



IAEA

International Atomic Energy Agency

Atoms for Peace and Development

Open-Ended Meeting of Legal and Technical Experts on the Draft Code of Conduct on the Facilitation of the Safe and Secure Transport of Radioactive Material

IAEA Headquarters, Vienna, Austria

15–18 July 2024

Ref. No.: EVT 2304695

Information Sheet

Introduction

A robust regulatory framework exists for safe and secure transport of radioactive material that applies to all modes of transport. Safety requirements are established in the IAEA Regulations for the Safe Transport of Radioactive Material (IAEA Safety Standards No. SSR-6 (Rev. 1)), while security is governed by the IAEA Nuclear Security Recommendations on Physical Protection of Nuclear Material and Nuclear Facilities (IAEA Nuclear Security Series No. 13) and the IAEA Nuclear Security Recommendations on Radioactive Material and Associated Facilities (IAEA Nuclear Security Series No. 14).

Despite this framework, denials of and delays in shipment of radioactive materials can take place, which can affect, *inter alia*, the provision of medical treatment and diagnosis, the selection of routes and modes of shipment, and the predictability of transport.

Upon the request of IAEA General Conference¹, the Denial of Shipment Working Group (DoS WG) was established for a four-year period (2023–2026). At its second meeting from 24 to 28 July 2023, also in accordance with requests of the IAEA General Conference², the DoS WG prepared a draft Code of Conduct

¹ OP 79 of Resolution GC (65)/RES/8

² OP 81 of GC (63)/RES/7, OP 81 of GC(64)/RES/9, OP 80 of GC(65)/RES/8 and OP 87 of GC(66)/RES/6

on the Facilitation of Safe and Secure Transport of Radioactive Materials (hereinafter “CoC on Facilitation”). The IAEA General Conference in its Resolution, namely OP 95 of GC (67)/RES/7, further requested the Secretariat to consider the next steps on the CoC on Facilitation. The Secretariat is organizing this event as a next step on the CoC on Facilitation.

Objectives

The purpose of the event is to discuss the draft Code of Conduct on the Facilitation of the Safe and Secure Transport of Radioactive Material submitted by the Denial of Shipment Working Group, pursuant to IAEA General Conference resolution GC(67)/RES/7, and to provide a report that summarizes the discussions and conclusions reached and formulates clear recommendations for a path forward.

Target Audience

The event is primarily intended for legal and technical experts from States involved in the safe and secure transport of radioactive material including the transit States. The international transport of radioactive material also involves various national policy making organs and authorities responsible for import and export authorizations, emergency planning, physical protection and nuclear security, and modes of transport therefore policy experts may also participate. Participants should have experience in the authorization of shipments and routes, package design approvals, regulating carriers including establishment, implementation, and supervision of provisions for safe and secure transport of radioactive material. States are invited to designate one or more participants for this event.

The experts from interested International and Non-Governmental Organisations, which may have a role to facilitate the safe and secure transport of radioactive materials are also encouraged to participate. These may include experts in health provision or occupational health, international trade and development, logistics and transport.

Participants wishing to share their experiences relating to **facilitation of safe and secure transport of radioactive material or policies on import-export of radioactive material and provision of ports to handle radioactive material**, in a manner that fulfils or exceeds the current international regulatory framework particularly IAEA Regulations for the Safe Transport of Radioactive Material, 2018 Edition (SSR-6, Rev. 1), IAEA Nuclear Security Recommendations on Physical Protection of Nuclear Material and Nuclear Facilities (IAEA Nuclear Security Series No. 13) and the IAEA Nuclear Security Recommendations on Radioactive Material and Associated Facilities (IAEA Nuclear Security Series No. 14) are encouraged to provide presentations on implementation approaches for the provisions of IAEA Safety Standards and Nuclear Security Recommendations on transport of radioactive material. Files of the presentations should be provided to the Secretariat by **Thursday, 21 June 2024**.

Working Language

English.

Expected Outputs

The main expected output of the event will be that States discuss the draft Code of Conduct on the Facilitation of the Safe and Secure Transport of Radioactive Material submitted by the Denial of Shipment Working Group, and provide a report that summarizes the discussions and conclusions reached and formulates clear recommendations for a path forward.

Participation and Registration

All persons wishing to participate in the event have to be designated by an IAEA Member State or should be members of organizations that have been invited to attend.

In order to be designated by an IAEA Member State or invited organization, participants are requested to submit their application via the InTouch+ platform (<https://intouchplus.iaea.org>) to the competent national authority (Ministry of Foreign Affairs, Permanent Mission to the IAEA or National Atomic Energy Authority) or organization for onward transmission to the IAEA by **14 June 2024**, following the registration procedure in InTouch+:

1. Access the InTouch+ platform (<https://intouchplus.iaea.org>):
 - Persons with an existing NUCLEUS account can sign into the platform with their username and password;
 - Persons without an existing NUCLEUS account can register [here](#).
2. Once signed in, prospective participants can use the InTouch+ platform to:
 - Complete or update their personal details under ‘Complete Profile’ and upload the relevant supporting documents;
 - Search for the relevant event under the ‘My Eligible Events’ tab;
 - Select the Member State or invited organization they want to represent from the drop-down menu entitled ‘Designating Authority’ (if an invited organization is not listed, please contact InTouchPlus.Contact-Point@iaea.org);
 - If applicable, indicate whether financial support is requested and complete the relevant information (this is not applicable to participants from invited organizations);
 - Based on the data input, the InTouch+ platform will automatically generate the Participation Form (Form A) and/or the Grant Application Form (Form C);
 - Submit their application.

Once submitted through the InTouch+ platform, the application, together with the auto-generated form(s), will be transmitted automatically to the required authority for approval. If approved, the application, together with the applicable form(s), will automatically be sent to the IAEA through the online platform. NOTE: The application for financial support should be made, together with the submission of the application, by **14 June 2024**.

For additional information on how to apply for an event, please refer to the [InTouch+ Help](#) page. Any other issues or queries related to InTouch+ can be sent to InTouchPlus.Contact-Point@iaea.org.

Selected participants will be informed in due course on the procedures to be followed with regard to administrative and financial matters.

Participants are hereby informed that the personal data they submit will be processed in line with the [Agency's Personal Data and Privacy Policy](#) and is collected solely for the purpose(s) of reviewing and assessing the application and to complete logistical arrangements where required. The IAEA may also use the contact details of Applicants to inform them of the IAEA's scientific and technical publications, or the latest employment opportunities and current open vacancies at the IAEA. These secondary purposes are consistent with the IAEA's mandate. Further information can be found in the [Data Processing Notice](#) concerning IAEA InTouch+ platform.

