



**DANGEROUS GOODS PANEL (DGP)
WORKING GROUP MEETING (DGP-WG/23)**

Rio de Janeiro, Brazil, 15 to 19 May 2023

Agenda Item 5: Clarifying State oversight responsibilities in Annex 18 (Ref: Job Card DGP.005.04)

**REPORT OF THE DGP WORKING GROUP ON ANNEX 18: CLARIFYING STATES'
RESPONSIBILITIES IN ANNEX 18**

(Presented by the Secretary)

SUMMARY

This information paper provides a summary of the progress made on ANC Job Card DGP.005.03: Clarifying State oversight responsibilities in Annex 18. It invites the DGP to review the draft restructured Annex 18 presented in the appendix to this information and to provide feedback to DGP-WG/Annex 18 through the secretary.

1. BACKGROUND

1.1 The DGP Working Group on Clarifying States' Responsibilities in Annex 18 (DGP-WG/Annex 18) was established to progress the work on ANC Job Card DGP.005 — Clarifying State oversight responsibilities in Annex 18. The job card was developed after deficiencies were identified through work on aligning Annex 18 dangerous goods reporting and oversight requirements in Annex 18 with Annex 19 (ANC Job Card DGP.002.01). That work revealed a lack of clarity and sufficient detail in Annex 18 to effectively outline States' responsibilities with respect to the safe transport of dangerous goods by air and the interrelationship of oversight responsibilities between dangerous goods and other aviation activities. It was also identified that although notes to clarify that the scope of an operator's safety management system included the carriage of dangerous goods, nothing was introduced to clarify States' safety management responsibilities. It was concluded that establishing a relationship between State oversight of the safe transport of dangerous goods by air with the State safety management responsibilities and critical elements of a system that enables a State to discharge its responsibilities for safety oversight contained in Annex 19 would provide clarity.

2. PROGRESSION OF WORK

2.1 Progress of the working group was reported to the 2022 Working Group Meeting of the DGP (DGP-WG/22, 21 to 25 November 2022, see paragraph 4.5.1 of the DGP-WG/22 Report). DGP-WG/Annex 18 has held five consecutive one to two hour weekly virtual meetings since then and one three-day face-to-face meeting preceding DGP-WG/23 (Rio de Janeiro, Brazil, 8 to 10 May 2023). This work has cumulated into the draft new structure provided in the appendix.

2.2 The Air Navigation Commission has emphasized the need for caution when amending Standards and Recommended Practices (SARPs) so as not to put too much burden on States. States, especially less developed ones, struggle with keeping up with new amendments to all of ICAO's Annexes. Clarifying intent is often best achieved through guidance material. DGP-WG/Annex 18 is taking this into account by ensuring there is sufficient justification for each new, removed, or modified SARP. The group is developing guidance material to accompany the SARPs. Guidance material is not expected to be complete before Annex amendments are sent for State consultation, as the actual amendments may be modified based on the comments to States. DGP-WG/Annex 18 will, however, provide draft guidance to DGP/29 and propose that some guidance be presented with the Annex amendments to States.

2.3 The material in the appendix is a still a draft that will be further modified by DGP-WG/Annex 18 with the objective of publishing a working paper for DGP/29 with a final proposed amendment in September 2023. The material in the appendix is presented as a clean version for ease of review. A redline/strikeout version will be presented when the amendments are more mature. Paragraph 3 below provides an overview of the proposed restructured Annex 18 and a description of outstanding issues that DGP-WG/Annex 18 has not yet addressed to conclusion.

3. OVERVIEW OF RESTRUCTURED ANNEX 18

3.1 Below is a brief description of each chapter in restructured Annex 18. DGP-WG/Annex 18 recognizes the need for consistent use of terminology and will thoroughly review the final version of the proposed amendment for consistency before submitting it to DGP/29.

3.2 Foreword

3.2.1 Very draft amendments to the foreword have been made, but they will be revisited once the rest of the Annex is complete. DGP-WG/Annex 18 determined that improvements could be made with respect to:

- a) describing the Annex as being high level SARPs with details in the Technical Instructions;
- b) the interrelationships between the safe transport of dangerous goods by air and other modes of transport;
- c) the relationship with Technical Instructions and other Annexes;
- d) available guidance material; and
- e) the historical background of Annex 18 including a description of amendments that have been made over the years;

3.3 Chapter 1. Definitions

3.3.1 Chapter 1 continues to contain the definitions. The following amendments were developed:

- a) A new definition for “supply chain” was developed. DGP-WG/Annex 18 considered it necessary since the term is referred to in the SARP in Annex 6 — *Operation of Aircraft, Part I — International Commercial Air Transport — Aeroplanes*, Chapter 15 that requires operators to take the safety of the supply chain into account when conducting their required safety risk assessment on the carriage of items in the cargo compartment. A new chapter on the supply chain was also developed (see paragraph 4 below). DGP-WG/Annex 18 will consider potential unintended consequences if the definition is added and will seek guidance from security experts as to why supply chain is not defined in Annex 17 — *Aviation Security*. If there are potential consequences, the group will consider simply explaining the concept through provisions instead of an official definition. The definition includes the operator as part of the supply chain. This is considered necessary because the supply chain encompasses the shipment process from origin to destination, and several operators may be involved between these points.
- b) The following new terms have been defined, but a final decision to include them in the Annex will only be made if they are referenced in the Annex:
 - 1) extraterritorial office of exchange (ETOE);
 - 2) freight forwarder;
 - 3) ground handling service provider;
 - 4) misdeclared dangerous goods; and
 - 5) undeclared dangerous goods.

3.3.2 A definition for ground handling is already contained in Annex 6 and the *Manual on Ground Handling* (Doc 10121), but its scope might not be broad enough for dangerous goods. The group will coordinate with the Flight Operations Panel (FLTOSP) to see if modifications can be made. This might take time, so there may be a need to clarify the scope in guidance at least as a first step until changes can be made in Annex 6 and Doc 10121. This will ensure consistency among the various documents.

3.3.3 The definitions for “misdeclared” and “undeclared” were developed to address on-going queries from States and industry on what is meant by the terms. DGP-WG/Annex 18 discussed whether it was appropriate to define such detailed terms in an Annex. On the one hand the terms are referred to in the Annex, so it makes sense to define them, but the group has considered whether the term “non-compliance” should be used in the Annex instead. Non-compliance is a well-understood term, so referring to that term would make it unnecessary to define “misdeclared” or “undeclared”. The intent of the two terms could then be explained in guidance.

3.3.4 The group decided to amend the definition for dangerous goods incident by adding “cargo, mail or baggage *not in compliance with the Technical Instructions*” to the list of items that would be considered a dangerous goods incident. The group will consider whether the scope of the provision should be narrowed to capture only cases of non-compliance that might have an impact on safety, because there may be many types of non-compliance other than misdeclared or undeclared dangerous goods. This could

be done directly in the SARP or through guidance. Additional amendments to the definitions were made for the sake of clarity.

