



WORKING PAPER

**DANGEROUS GOODS PANEL (DGP)
WORKING GROUP MEETING (DGP-WG/26)**

Agenda Item 3: Facilitating safe transport of dangerous goods by air (Ref: REC-A-DGS-2029)

**PROPOSAL FOR THE DEVELOPMENT OF AN ICAO DANGEROUS GOODS
PROFESSIONAL MANAGEMENT COURSE**

(Presented by E. Gillett)

SUMMARY

This working paper proposes the development of an ICAO Dangerous Goods Professional Management Course (DGPMC) to support the effective implementation of Annex 18 — *The Safe Transport of Dangerous Goods by Air*, the *Technical Instructions for the Safe Transport of Dangerous Goods by Air* (Doc 9284) and State Safety Programme (SSP) responsibilities.

While existing dangerous goods training programmes provide extensive training for operational personnel, instructors and inspectors, there is currently no structured professional development pathway designed to develop the leadership, governance and programme-management competencies required to manage a State dangerous goods programme.

The working paper proposes that the Dangerous Goods Panel (DGP) support a recommendation to the Air Navigation Commission (ANC) that the Secretariat undertake a feasibility study, in coordination with the ICAO Global Aviation Training Office and interested experts, to determine the need, scope, delivery model and resource implications of such a programme.

Action by the DGP-WG is in paragraph 3.

1. INTRODUCTION

1.1 International Civil Aviation Organization (ICAO), Member States and industry organizations have developed a range of dangerous goods training programmes supporting implementation of Annex 18 and the Technical Instructions. These programmes provide important competencies for operational personnel, instructors, inspectors and other dangerous goods specialists.

1.2 The implementation and management of a State dangerous goods programme requires competencies extending beyond technical dangerous goods knowledge and inspection skills. Personnel

may be required to oversee regulatory development, approvals and exemptions, oversight systems, occurrence reporting, safety performance monitoring, SSP implementation, stakeholder engagement, international coordination and emerging risks.

1.3 The amendments to Annex 18 currently under development and the forthcoming ICAO guidance material on oversight and management of the safe transport of dangerous goods by air further emphasize the importance of effective State management and oversight systems.

1.4 While current dangerous goods training programmes effectively support the development of technical specialists, instructors and inspectors, no structured professional development programme currently exists to prepare personnel for the broader leadership and programme-management responsibilities associated with managing a State dangerous goods programme.

2. DISCUSSION

2.1 The dangerous goods operating environment continues to evolve in response to emerging technologies, new business models and changing operational risks. States are increasingly required to address:

- a) lithium battery risks;
- b) undeclared and hidden dangerous goods;
- c) dangerous goods in mail;
- d) e-commerce supply chains;
- e) competency-based training and assessment systems;
- f) RPAS operations involving dangerous goods;
- g) oversight of operator safety risk assessments;
- h) occurrence reporting and investigation;
- i) safety data analysis and performance monitoring;
- j) implementation of State Safety Programme principles; and
- k) risk-based and performance-based oversight approaches.

2.2 The competencies required to effectively manage these responsibilities are often acquired over many years through exposure to different sectors of the dangerous goods system, including operators, handling agents, freight forwarders, designated postal operators and other regulated entities. Opportunities to acquire this breadth of experience are not uniformly available across all States, creating challenges for capacity building, succession planning and the long-term sustainability of dangerous goods oversight programmes.

2.3 ICAO has recognized similar requirements within the aviation security domain through the Aviation Security Professional Management Course (PMC), developed by ICAO in collaboration with the John Molson School of Business at Concordia University. The programme combines aviation security subject matter with leadership and management competencies to support the implementation of State aviation security programmes. A similar approach could support Annex 18 implementation by providing a structured professional development pathway for current and future leaders of State dangerous goods programmes.

2.4 Subject to further study, a DGPMC could address:

- a) governance, organization and management of State dangerous goods programmes;
- b) implementation of Annex 18 and the Technical Instructions;
- c) management of State dangerous goods responsibilities, including those identified in Table S-13 of the Supplement to the Technical Instructions;
- d) oversight systems, approvals and surveillance programmes;
- e) oversight of operator safety risk assessments;
- f) SSP implementation, including State Safety Risk Management, State Safety Assurance and State Safety Promotion;
- g) occurrence reporting, investigation and corrective action management;
- h) safety performance monitoring and continuous improvement;
- i) competency-based training governance;
- j) compliance and enforcement strategies;
- k) management of emerging risks;
- l) stakeholder and inter-agency coordination;
- m) international obligations and audit preparedness; and
- n) leadership, organizational management and strategic planning.

2.5 The proposed programme would complement, rather than replace, existing dangerous goods operational, instructor and inspector training programmes and would focus on the competencies required to lead and manage State dangerous goods programmes.

3. ACTION BY THE DGP-WG

3.1 The DGP-WG is invited to:

- a) recognize the value of establishing a structured professional development pathway for personnel responsible for managing State dangerous goods programmes;
- b) agree that existing dangerous goods training programmes primarily address technical, instructional and inspection functions and do not provide a comprehensive programme-management qualification for State dangerous goods personnel;
- c) endorse the development of a feasibility study on the establishment of an ICAO Dangerous Goods Professional Management Course (DGPMC); and
- d) recommend that the Air Navigation Commission task the Secretariat, in coordination with the ICAO Global Aviation Training Office and interested experts, to conduct the feasibility study as presented in the appendix to this working paper.

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APPENDIX

DRAFT TERMS OF REFERENCE FOR FEASIBILITY STUDY

Objective

To determine the feasibility, scope, delivery model and resource implications of establishing an ICAO Dangerous Goods Professional.

Management Course (DGPMC) to support the development of current and future leaders of State dangerous goods programmes.

Scope

The feasibility study should:

- a) assess the competencies required to effectively manage State dangerous goods programmes;
- b) identify competency gaps not currently addressed through existing dangerous goods technical, instructor and inspector training programmes;
- c) examine State responsibilities arising from:
 - 1) Annex 18;
 - 2) the Technical Instructions;
 - 3) the Supplement to the Technical Instructions;
 - 4) SSP implementation requirements; and
 - 5) associated ICAO guidance material;
- d) identify the target audience for the proposed programme;
- e) develop a proposed competency framework for graduates;
- f) identify potential course structure, duration and delivery methods;
- g) evaluate opportunities for partnerships with universities or other academic institutions;
- h) evaluate opportunities to integrate the programme within ICAO's Global Aviation Training framework;

- i) assess resource requirements, funding models and implementation options;
- j) identify opportunities to establish a professional network supporting continued exchange of expertise and best practices among graduates; and
- k) develop recommendations for consideration by the DGP and ANC.

Deliverables

The feasibility study should produce:

- a) a business case for the programme;
- b) a proposed competency framework;
- c) a draft syllabus and course structure;
- d) recommended delivery and partnership models;
- e) estimated resource requirements; and
- f) an implementation roadmap, including recommendations on whether a DGP Job Card should be established for course development.

Reporting

The results of the feasibility study should be presented to a future meeting of the DGP for consideration and, as appropriate, subsequent review by the Air Navigation Commission.

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