Expenditures and Grants

No registration fee is charged to participants.

It should be noted that the Secretariat will provide the resources necessary for the efficient work of the event; however, all costs arising from the attendance of designated participants as well as additional experts in the event, including travel and per diem expenses, are expected to be borne by their respective Governments or organisations.

The IAEA might have limited funds at its disposal to help meet the cost of attendance of certain participants. Upon specific request, such assistance may be offered to normally one participant per country, provided that, in the IAEA's view, the participant will make an important contribution to the event.

The application for financial support should be made, together with the submission of the application, by **14 June 2024**.

Venue

The event will be held at the Vienna International Centre (VIC), where the IAEA's Headquarters are located. Participants must make their own travel and accommodation arrangements.

General information on the VIC and other practical details, such as a list of hotels offering a reduced rate for IAEA participants, are listed on the following IAEA web page:

www.iaea.org/events.

Participants are advised to arrive at Checkpoint 1/Gate 1 of the VIC one hour before the start of the event on the first day in order to allow for timely registration. Participants will need to present an official photo identification document in order to be admitted to the VIC premises.

Visas

Participants who require a visa to enter Austria should submit the necessary application to the nearest diplomatic or consular representative of Austria at least four weeks before they travel to Austria. Since Austria is a Schengen State, persons requiring a visa will have to apply for a Schengen visa. In States where Austria has no diplomatic mission, visas can be obtained from the consular authority of a Schengen Partner State representing Austria in the country in question.

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Subsequent correspondence on scientific matters should be sent to the Scientific Secretary and correspondence on other matters related to the event to the Administrative Secretaries.



SECOND MEETING OF THE DENIAL OF SHIPMENT WORKING GROUP

24–28 July 2023

IAEA Headquarters, Vienna, Austria

MEETING REPORT

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Day 1: Monday 24 July 2023 (Plenary)

1. Opening of the Meeting

The Second Meeting of the Denial of Shipment Working Group (DoS WG) was held in Vienna, from 24-28 July 2022 to discuss the progress of the DoS WG and the related sub-working groups, and to prepare outcomes to be presented at the 67th regular session of the IAEA General Conference. The meeting was attended by twenty-six (26) designated members of the DoS WG from fourteen (14) Member States, two international organizations and five non-governmental organizations. The list of meeting participants is placed in Annex I.

The meeting was opened by Ms Anna Clark, Acting Director, Division of Radiation, Transport and Waste Safety (NSRW), who welcomed the participants and expressed her sincere appreciation to all the registered members and the leadership of DOS WG for their efforts in progressing with the assigned tasks. Ms Clark underlined the need to clearly define DoS problem, critically examine its direct relationship with or its potential impact on safety and security of radioactive material and find sustainable solutions. To address this, the working group was asked to collect the data, perform deep analysis of potential root causes, safety, and security implications and to define proposed solutions. Ms Clark stressed upon the role of Member States in appropriately ensuring the implementation of the international legal and regulatory framework for safe transport of radioactive material (Class-7 dangerous goods) in domestic environment and highlighted the importance of global cooperation and coordination between competent authorities and other interested parties.

The meeting was chaired by Mr P. Alvano (DoS WG chair) from the Italian National Inspectorate for Nuclear Safety and Radiation Protection and co-chaired by Ms T. Soulsby from Nordion (Canada) Inc. The agenda was adopted and is attached in Annex II.

2. Selection of Chairs/Co-Chairs for Sub Working Group (SWGs)

The structure of the DoS WG, as agreed during the previous meeting in January 2023, included the establishment of the following three Sub-Working Groups (SWGs):

- SWG-1: DoS Data Collection, Analysis and Metrics
- SWG-2: Possible Solutions for DoS Problem
- SWG-3: Awareness, Training and Outreach

and chairs and co-chairs of each SWGs were appointed as follows:

- SWG-1: Mr. Alastair Brown from Nuclear Transport Solutions (UK) as chair and Ms. Franchone Oshinowo from Edlow International Company (USA) as co-chair.

- SWG-2: Mr. Ulrich Zimmermann from Paul Scherrer Institute (Switzerland) as chair and Mr. Joe Moussa from the Norwegian Radiation and Nuclear Safety Authority as co-chair.
- SWG-3: Ms. Alena Bujnova from the Ministry of Transport of the Slovak Republic as chair and Mr. Simon Chaplin from WNTI as co-chair.

Mr. Moussa and Ms. Bujnova are not able to continue their roles in DoS WG. In accordance with the Terms of Reference of the DoS WG, new co-chair for SWG-2 and new chair for SWG-3 were proposed and agreed as follows:

- SWG-2 co-chair: Mr Alejandro Leciñana Blanchard (Argentina);
- SWG-3 chair: Mr Natanael de Carvalho Bruno (Brazil).

3. Presentations: Examples of DoS from Different Operators' Perspectives

Ms M. Ginoux from CMA CGM provided a perspective of an international maritime company and a global overview on the acceptance of Class 7 by various global ports and terminals. Examples of DoS were presented, including difficulties experienced by industry to engage with local authorities particularly during transit.

Ms F. Oshinowo (WNA/Edlow International) shared experience as a freight forwarder for nuclear fuel cycle materials. Examples of DoS were presented, and difficulties experienced by industry to engage with local authorities.

Mr C. G. Tanner (GEA) provided an explanation about how the express delivery chain put in place by the Global Express Association transport companies works and highlighting the regulatory complexity they face when planning a shipment of radioactive material.

Ms Anne Presta (Orano) provided details about the current French industry challenges with reference to nuclear material transportation. Examples were given about difficulties encountered for loading and unloading operations in a French port terminal and for transit operations in Mexican port terminal.

4. Miscellaneous Topics

Mr. S. Gorlin from WNA provided a summary of the DoS Plenary session of the International Symposium on the Packaging and Transportation of Radioactive Materials-PATRAM 2022 which was held in Juan-Les-Pins, France from 11-15 June 2023, including the feedback received from audience. He mentioned that this provided the opportunity to develop understanding about the problem of DoS among diverse audience present there.