3.4 Chapter 2. General

3.4.1 A new chapter was developed to merge some general principles currently contained in several chapters and to provide a framework for how transporting dangerous goods by air are regulated. It contains the following sections:

- a) Objectives. A new SARP describing the objective of the Annex was developed based on an existing SARP in Annex 17. It currently states that the objective is the protection of health, safety, property and the environment. The group has discussed whether it should be the safety of the aircraft and its occupants, as this might be important particularly for entities in the supply chain other than the operator whose objective may be different. The group has also discussed whether there is any real value in having an objective at all. It will be reconsidered once the other amendments are complete.
- b) Applicability. The SARP currently contained in Annex 18 in 2.1.1 applies the Annex to all international operations of civil aircraft. DGP-WG/Annex 18 has broadened its scope by making the Annex applicable to international civil aviation to ensure entities other than the operator that contribute to the safe carriage of dangerous goods are covered. The Recommendation currently in 2.3 for Contracting States to take necessary measures to achieve compliance with the Annex and the Technical Instructions for domestic civil aircraft operations was modified to align with the revised applicability SARP and moved after it.
- c) Detailed Instructions. The current heading for the SARP making the Technical Instructions binding on States in 2.2 was modified from “Dangerous Goods Technical Instructions” to “Detailed Instructions” to make the intent of the provision easier to understand. A reference to “entities in the supply chain” was added to make who needs to comply with the Instructions clear. The recommendation for States to inform ICAO of difficulties encountered in the application of the Technical Instructions in 2.2.2 was moved to a new Chapter 3 on Provision of Information to ICAO so that all SARPs related to providing ICAO with information are contained in one place.
- d) Multimodal transport. The heading for the recommendation that States should make provisions to enable dangerous goods intended for air transport to be accepted for surface transport to or from aerodromes in 2.6 was modified from “Surface transport” to “Multimodal transport” to make the intent of the provision easier to understand.
- e) Limitations on the transport of dangerous goods by air, which is currently contained in Chapter 4, was moved to this chapter as they are part of the general framework for States to regulate dangerous goods. The SARP specifying what is permitted for transport by air was modified to specify dangerous goods *as cargo and mail*. Limitations for passengers and crew were moved from the current Exceptions section to this section, because DGP-WG/Annex 18 did not consider dangerous goods carried by passengers and crew to be excepted from the Annex. They are forbidden unless specifically permitted by the Technical Instructions. The SARPs were also modified by specifying that the State shall *only* permit to make them sound more like a limitation, since this is the title of the section.

The heading of current 4.2 refers to dangerous goods forbidden for transport by air unless exempted, but the SARP refers also to an approval. The heading was modified to include approval and provisions for approvals and exemptions were copied from the Technical Instructions to make the expectations of States clear.

The current SARP for dangerous goods forbidden for transport under any circumstances simply refers to the Technical Instructions. DGP-WG/Annex 18 concluded that more was needed to make the intent clear to States. It therefore copied the text contained in Part 1;2.1 of the Technical Instructions to the Annex. It created a new SARP prohibiting States from granting approvals or exemptions for these dangerous goods.

- f) International cooperation. The general intent of the current recommendation for cooperation between States in 11.2 was simplified and upgraded to a Standard and included in this general chapter.
- g) General exceptions. The exceptions for articles and substances classified as dangerous goods required to be aboard an aircraft in accordance with airworthiness requirements and operating regulations were moved from 2.4.1 to this chapter. A note explaining that the exception did not apply to replacements for these articles and substances was added under the SARP and the Standard requiring those intended as replacements or removed for replacement to be transported in accordance with the Annex currently in 2.4.2 was modified to focus on the need for the State to ensure the operator has procedures in place and moved to Chapter 5, Operator responsibilities.
- h) State safety management responsibilities specific to the transport of dangerous goods by air. The location of these SARPs, and whether they are needed, will be revisited once all other SARPs are complete. Deleting them might be appropriate if they are addressed through other SARPs in Annex 18 or through guidance. The need for robust protocol questions and a concern that not keeping the SARPs might impact this robustness was discussed. DGP-WG/Annex 18 will seek guidance from an officer from the ICAO Safety and Air Navigation Oversight Audit Section on procedures for modifying protocol questions and whether they had to directly link to a SARP in the Annex.

3.5 Chapter 3. Provision of information to ICAO

3.5.1 A new chapter capturing all SARPs requiring information be provided to ICAO was added. It includes the requirement for each State to specify an appropriate authority within its administration responsible for ensuring compliance with Annex 18 (2.7 of current Annex 18), the requirement to notify ICAO of variations from the Technical Instructions (2.5.1 of current Annex 18), the recommendation for the State of the Operator to take necessary measures to ensure ICAO is informed when operators adopt more restrictive requirements (2.5.2 of current Annex 18) and the recommendation for States to inform ICAO of difficulties encountered in the application of the Technical Instructions (2.2.2 of current Annex 18). DGP-WG/Annex 18 discussed whether there was value in keeping the operator variations in the Technical Instructions. Few were reported to ICAO, and updates to already reported variations were not always provided. Users of the Technical Instructions could not depend on them. The working group will discuss the matter further.

3.6 Chapter 4. Safety of the supply chain

3.6.1 A new chapter on the safety of the supply chain was added. It outlines the expectations upon States more clearly. Current Annex 18 has three separate chapters that address responsibilities of entities involved with preparing and offering dangerous goods for transport. These are: Chapter 3, Classification; Chapter 5, Packing; Chapter 6: Labelling and marking; Chapter 7: Shipper's responsibilities. All of them point to the provisions of the Technical Instructions, with some provisions from the Technical Instructions repeated in the Annex. They do not directly state what is required of the State, and there does not appear to be any rationale for determining what should be repeated and what should simply be referred to. This new chapter clearly defines what is expected of the State, which is to have primary aviation legislation and specific operating regulations in place that are directed at entities in the supply chain preparing, offering and accepting dangerous goods for transport by air. The new chapter lists the functions for which regulations are needed and refers to the applicable parts of the Technical Instructions where the detailed Instructions are found. Listing the functions provides the added benefit of an overview of how the Technical Instructions mitigate risk. Terminology to capture entities such as freight forwarders who may offer general cargo that contains undeclared dangerous goods was added (e.g. "Each Contracting State shall adopt regulations to require, at a minimum, that a person does not offer or cause to be offered for transport ...").

3.6.2 Safety management SARPs at the end of the chapter will be reviewed when the SARPs are more complete. There is currently some duplication with the safety management SARPs in Chapter 2, and there may be a need to strengthen the need for oversight and resolution of safety issues.

3.6.3 DGP-WG/Annex has had some discussion on whether applying some of the philosophy behind the secure supply chain concept adopted in Annex 17 would benefit the safe supply chain. However, this would require a lot of consideration, and developing a SARP in time for DGP/29 might be overly ambitious. The group may consider developing guidance material to support a safe supply chain concept.

3.7 Chapter 5. Operator's responsibilities

3.7.1 Chapter 5 replaces existing Chapter 8 on Operator's responsibilities. It summarizes details in the Instructions to create greater visibility to States. It specifies that operators must develop and implement procedures and distinguishes between operators with and without specific approval to transport dangerous goods as cargo. It is structured as follows:

- a) New note specifying that the State is required to recognize an air operator certificate issued by another Contracting State as valid in accordance with the surveillance of operations by a foreign operator provisions in Parts I, III and IV of Annex 6 (surveillance of a foreign operator). It specifies that this includes the specific approval to transport dangerous goods as cargo issued by another Contracting State. This note is in addition to the two existing referring to safety management systems (SMS) provisions in Annex 19 and the fact that dangerous goods are included in the scope of the operator's SMS.
- b) General. New section specifying that dangerous goods cannot be transported as cargo unless specifically approved to do so by the State in accordance with the applicable provisions of Annex 6, that an operator holding a specific approval to carry dangerous goods as cargo issued by the State can only do so in accordance with the specific approval, and that operators authorized to carry radioactive material must implement and maintain a radiation protection programme as specified in the Instructions.