Ms. S. Fayyaz, Unit Head, Transport Safety Unit, Regulatory Infrastructure and Transport Safety Section (RIT), NSRW explained the role of compliance assurance programme for safe transport of radioactive material developed by the Member States for ensuring compliance with

IAEA Safety Standards Series No. SSR-6 (Rev. 1) during both domestic and international transport of radioactive material. Ms Fayyaz mentioned that IAEA Specific Safety Guide SSG-78 on Compliance Assurance for the Safe Transport of Radioactive Material provides guidance on the establishment of liaison with national stakeholders and stresses on the need of liaison with the relevant competent authorities of countries of origin of package design and shipment.

Presentations were followed by the discussion which included:

- Lack of harmonization among different national regulations.
- Different commercial policies being developed for transport of dangerous goods and how they can affect the efficiency of the global supply chain.
- Lack of coordination between competent authorities may cause the delays in the planning stage of shipment.
- Lack of political commitment to facilitate transport of radioactive material by the Member States particularly in case of transit or transshipment.
- Challenges to identify “standard” root causes.
- Absence of safety and security reasons for justifying the delays or denials of transport of radioactive material.

Group members made comments and suggestions, including:

- (U. Schwela) IAEA and IMO to collect deviations/variations (as mentioned in Annex-I of SSR-6 Rev. 1) in national regulations related to import/export, transit, insurance, routes, carrier’s policy as in ICAO Technical Instructions for the Safe Transport of Dangerous Goods by Air.
- (IMO) offered to provide a platform upon request of IAEA to collect information from Members States on deviations when dealing with radioactive material.
- (Brazil) raised the issue related to the importance of having an RPO nominated within port terminals, customs, airports to advise those dealing with transport of radioactive material.
- (S. Gorlin) consider policies such as priority take-off and landing of aircraft carrying radioactive material consignments.
- (IMO and ICAO) suggested IAEA to involve International Labour Organization and World Custom Organization in the DoS discussions.
- (ICAO) urged IAEA to bring DoS issues forward to the CEB (UN Chief Executive Board) to make other international organizations aware of these issues.

5. Discussion and Revision on Terms of Reference (ToRs)

Mr Hilaire Mansoux, Section Head, RIT, NSW provided an explanation of some edits proposed in May 2023 by Ms Hildegard Vandenhove, NSW Director on the ToRs agreed during the January 2023 DoS WG meeting. The edits were accepted by the DoS WG. Subsequently, Mr. Alvano presented the revised version of the DoS WG ToR, which were agreed upon by the WG after a brief discussion on Day 5 of the meeting. The revised ToRs are attached in Annex III.

Day 2: Tuesday 25 July 2023

6. Sub-Working Groups' Break Out Session

The discussion within the three SWGs were focused on the following points:

- Development of common understanding within WGs for denial of shipment issues, root causes, potential consequences and interface with safety and security
- Additional elements for the characterization of the problem
- Correlation of root causes and potential solutions
- Communication strategies, awareness program, training material etc.

Day 3: Wednesday 26 July 2023 (Plenary)

7. Progress of Sub Working Groups

7.1 Progress of Sub Working Group 1, presented by Mr. Alastair Brown, SWG-1 Chair

Mr. Brown provided a progress report of the SWG-1 which included development and review of National Focal Point (NFP) questionnaire, competent authority questionnaire, industry questionnaire, NFP's roles and responsibilities, analysis of DoS cases.

SWG-1 collated the reasons for denials and delays (based on general assessment of past and current cases shared at different international forums) and presented these in a diagram to assist with understanding and communication. There were discussions on the root causes, however the conclusion was that there are many interlinked reasons, mainly based on the perceptions of class 7 – concerns about the safety and security risks associated with transport of radioactive material. The top-level reasons were grouped under the topics of Risk, Economics, Complexity and the Human Element. The same is provided in Annexe IV.

7.2 Progress of Sub Working Group 2 by Mr. Ulrich Zimmermann SWG-2 Chair and Mr. Alejandro Lecinana, SWG-2 Co-Chair

With reference to the development of common understanding within WGs for Denial of shipment issues, root causes, potential consequences and interface with safety and security

SWG-2 noted that the list D&D Analysis drafted by the SWG-1, is a running list and need permanent review and new occurrences could be added any time. Furthermore, delay and denial can have implications on safety and security, and consequences on the use of radioactive material for medical treatment and industrial operations.

SWG-2 proposed that the transparency of the national and local regulations, administrative documents and procedures for transit countries could represent a strong additional element for the characterization of the problem. SWG-2 also considered that probably hubs and ports are not addressed in the guides and so they should be added.

Regarding the *Correlation of root causes and potential solutions* SWG-2 recognized as potential solutions different elements like the Code of Conduct on the facilitation of the safe and secure transport of radioactive material, the harmonization of the regulations, the accessibility of State variations and operator variations for all transport modes, the acceptance of transit policies and laws by Member States, the appointment of experts or consultants for technical support during transit operations in each country and the implementation of continuous procedures in addition to emergency procedures.

7.3 Progress of Sub Working Group 3, presented by Mr. Simon Chaplin, SWG-3 Co-Chair

An overview was provided of the draft communication strategy developed by the SWG-3 and proposed to share with NFPs to develop understanding and importance of timely transport of radioactive material and reduce the perception about associated risks. SWG-3 also proposed to have a webpage hosted by the IAEA on sustaining radioactive material shipments to include a resource centre of articles, PowerPoint slides with accompanying notes to be used for face-to-face meetings, FAQs, brochures and factsheets, a multi-media packages (print article, photo, essay, video-clips) focused on specific issues and infographics.

It was recommended that all material used as part of the communications strategy should be evaluated by DoS WG before launching on a cross section of the target audience. SWG-3 shared their mechanism to further work on the communication strategy which included preparation of a checklist for the purpose of evaluation; seek assistance of appropriate NGOs for evaluation; obtain stakeholder feedback through members of the DoS WG and active NFPs and determine the use and effectiveness of the material.

Day 4: Thursday 27 July 2023

8. Sub-Working Groups' Break Out Sessions (Continued)

8.1 Drafting of recommendations including text for GC Resolution

The morning session was focused on the drafting of the recommendation within the three SWGs based on the discussions that took place on Day 2 in the breakout session and on Day 3 in plenary.

8.2 Report to Plenary

SWG-1 summarised that perception of safety and security consequences were believed to be a key factor underlying denials. This, coupled with the low volumes and complexity of the regulatory framework often leads to a lack of willingness to accept transport of radioactive material. In reviewing consequences, SWG-1 considered that while there may not be a direct safety consequence of denial and delay as the transport is still compliant with the Transport Regulations, there are some implications. In particular, the security requirement to use the shortest most direct route is often impacted. In addition, longer routes and more time in the public domain can increase the risk of accidents and the dose to operators.

SWG-1 recommended that Member States should notify their national deviations to IAEA (i.e., a database maintained by IAEA) to address the lack of harmonisation between national and international regulations.

SWG-1 shared a draft industry questionnaire primarily aimed at producers and consignors which was agreed by DoS WG and is provided in Annexe V. SWG-1 will develop a list of recipients from industry groups for nuclear, industry, NORM and medical sectors.

In addition, the competent authority/NFP questionnaire developed by the SWG-1 was discussed, agreed, and is placed in Annexe VI. It was also agreed that the questionnaire will be sent to competent authorities using the information available with IAEA. The same may be shared with TRANSSC members (and NFPs where they are known).

SWG-2 provided following recommendations:

- Re-Establishment of national focal points (NFP).
- Code of conduct (CoC) on the facilitation of the safe and secure transport of radioactive material.
- DoS webpage and DoS database.

During the discussion on proposed recommendations there was consensus on the re-establishment of NFPs and a draft of a Fact Sheet to describe the role and responsibilities of the NFP was discussed and agreed and is placed in Annex VII.

Whereas on the recommendation on CoC, some members shared their observations which are as follows:

Mr. Takuji Fukuda (Japan) was concerned about the legal nature of the CoC. He declared: “Japan cannot agree the content that we cannot comply”. Mr. Takuji Fukuda also asked: “Will the CoC be reviewed for countries not participating in this DoS-WG before GC approval?”.

Ms. Safiye Tuba Ecevit (Türkiye) pointed out that:

- 1) “Additional to international regulation, compliance to national regulation needs to be considered and stated in Code of conduct on the facilitation of the safe and secure transport of radioactive material for highly acceptance of it by Member States and decreasing the delays;
- 2) A graded approach can be need for the radioactive materials that is in the scope of the CoC for the sustainability of the valuable work that will done by NFPs”.

Mr Hossein Reies Mohammad (Iran) declared that he does not agree on the contents of the Code of conduct on the facilitation of the safe and secure transport of radioactive material.

Further there was discussion on the title of the Code of conduct on the facilitation of the safe and secure transport of radioactive material. There was agreement to keep the title using the word “Facilitation” and “Safe and Secure” as they depict the objectives of CoC clearly. All further details should be discussed in a Technical Meeting to be called to discuss the draft of the CoC. The draft CoC (Rev. 5) developed by the SWG-2 is at Annex VIII. The Plenary also agreed to involve other UN Organizations as co-sponsors (IMO, ICAO, UNECE) for the CoC. ICAO and IMO requested to reflect that «no operator or carrier can be obliged to transport dangerous good» as part of ICAO TI and IMDG Code as contained in the definition of denial in the CoC.

SWG-3 recommended to launch the communication strategy which was discussed and agreed. The same is placed in Annex IX. Further there was discussion on resources to be vetted by NFP, IAEA and Member States required to consider the Group’s recommendations. It was also highlighted that all the SWGs needs to work in collaboration to avoid duplication of efforts and develop consensus.

Day 5: Friday 28 July 2023

9. Next Steps

9.1 Discussion on the outcomes to be presented at the IAEA GC in September 2023

Based on previous and current available data on denial and delay of shipment of radioactive material the DoS WG recognized that:

- a. International framework for safety and security of nuclear and radioactive material is well in place and provides an appropriate level of safety and security; however, DoS may have safety and security consequences.
- b. IMO/IMDG code and ICAO TI state that no operator can be obliged to transport dangerous goods.
- c. Main cause of denial and delay include:
 - i. deviations/variations (as mentioned in Annex-I of SSR-6 Rev.1) in national regulations related to import/export, transit, insurance, routes, carrier's policy;
 - ii. perception among interested parties about the risks;
 - iii. complexity in national and local policies related to transport of radioactive material;
 - iv. the cost of compliance relative to the profitability of transporting Class 7 leads carriers to make policies deciding not to accept the shipments of radioactive materials.
- d. NFP and regional networks played a vital role in reduction of cases of delay and denial.
- e. The IAEA would benefit from support from other UN Organizations to address the problem of denial and delay of shipments of Radioactive Material.

The DoS WG recommends that:

1. Member States harmonize national regulations with international legal and regulatory framework for safe and secure transport of radioactive material and where regulatory variations (as mentioned in Annex-I of SSR-6 Rev.1) exist, report these to IAEA, and encourages IAEA to establish and maintain a publicly accessible list of these regulatory variations reported by Member States.
2. Member States facilitate the transport of radioactive material, and identify, if they have not done so, a NFP on DoS of radioactive materials to address this issue in a satisfactory and timely manner, and to take into consideration the communication strategy developed by the DoS WG.
3. IAEA maintains a list of NFPs and a webpage on denial and delay of shipment of radioactive material.
4. IAEA calls upon an Open-Ended meeting of Legal and Technical Experts to discuss the draft Code of Conduct on the facilitation of the safe and secure transport of radioactive material.
5. Member States address this issue and the recommendations of the DoS WG in the safety resolution of the 67th regular session of the IAEA General Conference.

9.2 Finalization of comprehensive action plan of each SWG and update of the resources required

The action plan of each SWG was presented and was agreed upon. Detailed discussion is reproduced in Annex X.

Mr. Paolo Alvano presented the proposed dates for the next DoS WG meetings which are:

- Third Meeting of the DoS WG - Vienna, Austria 15–19 April 2024;
- Fourth Meeting of the DoS WG - Vienna, Austria 2–6 December 2024.

Mr. P. Alvano expressed his gratitude to all the members of the WG for their commitment and dedication during the week. Mr H. Mansoux expressed appreciation to all delegates and speakers for the discussions and the constructive debates that had taken place during the week.