- c) Provision of information. New section that identifies information that must be provided in the Operations Manual or another appropriate manual. It includes dangerous goods-related SARPs currently in Annex 6, Part I, Chapter 14. DGP-WG/Annex 18 identified errors in dangerous goods provisions in Annex 6. It will coordinate with flight operations experts to consider removing detailed dangerous goods provisions in Annex 6, Part I, Chapter 14, Attachment J and similar provisions in Parts III and IV. This would eliminate redundancy and reduce the risk of errors in Annex 6. It will propose maintaining high-level provisions to make States aware that operators have dangerous goods responsibilities regardless of whether they have specific approval to transport them and providing references to the relevant parts of Annex 18 that highlight what responsibilities each type of operator has.
- d) Training programme. SARP requiring operators to establish a dangerous goods training programme in accordance with the Technical Instructions that must be included in the Operations Manual;
- e) Acceptance for transport. Includes a SARP requiring operators with specific approval to transport dangerous goods to develop and implement procedures aimed at preventing the introduction of undeclared and misdeclared dangerous goods into air transport in addition to requiring acceptance procedures, including an acceptance checklist;
- f) Inspection for damage or leakage;
- g) Loading and stowage;
- h) Information to pilot-in-command;
- i) Emergency Procedures; and
- j) Reporting.

3.7.2 DGP-WG/Annex 18 will further refine the chapter. It will also ensure that helicopters and remotely piloted aircraft, in coordination with DGP-WG/RPAS, are accounted for and provide clarification that it applies only to aircraft certified in accordance with Annex 8 — *Airworthiness of Aircraft*.

3.8 Chapter 6. Passenger Provisions

3.8.1 A new chapter devoted to passenger provisions was added which is still in an early draft form. It will focus on the provision of information and encouraging States to raise awareness of what passengers can and cannot carry on board an aircraft.

3.9 Chapter 7. Transport of dangerous goods by post

3.9.1 A new chapter on the transport of dangerous goods by post was created to merge into one the training provisions currently contained in 10.2.2 and the SARP requiring procedures of designated postal operators for controlling the introduction of dangerous goods in airmail to be approved by the civil aviation authority of the State the mail is accepted currently contained in 11.4 of Annex 18. It modifies the existing provisions so that the States is required to adopt regulations to establish and implement them. It adds references to extraterritorial offices of exchange (ETOE).

3.10 Chapter 8. Training programmes

3.10.1 This chapter is equivalent to current Chapter 10. It will be reviewed by the DGP-WG/Training. DGP-WG/Training is asked to consider whether provisions currently in the Technical Instructions that have an impact on States should be moved here. Note 2 in current Annex 18 that refers to 4.2.2 of Annex 6, Part I is modified to clarify intent, which is to make States aware that they are required to recognize as valid dangerous goods training programmes approved by another Contracting State. Annex 6 refers to States recognizing air operator certificates issued by other Contracting States as valid without specific reference to training programmes. DGP-WG/Annex 18 recommends adding a specific reference to training programmes in Annex 6.

3.11 Chapter 9. Dangerous goods safety intelligence

3.11.1 Chapter 9 replaces reporting and investigation provisions currently contained in Chapter 12. The revised provisions, which were developed by DGP-WG/Reporting, are based on Annex 19. Amendments that will be incorporated in Amendment 2 to Annex 19 are currently under development. DGP-WG/Annex 18 will ensure the provisions align with the amendment to Annex 19.

3.12 Chapter 10. Dangerous goods security provisions

3.12.1 Chapter 10 is equivalent to current Chapter 13.

3.13 Attachments

3.13.1 The following guidance has been developed (see DGP-WG/22-IP/7) but not yet extensively reviewed by DGP-WG/Annex 18:

- a) Clarifying the interrelationships between Annex 18 and other Annexes (6, 8 and 19).
- b) Interrelationship between safety risk management processes of the SSP and SMS
- c) Establishing a national authority for dangerous goods
- d) State Variations
- e) International vs. Domestic operations
- f) Multi-modal harmonization
- g) Reporting and investigations (developed by DGP-WG/Reporting)

3.13.2 Where the material should be located and how it will be structured is still to be determined. DGP-WG/Annex 18 plans to begin reviewing it at its next virtual meeting. The Secretary informed the group that it will not be necessary to submit final guidance material with the proposed Annex amendment to the Air Navigation Commission. Draft material will be acceptable provided it can be finalized prior to the adoption of the amendment.

4. **NEXT STEPS**

4.1 DGP-WG/Annex 18 will meet virtually for 60 to 90 minutes each week and potentially convene a one-week face-to-face meeting toward the end of the summer. It aims to submit a completed draft amendment to Annex 18 to DGP/29.

4.2 The panel is encouraged to provide comments on the draft contained in the appendix to this working group via the Secretary.

APPENDIX

DRAFT NEW ANNEX 18

FOREWORD

Annex 18 establishes the international principles that contribute to the safety of dangerous goods in air transport by providing criteria for standardized operating practices that facilitate the transport of dangerous goods internationally.

Historical background

The Standards and Recommended Practices (SARPs) in this Annex were developed by the Air Navigation Commission (ANC) in response to Recommendation 7/1 of the ICAO Accident Investigation and Prevention Divisional Meeting (1974) and a need expressed by Contracting States for an internationally agreed set of provisions governing the safe transport of dangerous goods by air. The Air Navigation Commission established the Dangerous Goods Panel (DGP) to assist in the development of the SARPs and the detailed instructions contained in the *Technical Instructions for the Safe Transport of Dangerous Goods by Air* (Doc 9284) necessary for the standardized implementation of the Annex and the safe and orderly transport of dangerous goods by air.

The provisions of The Technical Instructions are based on the Recommendations of the United Nations Committee of Experts on the Transport of Dangerous Goods so as to achieve a baseline level of safety and compatibility with the regulations covering the transport of dangerous goods by other modes of transport.

In 2016, the Dangerous Goods Panel agreed to establish a working group to restructure Annex 18. Subsequently, the ANC approved a job card tasking the DGP to complete a comparison of Annex 18 with other Annexes (and associated guidance material) with the view to identify any ambiguities, inconsistencies, unnecessary duplication and gaps; the ultimate goal being to re-align and strengthen relationships with the other Annexes. The restructure focused on clarifying States' dangerous goods responsibilities within the State safety programme (SSP).

Guidance

The *Supplement to the Technical Instructions for the Safe Transport of Dangerous Goods by Air* (Doc 9284SU) provides additional information to the Technical Instructions and guidance to the States in performing their functions as a national civil aviation authority or as a competent authority as required by Annex 18. The Supplement also provides guidance with respect to the assessment and subsequent issuance of State approvals and exemptions for the transport of dangerous goods by air specified under certain provisions detailed within the Technical Instructions.

Revisions to this Annex

Annex 18 contains the SARPs for the transport of dangerous goods by air. The SARPs within this Annex are written broadly and without technical detail, in order that amendment to them is required only infrequently. The Technical Instructions are an amplification of these SARPs which provide the technical details required to achieve compliance with the requirements and recommendations of the Annex. Unlike Annex 18, the Technical Instructions are updated biennially to align with the UN Recommendations on the Transport of Dangerous Goods (Model Regulations). Proposals to update Annex 18 are presented to the DGP for discussion and scrutiny. If agreed by the Panel, these updates are then presented to the Air Navigation Commission for further review and discussion. It is part of the ANC's remit of responsibility to approve any amendments to this Annex.

Definitions

The addition of definitions into the Annex must take into consideration the definitions contained within the other Annexes and also within the Technical Instructions. The definitions listed within Annex 18 explain specific words or technical concepts for which a common level of understanding is required to achieve the intended safety outcome for each SARP within this Annex. These definitions are not intended to duplicate definitions within other Annexes, however where differences occur specific to the transport of dangerous goods by air, these definitions may provide a different meaning for application only in the context of Annex 18 and the Technical Instructions. Any additional definitions used in the operational requirements for the transport of dangerous goods by air are largely contained within the Technical Instructions.

Relationship with other Annexes and the *Technical Instructions for the Safe Transport of Dangerous Goods by Air* (Doc 9284)

The provisions of Annex 18 govern the international transport of dangerous goods by air within a State's safety programme. The broad provisions of Annex 18 are amplified by the detailed specifications of the *Technical Instructions for the Safe Transport of Dangerous Goods by Air* (Doc 9284). In order that a comprehensive document may be available to States for implementation of the dangerous goods provisions prescribed by this Annex, an Attachment hereto describes the interrelationships between Annex 18 and other Annexes bearing on the subject of the safe transport of dangerous goods by air.