Annex I: List of Participants

Second Meeting of the Denial of Shipment Working Group Vienna, Austria 24 to 28 July 2023

(As of 2023-07-24)

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Annex-II: Agenda

(EVT2302132): Second Meeting of the Denial of Shipment Working Group

24 – 28 July 2023

Opening Plenary 10h00 VIC, Board Room-CR3

Day 1: Monday 24 July 2023 (Plenary)		
1.	Opening of the meeting (10:00-10:30)	
1.1	Opening Remarks	<i>Ms Anna Clark, Acting Director, NSW Mr Hilaire Mansoux, SH-RIT/NSRW</i>
1.2	Introduction of participants, Adoption of the Agenda and Group Photo	<i>Mr Paolo Alvano, DoS WG Chair Ms Terry Soulsby, DoS WG Co-Chair</i>
2.	Selection of Chairs/Co-chairs for SWGs (10:30-11:00)	
2.1	SWG-2: Potential Solutions for DoS Problem SWG-3: Awareness, Training and Outreach	<i>Mr P. Alvano, Ms T. Soulsby</i>
3.	Presentations: Examples of DoS from different operators' perspectives (11:00-11:45)	
3.1	Denial of Shipment: the perspective of an international maritime company	<i>Ms M. Ginoux (CMA CGM)</i>
3.2	Transportation Company Perspective with Denials of Shipments	<i>Ms F. Oshinowo (WNA/Edlow International)</i>
3.3	Transport of Radioactive Material by Express Delivery	<i>Mr C. G. Tanner (WNTI/GEA)</i>
3.4	Nuclear Material Transportation - Current Main French Industry Challenges	<i>Ms Anne Presta (Orano)</i>
Lunch Break		
4.	Miscellaneous Topics (14:00-17:00)	
4.1	Summary of the DoS Plenary at PATRAM 2022	<i>Mr. S. Gorlin (WNA)</i>
4.2	Role of Compliance Assurance Programme for Safe Transport of Radioactive Material	<i>Shazia.Fayyaz, Unit Head, TSU/RIT</i>
5.	Discussion and Revision (if needed) on ToRs	
Day 2: Tuesday 25 July 2023 (09:00 – 17:00)		
6.	Sub-Working Groups' Break Out Sessions	
	Discussion: <ul style="list-style-type: none"> • Development of common understanding within WGs for Denial of shipment issues, root causes, potential consequences and interface with safety and security • Additional elements for the characterization of the problem • Correlation of root causes and potential solutions • Communication strategies, awareness program, training material etc. 	<i>SWG-1: Room # C0733 SWG-2: Room # C0735 SWG-3 Room #C0731 Combined discussions Room #CR-3</i>

Day 3: Wednesday 26 July 2023 (Plenary)		
7.	Plenary Session: Progress of Sub Working Groups (SWGs)	
7.1	Report on progress of SWG-1 Discussion on: <ul style="list-style-type: none"> • Definition of root causes and analysis methods • Potential root causes identified and their consequences • Interface with Safety and security of radioactive material • Way forward/action plan 	<i>Mr Alastair Brown, SWG Chair</i> <i>Ms Franchone Oshinowo, SWG-Co Chair</i> <i>All</i>
7.2	Report on progress of SWG-2 Discussion on: <ul style="list-style-type: none"> • Correlation between root causes and potential solution to address denial of shipment • Way forward for different potential approaches and Finalization of action plan 	<i>Mr Zimmermann Ulrich, SWG-Chair</i> <i>Mr Alejandro Lecinana, SWG Co-Chair</i> <i>All</i>
7.3	Report on progress of SWG-3 Discussion on: <ul style="list-style-type: none"> • Communication strategy in relation to the outcomes of SWG-1 and SWG-2 • Training material for relevant audience • Awareness program • DoS WG projection at different forums • Finalization of way forward/ action plan 	<i>Mr Nat Bruno SWG-Chair</i> <i>Mr Simon Chaplin SWG Co-Chair</i> <i>All</i>
RECEPTION FOR MEETING PARTICIPANTS [Salon B & C in VIC Restaurant at 17:00]		
Day 4: Thursday 27 July 2023 (09:00 – 17:00)		
8.	Sub-Working Groups' Break Out Sessions (09:00-11:30)	
8.1	Drafting of recommendations including text for GC Resolution	<i>SWG-1: Room # C0733</i> <i>SWG-2: Room # C0735</i> <i>SWG-3 Room #C0731</i> <i>Combined discussions Room #CR-3</i>
Lunch Breal		
8.2	Finalization of the recommendations by the Working Group (Plenary) (13:00-17:00)	<i>Mr P. Alvano,</i> <i>Ms T. Soulsby</i>
Day 5: Friday 28 July 2023 (Plenary) (09:00 – 12:00)		
9.	Next Steps	
9.1	Discussion on the outcomes to be presented at the IAEA General Conference in September 2023	<i>Mr P. Alvano,</i> <i>Ms T. Soulsby</i>
9.2	Finalization of comprehensive action plan of each SWG and update of the resources required	<i>Mr P. Alvano,</i> <i>Ms T. Soulsby</i>
9.3	Dates of next DoS WG meetings	<i>Mr P. Alvano,</i> <i>Ms T. Soulsby</i>
9.4	Closing	<i>Chair/Co-Chair DoS WG</i> <i>Scientific Secretary</i>

Annex-III: Terms of Reference Denial of Shipment Working Group (DoS WG)

Version 2 (July 27, 2023)

This document will be reviewed and possibly revised at each meeting of the DoS WG if need be.

Background

A robust regulatory framework has been established for safe and secure transport of radioactive material that applies to all modes of transport. The safety requirements for the transport of radioactive material are established in the IAEA Regulations for the Safe Transport of Radioactive Material, 2018 Edition (SSR-6, Rev. 1).

Despite this robust regulatory framework, denials of and delays in shipment of radioactive materials can take place, which can affect, inter alia, the provision of medical treatment and diagnosis, the selection of routes and modes of shipment, and the predictability of transport.

The Denial and Delay of Shipment issue was highlighted at the IAEA Transport Conference in 2003, and this was followed by fact-finding exercises in 2004. The IAEA General Conference then called for the establishment of a committee to address this issue, which led to the establishment of the International Steering Committee on Denial of Shipment (ISC-DOS) in 2006. The ISC-DOS met eight times, pursuing an Action Plan which led to the establishment of National Focal Points, Regional Workshops, Regional Networks and Coordinators, a Communication Strategy with supporting materials etc. The ISC-DOS was ended in 2013.

The Transport Facilitation Working Group (TFWG) was established in April 2014, following the ending of the International Steering Committee on Denial of Shipment (ISC-DOS). This was done in order to provide a level of continuity for the work that had been done by the ISC-DOS. It was formed as an independent, multi-stakeholder group of experts. Its role was to propose strategies and activities necessary to enable the efficient international transport of radioactive materials.