INTERNATIONAL STANDARDS AND RECOMMENDED PRACTICES

CHAPTER 1. DEFINITIONS

When the following terms are used in this Annex, they have the following meanings:

Approval. An authorization granted by an appropriate national authority for:

- a) the transport of dangerous goods forbidden on passenger and/or cargo aircraft where the Technical Instructions state that such goods may be carried with an approval; or
- b) other purposes as provided for in the Technical Instructions.

Note.— *In the absence of a specific reference in the Technical Instructions allowing the granting of an approval, an exemption may be sought.*

Cargo. Any property carried on an aircraft other than mail and accompanied or mishandled baggage.

Note.— *This definition differs from the definition of “cargo” given in Annex 9 — Facilitation.*

[Cargo aircraft. Any aircraft, other than a passenger aircraft, which is carrying goods or property.]

Consignment. One or more packages of dangerous goods accepted by an operator from one shipper at one time and at one address, receipted for in one lot and moving to one consignee at one destination address.

Crew member. A person assigned by an operator to duty on an aircraft during a flight duty period.

Dangerous goods. Articles or substances which are capable of posing a hazard to health, safety, property or the environment and which are shown in the list of dangerous goods in the Technical Instructions or which are classified according to those Instructions.

Dangerous goods accident. An occurrence associated with and related to the transport of dangerous goods by air, not necessarily occurring on board an aircraft, which results in fatal or serious injury to a person or major property or environmental damage.

Note.— *A dangerous goods accident may also constitute an aircraft accident as defined in Annex 13— Aircraft Accident and Incident Investigation.*

Dangerous goods incident. An occurrence, other than a dangerous goods accident, associated with and related to the transport of dangerous goods by air, not necessarily occurring on board an aircraft where:

- a) a person is injured;
- b) there is property or environmental damage;
- c) there is fire, breakage, spillage, leakage of contents or radiation or there is other evidence that the integrity of the packaging has not been maintained;

- d) [any occurrence that] seriously jeopardizes the aircraft or its occupants; or
- [e] cargo, mail or baggage not in compliance with the Technical Instructions are identified when or after being offered for transport];

Note.— *A dangerous goods incident may also constitute an aircraft incident as defined in Annex 13 — Aircraft Accident and Incident Investigation.*

Designated postal operator. Any governmental or non-governmental entity officially designated by a Universal Postal Union (UPU) member country to operate postal services and to fulfil the related obligations arising from the acts of the UPU Convention on its territory.

Exception. A provision in this Annex which excludes a specific item of dangerous goods from the requirements normally applicable to that item.

Exemption. An authorization, other than an approval, granted by an appropriate national authority providing relief from the provisions of the Technical Instructions.

[Extraterritorial office of exchange (ETOE). A facility belonging to a designated postal operator outside its national territory on the territory of another State.]

Flight crew member. A licensed crew member charged with duties essential to the operation of an aircraft during a flight duty period.

[Freight forwarder. A person [organization or enterprise] who offers the service of arranging the transport of cargo by air.]

[Ground handling service provider. A person [organization or enterprise] who performs, on behalf of an operator, the service of accepting, handling, loading, unloading, transferring, or otherwise processing cargo, passengers or baggage.]

[Misdeclared dangerous goods. Dangerous goods offered for transport by air that are identified to not be in accordance with the information provided on the dangerous goods transport document or other documentation, when applicable.

Note.— *Dangerous goods identified by the operator during the acceptance check as not being fully in compliance with the applicable provisions of the Technical Instructions are not included in this definition.]*

Operator. A person, organization or enterprise engaged in or offering to engage in an aircraft operation.

Overpack. An enclosure used by a single shipper to contain one or more packages and to form one handling unit for convenience of handling and stowage.

Note.— *A unit load device is not included in this definition.*

Package. The complete product of the packing operation consisting of the packaging and its contents prepared for transport.

Packaging. One or more receptacles and any other components or materials necessary for the receptacles to perform their containment and other safety functions.

Note.— *For radioactive material, see Part 2, paragraph 7.1.3 of the Technical Instructions.*

[Passenger aircraft. An aircraft that carries any person other than a crew member, an operator's employee in an official capacity, an authorized representative of an appropriate national authority or a person accompanying a consignment or other cargo.]

Pilot-in-command. The pilot designated by the operator, or in the case of general aviation, the owner, as being in command and charged with the safe conduct of a flight.

Safety management system (SMS). A systematic approach to managing safety, including the necessary organizational structures, accountabilities, policies and procedures.

Serious injury. An injury which is sustained by a person in an accident and which:

- a) requires hospitalization for more than 48 hours, commencing within seven days from the date the injury was received; or
- b) results in a fracture of any bone (except simple fractures of fingers, toes or nose); or
- c) involves lacerations which cause severe haemorrhage, nerve, muscle or tendon damage; or
- d) involves injury to any internal organ; or
- e) involves second- or third-degree burns, or any burns affecting more than 5 per cent of the body surface; or
- f) involves verified exposure to infectious substances or injurious radiation.

State of Destination. The State in the territory of which the consignment is finally to be unloaded from an aircraft.

State of Origin. The State in the territory of which the consignment is first to be loaded on an aircraft.

State of the Operator. The State in which the operator's principal place of business is located or, if there is no such place of business, the operator's permanent residence.

[Supply chain. Includes any entity that:

- a) offers, handles or transports; or
- b) causes to offer, handle or transport;

dangerous goods in cargo or mail.]

Technical Instructions. The *Technical Instructions for the Safe Transport of Dangerous Goods by Air* (Doc 9284), approved and issued periodically in accordance with the procedure established by the ICAO Council.

[Undeclared dangerous goods. Dangerous goods offered for transport by air where there is no dangerous goods transport document or other documentation, when permitted, describing the contents as containing dangerous goods or the package is not marked to identify the contents as containing dangerous goods, as required by the Technical Instructions.]

UN number. The four-digit number assigned by the United Nations Committee of Experts on the Transport of Dangerous Goods and on the Globally Harmonized System of Classification and Labelling of Chemicals to identify an article or substance or a particular group of articles or substances.

Unit load device. Any type of freight container, aircraft container, aircraft pallet with a net, or aircraft pallet with a net over an igloo.

Note 1.— An overpack is not included in this definition.

Note 2.— A freight container for radioactive material is not included in this definition.

CHAPTER 2. GENERAL

2.1 Objectives

[2.1.1 Each Contracting State shall have as its primary objective the protection of health, safety, property and the environment in matters related to the transport of dangerous goods by air.]

[Or]

[2.1.1 Each Contracting State shall have as its primary objective the safety of the aircraft, its occupants, ground personnel and the general public.]

2.2 Applicability

2.2.1 The Standards and Recommended Practices of this Annex shall be applicable to international civil aviation.

2.2.2 **Recommendation.**— *In the interests of safety and of minimizing interruptions to the international transport of dangerous goods, Contracting States should apply the Standards and the Recommended Practices contained in this Annex to domestic civil aviation.*

2.3 Detailed instructions

2.3.1 Dangerous Goods Technical Instructions

2.3.1.1 Each Contracting State shall take the necessary measures for entities in the supply chain to achieve compliance with the detailed provisions contained in the Technical Instructions.

2.3.1.2 Each Contracting State shall also take the necessary measures to achieve compliance with any amendment to the Technical Instructions which may be published during the specified period of applicability of an edition of the Technical Instructions.

2.3.1.2 **Recommendation.**— *Although an amendment to the Technical Instructions with an immediate applicability for reasons of safety may not yet have been implemented in a Contracting State, such State should, nevertheless, facilitate the movement of dangerous goods in its territory which are consigned from another Contracting State in accordance with that amendment, providing the goods comply in total with the revised requirements.*

2.3.1.3 Multimodal transport

Recommendation.— *States should take measures to enable dangerous goods intended for air transport and prepared in accordance with the Technical Instructions to be accepted for transport by other modes of transport to or from aerodromes.*

2.4 Limitation on the transport of dangerous goods by air

2.4.1 Dangerous goods permitted for transport by air

2.4.1.1 The State shall only permit the transport of dangerous goods as cargo or mail by air as established in this Annex and the detailed provisions of the Technical Instructions.

2.4.1.2 The State shall only permit the carriage of dangerous goods by passengers or crew members if specifically permitted in accordance with Chapter 6.

2.4.2 Dangerous goods forbidden for transport by air unless approved or exempted

The State shall not permit the transport of dangerous goods identified in the Technical Instructions as being forbidden for transport in normal circumstances unless the provisions of the Technical Instructions indicate they may be transported under an approval granted by the States concerned in accordance with 2.4.2.1 or an exemption granted by States concerned in accordance with 2.4.2.2.

2.4.2.1 Approvals

Where specifically provided for in the Technical Instructions, the States concerned may grant an approval provided that in such instances an overall level of safety in transport which is equivalent to the level of safety provided for in the Technical Instructions is achieved.

Note.— For the purpose of approvals, “States concerned” are the States of Origin and the Operator, unless otherwise specified in the Technical Instructions.

2.4.2.2 Exemptions

2.4.2.2.1 In instances:

- a) of extreme urgency; or
- b) when other forms of transport are inappropriate; or
- c) when full compliance with the prescribed requirements is contrary to the public interest,

the States concerned may grant an exemption from the provisions of the Technical Instructions provided that in such instances every effort shall be made to achieve an overall level of safety in transport which is equivalent to the level of safety provided for in the Technical Instructions.

2.4.2.2.2 For the State of Overflight, if none of the criteria for granting an exemption are relevant, an exemption may be granted based solely on whether it is believed that an equivalent level of safety in air transport has been achieved.

Note 1.— For the purpose of exemptions, “States concerned” are the States of Origin, Operator, Transit, Overflight and Destination.

Note 2.— Guidance for the processing of exemptions, including examples of extreme urgency, may be found in the Supplement to the Technical Instructions (Part S-1, Chapter 1, 1.2 and 1.3).

2.4.3 Dangerous goods forbidden for transport by air under any circumstances

2.4.3.1 The State shall forbid any article or substance to be transported by air under any circumstance if, as presented for transport, it is liable to explode, dangerously react, produce a flame or dangerous evolution of heat or dangerous emission of toxic, corrosive or flammable gases or vapours under conditions normally encountered in transport.

2.4.3.2 The State shall not grant approvals or exemptions for articles and substances identified in 2.4.3.1.

Note 1.— The Dangerous Goods List (Table 3-1) contained in Part 3 of the Technical Instructions identifies certain dangerous goods known to meet the description in 2.4.3.1 with the word “Forbidden” shown in columns 2 and 3. It must be noted, however, that it would be impossible to list all dangerous goods which are forbidden for transport by air under any circumstance. Therefore, it is essential that those offering dangerous goods for transport exercise appropriate care to ensure that no goods meeting the description in 2.4.3.1 are offered for transport.

Note 2.— Dangerous goods forbidden under any circumstance include articles being returned to the manufacturer for safety reasons.

2.5 International cooperation

2.5.1 Each Contracting State shall ensure that requests from other Contracting States for additional information with respect to dangerous goods accidents, dangerous goods incidents, and [dangerous goods occurrences] are met, as far as may be practicable.

2.6 General exceptions

2.6.1 Articles and substances which would otherwise be classified as dangerous goods but which are required to be aboard the aircraft in accordance with the pertinent airworthiness requirements and operating regulations, or for those specialized purposes identified in the Technical Instructions, shall be excepted from the provisions of this Annex.

Note.— This exception does not apply to articles and substances intended as replacements or which have been removed for replacement (see 5.2.3).

2.7 State safety management responsibilities specific to the transport of dangerous goods by air

Note.— Chapter 3 to Annex 19 contains the general provisions for State safety management responsibilities which are applicable to this Annex. This section contains additional State safety management responsibilities specific to the safe transport of dangerous goods by air.

Note.— The safe transport of dangerous goods by air is addressed in the scope of the State safety programme (SSP).

Note.— Guidance on an SSP is contained in the Safety Management Manual (SMM) (Doc 9859).

2.7.1 State system and functions (CE 3)

[2.7.1.1 Each Contracting State shall establish an organization that develops and implements regulations, recommended practices and procedures that provide for the safe transport of dangerous good by air.

2.7.1.1.1 The State shall establish relevant authorities responsible for the management of safety with respect to the safe transport of dangerous goods by air in accordance with Annex 19.]

Note.— States where the size of the aviation industry is relatively small and the level of complexity relatively low, the State may be able to implement this Standard in a cost-effective manner through arrangements with other States or an RSSO.

2.7.1.2 The State shall use a methodology to determine its staffing requirements for the management of dangerous goods safety.

2.7.1.3 The State shall ensure that authority personnel have adequate support, credentials and transportation to accomplish, independently, their dangerous goods safety management tasks.

2.7.2 Qualified technical personnel (CE 4)

Note.— Guidance on minimum qualification requirements and training for dangerous goods technical personnel involved in the regulation and oversight of transport of dangerous goods by air is contained in Part 1, Chapter 5 of the Supplement to the Technical Instructions for the Safe Transport of Dangerous Goods by Air (Doc 9284SU).

2.7.3 State safety risk management (CE 6)

2.7.3.1 Safety management system obligation

2.7.3.1.1 **Recommendation.**— *The State should encourage entities other than the operator to establish procedures for investigating safety issues related to the transport of dangerous goods by air.*

Note.— See ... for additional State safety risk management provisions specific to dangerous goods.

2.7.4 Accident and incident investigation

States shall establish a process to investigate dangerous goods accidents and dangerous goods incidents in support of the management of safety in the State.

Note.— Guidance on dangerous goods safety investigations can be found in [guidance DGP working group is developing].

2.7.5 State safety promotion

Note.— See ... for additional State safety promotion provisions specific to dangerous goods.

CHAPTER 3. PROVISION OF INFORMATION TO ICAO

3.1 National authority

Each Contracting State shall specify to ICAO an appropriate authority within its administration to be responsible for ensuring compliance with this Annex.

3.2 Notification of variations from the Technical Instructions

3.2.1 Where a Contracting State adopts different provisions from those specified in the Technical Instructions, it shall notify ICAO promptly of such State variations for publication in the Technical Instructions.

Note.— Contracting States are expected to notify a difference to the provisions of 2.3.1.1 under Article 38 of the Convention only if they are unable to accept the binding nature of the Technical Instructions. Where States have adopted different provisions from those specified in the Technical Instructions, they are expected to be reported only under the provisions of 3.2.

3.2.2 **Recommendation.**— *The State of the Operator should take the necessary measures to ensure that when an operator adopts more restrictive requirements than those specified in the Technical Instructions, the notification of such operator variations is made to ICAO for publication in the Technical Instructions.*

3.3 Difficulties encountered in the application of the Technical Instructions

3.3.1 **Recommendation.**— *Each Contracting State should inform ICAO of difficulties encountered in the application of the Technical Instructions and of any amendments which it would be desirable to make to them.*

CHAPTER 4. SAFETY OF THE SUPPLY CHAIN

4.1 Primary aviation legislation (CE 1)

4.1.1 The State shall promulgate laws that enable the oversight and management of the supply chain for the safe transport of dangerous goods by air, the resolution of safety issues and the enforcement of regulations through the relevant authorities established for that purpose.