Among the activities undertaken, the TFWG established a website (tfwg.info), organised side meetings at IAEA GC, and carried out industry surveys, which showed that planning times have increased and that supply chains are fragile, often relying on very few carriers or routes; the effects of the pandemic on transport underlined the fragility of Class 7 transport. It also advocated for the reactivation of the National Focal Point (NFP) network, and conducted an online webinar to explain the roles and responsibilities of a NFP, which was well attended and included an address by the IAEA DG Rafael Grossi. In 2019, the IAEA General Conference issued Resolution GC(63)/RES/9 paras 80 and 81, and the IAEA held two Technical Meetings on Denials of Shipment — Issues and Solutions and Development of the Terms of Reference for the Denial of Shipment Working Group virtually, from 23 to 26 March 2021 and from 17 to 19 August 2021 respectively. Later on, as an outcome of these meetings and in response to IAEA General

Conference Resolution GC(65/RES/8) para 79 and 80, the Denial of Shipment Working Group (DoS WG) has been established for a four-year period (2023–2026).

Objective

The Denial of Shipment Working Group (DoS WG) objective is to consider the options for addressing denials of and delays in shipment of radioactive materials, which may include the proposal of a code of conduct on facilitation of transport. The options should encourage efforts to avoid and address problems related to denials of and delays in the shipment of radioactive material, to achieve a satisfactory and timely resolution of this issue.

Functions

1. Evaluate the root causes and extent of the issue of denial and delay of shipment and develop metrics to review this periodically.
2. Consider potential solutions for addressing denials of and delays in shipment, which may include a code of conduct on facilitation of transport. This consideration should include a review of the successes and less successful aspects of the International Steering Committee on Denials of Shipment of Radioactive Material that met from 2006-2013.
3. Develop awareness, training and communication strategies for various interested parties involved.

Membership

DoS WG membership is open to all Member States, including their Competent Authorities, and to all other interested parties such as international organizations, and non-governmental organizations.

Structure and working methodology.

The DoS Working Group Chair shall be a representative from a Member State, supported by a Co-Chair, who will manage the activities and monitor the progress of the group. The Chair/Co-chair will be selected by the DoS WG for its four-year term.

In the event of a Chair/Co-Chair standing down before the end of the four-year term, the DoS WG will re-select a Chair/Co-Chair, at the earliest opportunity, to serve for the remaining term.

The DoS WG will meet in person at least annually to review the progress and discuss the way forward.

Other means of communication, such as email correspondence or virtual meetings may be used to follow-up on the activities when required.

The IAEA Secretariat will provide the necessary support for the smooth working of the DoS WG.

The DoS WG Chair/Co-Chair will prepare the report of the meetings and this will be made available for the DoS WG members.

The DoS WG will seek to achieve its objectives by means of three (03) sub-working groups (SWGs) namely:

- (i) Sub-Working Group 1 (SWG-1): DoS Data Collection (denial of shipments and delays in shipments and their root cause analysis, efficiency of actions proposed by previous ISC-DOS), Analysis and Metrics
- (ii) Sub-Working Group 2 (SWG-2): Potential solutions to address the DoS Problem
- (iii) Sub-Working Group 3 (SWG-3): Awareness, Training and Outreach

DoS WG Members can participate in any of the SWGs as appropriate. Each SWG will select a Chair and Co-Chair for its four-year term.

In the event of a SWG Chair/Co-Chair standing down before the end of the four-year term, the appropriate DoS SWG will re-select a Chair/Co-Chair, at the earliest opportunity, to serve for the remaining term.

The SWG Chair(s)/Co-Chair(s) will maintain a list of members which will be shared with the IAEA Secretariat, if updated.

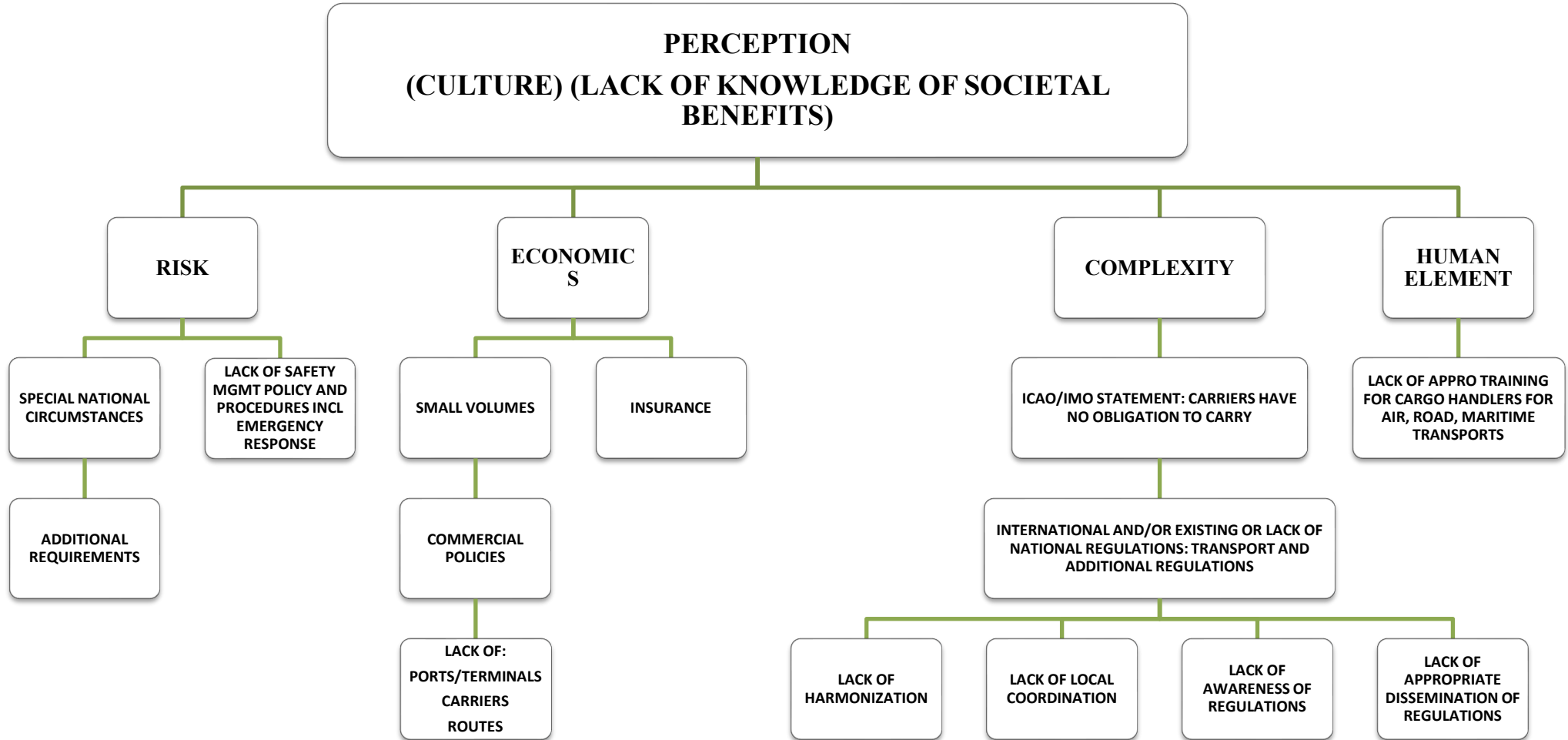
Each SWG will develop a workplan which will be updated after every DoS WG meeting.