4.2 Specific operating regulations

4.2.1 Each Contracting State shall adopt regulations to require, at a minimum, that:

- a) a person does not offer or cause to be offered for transport:
 - 1) articles or substances which are forbidden for transport in accordance with 2.4.3;
 - 2) articles or substances which are forbidden for transport in accordance with 2.4.2 unless permitted by States concerned through an approval or exemption;
- b) a person does not offer or cause to be offered dangerous goods for transport unless:
 - 1) policies and procedures have been developed and provided to enable them to carry out the function for which they are responsible;
 - 2) associated hazards are identified in accordance with the classification criteria of Part 2 of the Technical Instructions;
 - 3) risks associated with the identified hazards are mitigated at the package level through quantity limitations and packing and packaging requirements in accordance with Parts 3, 4 and 6 of the Technical Instructions;
 - 4) hazard and handling information are communicated to entities in the supply chain in accordance with the marking, labelling and documentation requirements of Parts 3, 4 and 5 of the Technical Instructions;
- d) operators comply with the provisions detailed in Chapter 5;
- e) dangerous goods accidents, dangerous goods incidents [and occasions when undeclared or misdeclared dangerous goods are discovered] are reported in accordance with Chapter 9;
- f) training and assessment in accordance with Chapter 8 are provided to personnel employed by or acting on behalf of each entity in the supply chain to ensure they are competent to perform any function for which they are responsible prior to performing any of these functions
- g) dangerous goods are not offered, caused to be offered or accepted for transport by mail unless specifically permitted in accordance with Chapter 7; and
- h) dangerous goods are not carried by passengers or crew unless specifically permitted in accordance with Chapter 7.

4.3 State safety risk management

4.3.1 The State of the Operator shall ensure that operators have processes and procedures in place to manage safety risks associated with the supply chain.

4.3.2 The State shall establish and maintain a process to identify hazards associated with the supply chain from safety intelligence.

4.3.3 The State shall develop and maintain a process that ensures the assessment of safety risks associated with identified supply chain hazards.

4.3.4 The State shall develop and maintain a process to ensure risks induced by interfacing entities are managed.

4.3.5 Each Contracting State shall ensure that operators do not accept cargo or mail for carriage on an aircraft engaged in commercial air transport operations unless the application of safety controls is confirmed and accounted for by a regulated agent, a known consignor, or an entity that is approved by an appropriate authority. Cargo and mail which cannot be confirmed and accounted for by a regulated agent, a known consignor, or an entity that is approved by an appropriate authority shall be subjected to additional safety measures.

4.4 Management of safety risks

4.4.1 State shall establish mechanisms for the resolution of issues related to safety of the supply chain, up to and including enforcement measures.

4.5 State Safety promotion

4.5.1 States shall establish and manage safety promotional activities aimed at preventing passengers from carrying dangerous goods forbidden to be carried by passengers on board an aircraft.

Note.— See Chapter [6] for dangerous goods carried by passengers and crew.

4.5.2 States shall establish and manage safety promotional activities aimed at preventing the introduction of dangerous goods in cargo and mail which are not in compliance with the provisions of this Annex and the Technical Instructions.

4.5.3 States shall establish measures to improve safety awareness and promote a positive safety culture throughout the supply chain.

CHAPTER 5. OPERATOR'S RESPONSIBILITIES

Note 1.— Annex 19 includes safety management provisions for air operators. Further guidance is contained in the Safety Management Manual (SMM) (Doc 9859).

Note 2.— The carriage of dangerous goods is included in the scope of the operator's safety management system (SMS).

Note 3.— The State is required to recognize as valid an air operator certificate (AOC) issued by another Contracting State in accordance with 4.2.2 of Annex 6 — Operation of Aircraft, Part I — International Commercial Air Transport — Aeroplanes, an AOC issued by another Contracting State in accordance with 2.2.2 of Part III — International Operations — Helicopters and a remotely piloted aircraft systems (RPAS) operator certificate issued by another Contracting State in accordance with 4.2.2 of Part IV — International Operations — Remotely Piloted Aircraft. This includes the specific approval to transport dangerous goods as cargo issued by another Contracting State.

5.1 General

5.1.1 An operator shall not carry dangerous goods as cargo unless specifically approved to do so by the State in accordance with the applicable provisions of Annex 6 [– Operation of Aircraft].

5.1.2 An operator holding a specific approval to carry dangerous goods as cargo issued by the State shall only do so in accordance with the specific approval.

5.1.3 An operator with a specific approval to carry dangerous goods as cargo that includes the carriage of radioactive material shall develop, implement and maintain a radiation protection programme as specified in the Technical Instructions.

5.2 Provision of Information

5.2.1 Operators with no specific approval to transport dangerous goods as cargo shall:

- a) in the Operations or other appropriate manual made available to flight crew, cabin crew and other employees document policies and procedures that address, as applicable, the carriage of cargo and mail and the carriage of dangerous goods in passenger and crew baggage, [at a minimum, the requirements of the Technical Instructions and the State's regulations] to allow operator personnel to:
 - 1) identify and reject undeclared and misdeclared dangerous goods, including COMAT classified as dangerous goods;
 - 2) identify and prevent the carriage of dangerous goods not permitted in passenger and crew baggage; and
 - 3) report to the appropriate authorities of the State of the Operator and the State in which it occurred any:
 - i) occasions when undeclared dangerous goods are discovered in cargo or mail;
 - ii) occasions when dangerous goods not permitted in passenger or crew baggage is discovered; and

- iii) dangerous goods accidents and dangerous goods incidents.
- b) the operator shall ensure that all personnel, including third-party personnel, involved in the acceptance, handling, loading and unloading of cargo, mail, passenger and crew baggage are informed of the operator's limitations with regard to the transport of dangerous goods.

5.2.2 An operator with a specific approval to carry dangerous goods as cargo shall:

- a) in the Operations or other appropriate manual made available to flight crew, cabin crew and other employees, document policies and procedures that address the carriage of dangerous goods in cargo, mail, passenger and crew baggage; and
- b) ensure that all personnel, including third-party personnel, involved in the acceptance, handling, loading and unloading of cargo, mail, passenger and crew baggage are informed of the operator's specific approval and limitations with regard to the transport of dangerous goods.

5.2.3 The documented policies and procedures established by the operator in 5.2.2 shall ensure articles and substances intended as replacements for those described in 2.6 or which have been removed for replacement are carried on an aircraft in accordance with the provisions of the Technical Instructions.

5.3 Training Programmes

All operators shall establish a dangerous goods training programme that meets the applicable requirements of the Technical Instructions, Part 1, Chapter 4, and the requirements of the State's regulations, as appropriate. Details of the dangerous goods training programme shall be included in the operator's operations manuals;

5.3 Acceptance for transport

5.3.1 All operators shall develop and implement procedures aimed at preventing the introduction of undeclared and misdeclared dangerous goods into air transport.

Note.— See 5.8 concerning the reporting of dangerous goods accidents, dangerous goods incidents and instances where undeclared or misdeclared dangerous goods are identified.

5.3.2 An operator with a specific approval to transport dangerous goods as cargo shall:

- a) develop and implement procedures to ensure that dangerous goods are not accepted for transport by air:
 - 1. unless the dangerous goods are accompanied by a completed dangerous goods transport document, except where the Technical Instructions indicate that such a document is not required; and
 - 2. until the package, overpack or freight container containing the dangerous goods has been inspected in accordance with the acceptance procedures contained in the Technical Instructions.
- b) develop and use an acceptance checklist as an aid to compliance with the provisions of a).

5.4 Inspection for damage or leakage

5.4.1 An operator with a specific approval to transport dangerous goods as cargo shall develop and implement procedures to ensure that:

- a) packages and overpacks containing dangerous goods and freight containers containing radioactive materials shall be inspected for evidence of leakage or damage before loading on an aircraft or into a unit load device. Leaking or damaged packages, overpacks or freight containers shall not be loaded on an aircraft;
- b) unit load devices are not loaded aboard an aircraft unless the device has been inspected and found free from any evidence of leakage from, or damage to, any dangerous goods contained therein;
- c) any package of dangerous goods loaded on an aircraft that appears to be damaged or leaking is removed from the aircraft or arrange for its removal by an appropriate authority or organization, and thereafter shall ensure that the remainder of the consignment is in a proper condition for transport by air and that no other package has been contaminated;
- d) packages or overpacks containing dangerous goods and freight containers containing radioactive materials are inspected for signs of damage or leakage upon unloading from the aircraft or unit load device. If evidence of damage or leakage is found, the area where the dangerous goods or unit load device were stowed on the aircraft shall be inspected for damage or contamination; and
- e) an aircraft which has been contaminated by radioactive materials shall immediately be taken out of service and not returned to service until the radiation level at any accessible surface and the non-fixed contamination are not more than the values specified in the Technical Instructions.

5.5 Loading and stowage

5.5.1 An operator with a specific approval to transport dangerous goods as cargo shall develop and implement procedures to ensure that:

- a) packages and overpacks containing dangerous goods and freight containers containing radioactive materials are loaded and stowed on an aircraft in accordance with the provisions of the Technical Instructions;
- b) packages containing dangerous goods which might react dangerously one with another are not be stowed on an aircraft next to each other or in a position that would allow interaction between them in the event of leakage;
- c) packages of radioactive materials are stowed on an aircraft so that they are separated from persons, live animals and undeveloped film, in accordance with the provisions in the Technical Instructions;
- d) dangerous goods loaded in an aircraft are protected from being damaged and secured in the aircraft in such a manner that will prevent any movement in flight which would change the orientation of the packages;and
- e) packages of dangerous goods bearing the “Cargo Aircraft Only” label are loaded in accordance with the Technical Instructions.

- f) dangerous goods are not carried in an aircraft cabin occupied by passengers or on the flight deck of an aircraft, except in circumstances permitted by the provisions of the Technical Instructions.

5.6 Information to pilot-in-command

An operator with a specific approval to transport dangerous goods as cargo shall develop and implement procedures to ensure that where an aircraft is to carry dangerous goods as cargo the pilot-in-command is provided as early as practicable before departure of the aircraft with information as specified in the Technical Instructions.

5.7 Emergency Procedures

5.7.1 All operators shall develop and provide to aircrew instructions as to the action to be taken in the event of emergencies arising involving dangerous goods.

5.7.2 If an in-flight emergency occurs, the pilot-in-command shall, as soon as the situation permits, inform the appropriate air traffic services unit, for the information of aerodrome authorities, of any dangerous goods on board the aircraft, as provided for in the Technical Instructions.

5.7.3 In the event of:

- a) an aircraft accident; or
- b) a serious incident where dangerous goods carried as cargo may be involved,

the operator of the aircraft carrying dangerous goods as cargo shall provide information, without delay, to emergency services responding to the accident or serious incident about the dangerous goods on board, as shown on the written information to the pilot-in-command. As soon as possible, the operator shall also provide this information to the appropriate authorities of the State of the Operator and the State in which the accident or serious incident occurred.

5.7.4 In the event of an aircraft incident, the operator of an aircraft carrying dangerous goods as cargo shall, if requested to do so, provide information without delay to emergency services responding to the incident and to the appropriate authority of the State in which the incident occurred, about the dangerous goods on board, as shown on the written information to the pilot-in-command.

Note.— The terms “accident”, “serious incident” and “incident” are as defined in Annex 13.

5.8 Reporting

5.8.1 All operators shall develop and implement procedures to ensure that:

- a) dangerous goods accidents and dangerous goods incidents are reported to the appropriate authorities of the State of the Operator and the State in which the dangerous goods accident or dangerous goods incident occurred;
- b) where undeclared or misdeclared dangerous goods are discovered in cargo or mail a report is provided to the appropriate authorities of the State of the Operator and the State in which the dangerous goods were discovered;

- c) the operator shall report to the authority of the State of the Operator where dangerous goods are found to have been loaded on an aircraft when not in compliance with 6.5.2 or the pilot-in-command was not provided with information in accordance with 6.6;
 - d) where dangerous goods not permitted by the Technical Instructions are discovered in passenger or crew baggage by the operator, or the operator is advised of such dangerous goods that a report is submitted to the appropriate authority of the State in which this occurred.
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CHAPTER 6. DANGEROUS GOODS CARRIED BY PASSENGERS AND CREW

6.1 LIMITATIONS

6.1.1 States shall ensure that operators have policies and procedures in place aimed at preventing passengers or crew from carrying dangerous goods either as or in carry-on baggage, checked baggage or on their person unless the dangerous goods are:

- a) permitted in accordance with Part 8 of the Technical Instructions; and
- b) for personal use only.

6.1.2 The State shall ensure that the operator develops and implements policies and procedures to ensure that passengers are provided with information about the types of dangerous goods which they are forbidden to carry aboard an aircraft in accordance with the provisions of the Technical Instructions.

6.1.3 The State shall ensure that the operator's handling agent and the airport operator provides information on the types of dangerous goods which passengers are forbidden to transport in accordance with the provisions of the Technical Instructions.

6.1.4 The State shall establish policies to raise awareness of risks inherent to dangerous goods carried on aircraft

6.1.5 The State should take measures to promote passenger awareness through organizations or enterprises other than the operator involved in the air transport of passengers to provide passengers with information about the types of dangerous goods which they are forbidden to carry aboard an aircraft.

Note 1.- The type of organizations or enterprises include travel agents.

Note 2.- This information should consist of, as a minimum, notices at those locations where there is an interface with the passengers.

CHAPTER 7. TRANSPORT OF DANGEROUS GOODS BY POST

7.1 Specific operating regulations

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| How to deal with UN 3373 and dry ice. Maybe it should be addressed in the supplement with the mail guidance |
|---|

7.1.1 Each Contracting State shall adopt regulations that address mail articles offered for air transport by designated postal operators [and designated postal operators conducting business through an extraterritorial office of exchange (ETOE) in their State] in conformity with the Annexes to the Convention and the detailed provisions of the Technical Instructions. These regulations shall, at a minimum, ensure that the designated postal operator [and ETOE]:

- a) establishes and maintains a dangerous goods training programme;
- b) establishes policies and procedures that address the acceptance of dangerous goods in mail to those permitted by the Technical Instructions;
- c) establishes policies and procedures to ensure that mail articles containing lithium batteries permitted by the Technical Instructions are not accepted unless specifically approved to do so by the civil aviation authority of the State where the mail is accepted.
- d) develops and implements procedures for controlling the introduction of dangerous goods in mail not in compliance with the provisions of this Annex and the Technical Instructions;
- e) develops and implements reporting of dangerous goods accidents, dangerous goods incidents and occasions when undeclared or misdeclared dangerous goods are discovered in mail offered for air transport.

7.1.2 States shall periodically review the policies, procedures and training for the safe transport of dangerous goods by air to ensure they remain relevant and appropriate.

7.2 Approval of training programme

7.2.1 Dangerous goods training programmes for designated postal operators shall be approved by the civil aviation authority of the State where the mail is accepted by the designated postal operator.

7.2.2 Dangerous goods training programmes for ETOEs shall be approved by the civil aviation authority of the State of the designated postal operator that is operating the ETOE.

7.3 Approval of procedures for controlling the introduction of dangerous goods in mail into air transport

The procedures of designated postal operators [and ETOEs] for controlling the introduction of dangerous goods in mail into air transport shall be approved by the civil aviation authority of the State where the mail is accepted.

Note 1.— In accordance with the Universal Postal Union (UPU) Convention, dangerous goods are not permitted in mail, except as provided for in the Technical Instructions.