The DoS SWG Chair(s)/Co-Chair(s) will manage the activities and monitor the progress of their respective groups, coordinate with the other SWG and report their progress to the DoS WG. The SWG reports will be made available for the DoS WG members.

The meeting reports of the Group will be shared by the secretariat through official reporting channel for General Conference. The Group members may also share the meeting reports with respective Permanent Missions.

In addition, the Group will inform the Secretariat about what to include in the GC resolution, if need be.

Annex-IV: Perception (Culture) (Lack of Knowledge of Societal Benefits)



Annex-V: Industrial Survey
IAEA Industry Survey on Radioactive Material (Class 7)
International Transport Experience
27 July 2023

Please answer these questions based upon international transport only, i.e. when the Origin and Destination are in different countries.

1. Contact information

Name	Email Address
Organization	Phone Number
Country	

2. To which sector(s) does your organization belong?

Medical	Industrial (Portable Gauges, Radiography, Accelerators, etc.)
Research and Development Facilities	Nuclear Industry
Mining / Minerals	Other (please specify)

3. Please mark the cargoes that your organization ships

Exempt quantities of Radioactive Materials	Special Form Radioactive Material
Radioactive Material in excepted packages	Low Dispersible Radioactive Material
Low Specific Activity Material	Fissile Excepted Material
Surface Contaminated Objects	Fissile Material
Radioactive Material in other form	Uranium Hexafluoride

4. How many Class 7 shipments* does your organization carry out each year?

* Shipment means a complete transfer of a package(s) from Consignor to Consignee.

< 5	51-100
5-10	>100
11-50	

5. What percentage of shipments are organized in house and what percentage via logistic companies?

6. What is the average number of packages in each shipment?

7. Between which countries do you mainly ship Class 7?

8. To what extent do you use the following modes as the primary mode for Class 7 transport. Select as many as applicable.

	Percentage
Air	
Maritime	
Road	
Rail	
Inland Waterway	

9 To what extent does your organization rely on transit* or transshipment when shipping its Class 7 cargoes?**

*transit: The cargo must pass through intermediate ports/airports/ land border crossings.

**transshipment: The cargo must transfer from one means of transport to another during shipment.

	Percentage
Transit	
Transshipment	

10. Please respond to the items below choosing the statements that most accord with your organization's experience:

Availability of carrier services to primary destination

Number of regularly used and reliable carriers

Number of alternative carriers

Availability of carrier services to other destination

Number of regularly used and reliable carriers

Number of alternative carriers

Availability of routes to primary destination

Number of regularly used routes

Number of alternative routes

Availability of routes to other destination

Number of regularly used routes

Number of alternative routes

Planning times for shipments (choose one)

Predictable and efficient

Quite predictable and efficient

Quite unpredictable and inefficient

Unpredictable and inefficient

Execution of shipments (choose one)

Predictable and efficient

Quite predictable and efficient

Quite unpredictable and inefficient

Unpredictable and inefficient

Compared to the most direct route, how long do shipments take to reach their destination (choose one)

Shipments spend minimum time in transit

Shipments spend a little additional time

Shipments spend quite a lot longer

Shipments spend a lot longer

11. How is the situation compared to pre-Covid (up until 2020)?

Greatly improved

Improved

Stayed the same

Deteriorated

Greatly deteriorated

Other (please specify)

12. Complete the sentence in a way that most accords with your organization's experience:

Since 2020, planning times for Class 7 shipments have:

Greatly decreased

Decreased

Stayed the same

Increased

Greatly increased

13. Please could you share any specific examples* of denial and delay of shipments and their effects**

* Examples could be related to ports, carriers, regulations, local authority policies, etc.

** Effects could include delay in receiving medical treatment, risks to security of supply, indirect transport route, etc.

1) Example / Effect / Reason for delay/ Predictability of delay

2) Example / Effect / Reason for delay/ Predictability of delay

3) Example / Effect / Reason for delay/ Predictability of delay

Comments: Please provide any additional comments you may have.

Annex-VI: National Focal Point Questionnaire

25/7/2023

Questionnaire for National Competent Authorities and National Focal Points if available

The IAEA has established a Denial of Shipment Working Group (DoS WG) to (inter alia) assess the current situation with class 7 transport and associated denials and delays and make proposals to reduce the impact of denials and delays of shipment of radioactive materials. As part of the working group's data gathering, there are two questionnaires: one for National Focal Points or Competent Authorities and one for Industry.

This questionnaire is for National Focal Points or Competent Authorities and aims to gain an overview of the availability of class 7 transport options (carriers, seaports, airports land border-crossings), current issues with denial and delay and help Member States evaluate the resilience of transport in their country. The DoS WG very much appreciates your support in completing and returning this questionnaire.

Purpose

To gain an overview of the availability of class 7 transport options) and current issues with denial and delay in each country from the viewpoint of the National Focal Point or Competent Authority.

To identify National differences in application of the international regulations.

To identify national contact points.