Note 2.— The Universal Postal Union has established procedures to control the introduction of dangerous goods into air transport through the postal services (see the UPU Parcel Post Regulations and Letter Post Regulations).

Note 3.— Guidance for approving the procedures established by designated postal operators to control the introduction of dangerous goods into air transport may be found in the Supplement to the Technical Instructions (Part S-1, Chapter 3).

CHAPTER 8. TRAINING PROGRAMMES

8.1 Establishment of training programmes

Initial and recurrent dangerous goods training programmes shall be established and maintained in accordance with the Technical Instructions.

8.2 Approval of training programmes

8.2.1 Dangerous goods training programmes for operators shall be approved by the appropriate authority of the State of the Operator.

Note.— Dangerous goods training programmes are required for all operators regardless of whether or not they have a specific approval to transport dangerous goods as cargo in accordance with Annex 6, Parts I, III and IV.

8.2.2 **Recommendation.**— *Dangerous goods training programmes required for entities in the supply chain other than operators and designated postal operators should be approved as determined by the appropriate national authority.*

Note 1.— Dangerous goods training programme requirements for designated postal operators are included in Chapter 7.

Note 2.— The State is required to recognize as valid an air operator certificate issued by another Contracting State in accordance with 4.2.2 of Annex 6 — Operation of Aircraft, Part I — International Commercial Air Transport — Aeroplanes for surveillance of operations by a foreign operator, Part III and Part IV. This includes dangerous goods training programmes approved by another Contracting State.

CHAPTER 9. DANGEROUS GOODS SAFETY INTELLIGENCE

Replace reporting and investigation provisions currently contained in Chapter 12 with the following new provisions. These revised provisions are based on Annex 19 with Amendment 1 incorporated. Amendments that will be incorporated in Amendment 2 are currently under development. They will likely result in the need to modify terminology.

Note.— In addition to the provisions of this chapter, other provisions relative to the promotion of dangerous goods accident and incident prevention by collection and analysis of safety data and by a prompt exchange of safety information, as part of the State safety programme (SSP), are included in Annex 19 — Safety Management and, to this effect, are applicable to this Annex. Further guidance is contained in the Safety Management Manual (SMM) (Doc 9859).

9.1 Safety data collection and processing systems

The State shall ensure its safety data collection and processing systems (SDCPS) capture, store, aggregate and enable the analysis of dangerous goods safety data and dangerous goods safety information in accordance with Annex 19, 5.1.

Note 1.— Within the context of this Annex, SDCPS refers to processing and reporting systems, safety databases, schemes for exchange of information, and recorded information including but not limited to:

- a) data and information related to safety investigations by State authorities, operators or other entities involved with the transport of dangerous goods by air;*
- b) mandatory safety reporting systems as indicated in 5.1.2 of Annex 19 and 8.1.1 of this Annex; and*
- c) voluntary safety reporting systems as indicated in 5.1.3 of Annex 19 and 8.1.2 of this Annex.*

Note 2.— Guidance related to SDCPS is contained in the Safety Management Manual (SMM) (Doc 9859) and the [DG guidance material].

9.1.1 Mandatory safety reporting system

9.1.1.1 States shall include reporting of dangerous goods accidents, dangerous goods incidents and occasions when undeclared or misdeclared dangerous goods are discovered as part of their mandatory safety reporting systems in accordance with the provisions of Annex 19.

9.1.1.2 States' mandatory reporting systems shall include a requirement for the operator to report dangerous goods accidents and dangerous goods incidents to the appropriate authority of the State in which they occurred and to the State of the Operator.

9.1.1.3 States' mandatory reporting systems shall include a requirement for the operator to report occasions when undeclared or misdeclared dangerous goods are discovered in cargo or mail to the appropriate authority of the State in which they were discovered and the State of the Operator.

9.1.1.4 States' mandatory reporting systems shall include a requirement for the operator to report occasions when dangerous goods not permitted to be carried by passengers or crew are discovered by the operator, or the operator is advised by the entity that discovers the dangerous goods, either in the baggage or on the person, of passengers or crew members to the appropriate authority of the State in which this occurred.

Note.— Dangerous goods permitted to be carried by passengers and crew are provided in Part 8 of the Technical Instructions.

9.1.1.5 States' mandatory reporting systems shall include a requirement for entities other than operators to report dangerous goods accidents and dangerous goods incidents to the appropriate authority of the State in which they occurred.

9.1.1.6 States' mandatory reporting systems shall include a requirement for entities other than operators to report occasions when undeclared or misdeclared dangerous goods are discovered to the appropriate authority of the State in which they were discovered.

9.1.1.7 States' mandatory reporting systems shall include a requirement for operators to report dangerous goods occurrences in accordance with the detailed provisions in the Technical Instructions.

9.1.2 Voluntary safety reporting system

9.1.2.1 States shall establish a voluntary dangerous goods safety reporting system to collect safety data and safety information from operators that is not captured by mandatory safety reporting systems in accordance with Annex 19, 5.1.

9.1.2.2 **Recommendation.**— *States should establish a voluntary dangerous goods safety reporting system to collect safety data and safety information not captured by mandatory reporting systems for entities other than operators in accordance with Annex 19, 5.1.*

9.1.3 Safety investigations

States shall establish procedures for collecting data and information related to dangerous goods safety investigations which include, at a minimum:

- a) dangerous goods accidents and dangerous goods incidents;
- b) undeclared or misdeclared dangerous goods in cargo, mail or baggage; and
- c) other safety issues related to the transport of dangerous goods by air.

9.2 Safety data and safety information analysis

States shall establish and maintain a process to analyse the dangerous goods safety data and dangerous goods safety information from the SDCPS and associated safety databases in accordance with Annex 19, 5.2.

9.3 Safety data and safety information protection

9.3.1 States shall accord protection to dangerous goods safety data captured by, and dangerous goods safety information derived from, voluntary safety reporting systems and related sources in accordance with Annex 19, 5.3.

9.3.2 **Recommendation.**— States should extend the protection referred to in 9.3.1 to safety data captured by, and safety information derived from, mandatory dangerous goods safety reporting system and related sources in accordance with Annex 19, 5.3.

9.4 Safety information sharing and exchange

9.4.1 The State shall share and exchange dangerous goods safety information in accordance with Annex 19, 5.4.

9.4.2 If a State, in the analysis of the dangerous goods information contained in its safety data collection and processing system (SDCPS), identifies safety issues which may pose an unacceptable risk to the global aviation safety system, that State shall forward such safety information to ICAO with a minimum of delay.

Note 1.— Provisions for a SDCPS and safety information sharing and exchange between States are included in Annex 19. Further guidance is contained in the Safety Management Manual (SMM) (Doc 9859).

This may not be necessary. If it were, it would be in every Annex or at least in Annex 19.

Note 2.— Whenever practicable, the safety information sent to ICAO is to be prepared in one of the working languages of the Organization.

This may not be necessary. If it were, it would be in every Annex or at least in Annex 19.

9.4.3 States shall provide ICAO with dangerous goods information from their SDCPS upon request to address global safety issues related to the transport of dangerous goods.

9.4.4 States shall participate in cooperative efforts with other States with the aim of eliminating unsafe practices and non-compliance with the Technical Instructions.

9.4.5 States' cooperative efforts shall include coordination of investigations of dangerous goods accidents and dangerous goods incidents, identified safety issues related to the transport of dangerous goods, non-compliance with the Technical Instructions and enforcement actions.

CHAPTER 10. DANGEROUS GOODS SECURITY PROVISIONS

Each Contracting State shall establish dangerous goods security measures, applicable to entities in the supply chain engaged in the transport of dangerous goods by air, to be taken to minimize theft or misuse of dangerous goods that may endanger persons, property or the environment. These measures should be commensurate with security provisions specified in other Annexes and the Technical Instructions.