To identify key import export points

Member State	
Organisation completing this Questionnaire	
Contact details for any follow up	Name: _____ Email address: _____ Telephone: _____
Regulatory contact points for radioactive material transport by mode.	
Road	Name: _____ Organisation: _____ Email address: _____ Telephone: _____
Rail	Name: _____ Organisation: _____ Email address: _____ Telephone: _____
Air	Name: _____ Organisation: _____ Email address: _____ Telephone: _____
Sea	Name: _____ Organisation: _____ Email address: _____ Telephone: _____
Inland Waterway	Name: _____ Organisation: _____ Email address: _____ Telephone: _____
Sectors transporting radioactive material in Member State	Nuclear: Yes / No NORM: Yes / No Industrial: Yes / No Medical: Yes / No Research: Yes / No
Approximate number of shipments by sector each year (if known)	Nuclear: _____ NORM: _____ Industrial: _____

	Medical: _____ Research: _____
Approximate number of import and export or transit shipments per year (if known)	Import: _____ Export: _____ Transit: _____
Number of licenced carriers (if applicable)	Road: _____ Rail: _____ Inland Waterway: _____ Air: _____ Sea: _____
Are there any key variations to the IAEA Transport Regulations (SSR-6) in your Member State's Regulation? If so, please identify these by mode.	
Are there any customs specific requirements for class 7 (import and export)? If so, please identify these.	
Are there any specific requirements for transit of class 7, including requirements for ship calls at ports where material is not unloaded, regardless of destination (if applicable)? If so, please identify these.	
Are there any specific requirements for trans-shipment of class 7, regardless of destination? If so, please identify these.	
Are there any specific requirements for transit of class 7 through airports, regardless of destination? If so, please identify these.	
Are there any security regulations which restrict import or export of class 7 materials (and could contribute to denial or delay)? If so, please identify these.	
Are there any specific requirements for heavy and/or oversize load shipments which restrict class 7 shipments? If so, please identify these.	
Which airports accept class 7 imports, exports or transits and are there any restrictions?	
Which sea ports (if applicable) accept class 7 imports, exports, transits or transshipments and are there any restrictions?	
Which land border crossings (if applicable) accept class 7 imports or exports and are there any restrictions?	
Are there any particular issues with denial and delay of shipments to / from your Member State?	

Annex-VII: Factsheet: National Focal Point (NFP) for Denial and Delay of Shipment

Purpose

A National Focal Point (NFP) for denial and delay of shipment of radioactive material acts as an interface between governments and those entities directly involved in the radioactive material transport chain including various authorities and industry. The NFP needs to identify and validate reported difficulties of delay and denial as well as coordinate and communicate with stakeholders aiming to find solutions.

If more than one «NFP» is designated by a Member State, the responsibilities of each «NFP» must be clearly described and defined. Any change of the NFP designation should be promptly reported to IAEA (Division of Radiation, Transport and Waste Safety).

Requirements for the function «NFP»

- NFP should be familiar with the practical procedures and regulations for the safe and secure transport of radioactive materials.
- NFPs are normally from within the national competent authority. NFPs can also come from technical support organisations or government sponsored organisations.
- The resources depend on the extent of DoS, the quantity of import / export / transit radioactive material, the transport modes used in the country and the size and amount of infrastructure.

General tasks

1. SUPPORT

Network Management of all involved parties and share information, discuss with involved parties DoS occurrence to facilitate a solution, establish action plan with relevant interested parties, coordinate and facilitate solutions using the network of experts.

2. PREVENT

Prepare proposals for possible improvements to reduce DoS, identify and communicate lessons learnt, share information
Collect DoS information for their member state, and provide to IAEA for inclusion in the DoS database
Collect data to identify difficulties (preventive action)

3. REPORT

Provide feedback to the national network and for each occurrence to the relevant interested parties. Report annually to the national network, the national authority and IAEA (Division of Radiation, Transport and Waste Safety)

Further tasks

1. Identify national needs including training to minimize DoS with the cooperation of the network, Interested Parties and other agencies;
2. Take into consideration the DoS WG communication strategy.
3. Understand the main routes for import / export and transit – including land borders, ports and airports used for shipping radioactive material at a national level.
4. Liaising with regional and international organizations
Take part in a network of NFPs at a regional level to understand problems and facilitate solutions; communicate through IAEA with international organizations such as ILO, IMO, ICAO (IATA), UNECE and WCO.
5. Encourage to share the identified differences between national regulations and international regulations for the transport of radioactive materials.
6. The NFP should participate to the annual meetings of NFP organized by IAEA.
7. Succession planning should be taken into account.

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5 **CODE OF CONDUCT ON THE FACILITATION**
6 **OF THE SAFE AND SECURE TRANSPORT OF**
7 **RADIOACTIVE MATERIAL**

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10 促进放射性物质安全可靠运输行为准则

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13 **CODE DE CONDUITE POUR LA FACILITATION**
14 **DU TRANSPORT SÛR ET SÉCURISÉ DES**
15 **MATIÈRES RADIOACTIVES**

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18 **КОДЕКС ПОВЕДЕНИЯ ПО ОБЛЕГЧЕНИЮ**
19 **БЕЗОПАСНОЙ И НАДЕЖНОЙ ПЕРЕВОЗКИ**
20 **РАДИОАКТИВНЫХ МАТЕРИАЛОВ**

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23 **CÓDIGO DE CONDUCTA PARA FACILITAR EL**
24 **TRANSPORTE TECNOLÓGICA- Y FÍSICAMENTE**
25 **SEGURO DE MATERIALES RADIATIVOS**

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28 مدونة قواعد السلوك بشأن تسهيل النقل الآمن والأمين للمواد المشعة

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FOREWORD

DRAFT Rev.5

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I. INTRODUCTION

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4 A robust international regulatory framework for the safe transport of radioactive material
5 by all modes has been in place for more than six decades. The requirements for this
6 framework are established in the IAEA Regulations for the Safe Transport of Radioactive
7 Material, 2018 Edition (SSR-6, Rev.1), which is incorporated into modal regulations for
8 international transport by air and sea, and regional agreements for the transport of
9 dangerous goods by road and rail. Despite having a well-established international
10 regulatory framework and an excellent safety record, stakeholders continue to face
11 problems related to denials and delays in the international shipments of radioactive
12 material, which are classified as class 7 dangerous goods.

13 In addressing the Denial and Delay of Shipment issue, IAEA General Conference
14 Resolution GC(64)/RES/9 paras 80 and 81 state, respectively:

15 ‘Encourages efforts to avoid and address problems related to denials of and delays in the
16 shipment of radioactive material, particularly shipment by air and calls upon Member
17 States to facilitate the transport of radioactive material, and to identify, if they have not
18 done so, a national focal point on denials of shipment of radioactive materials to achieve
19 a satisfactory and timely resolution of this issue’

20 ‘Requests the Secretariat to hold a technical meeting to share experience with a view to
21 establishing a Working Group, with full participation of interested Member States and
22 relevant experts, to consider the options for addressing denials of and delays in shipment,
23 including a code of conduct on facilitation, and provide an initial report on these options
24 to the Member States by June 2021.’

25 In response to resolution GC(64)/RES/9 paras 80 and 81 of the IAEA General Conference,
26 Member States have requested the Secretariat to establish a Working Group on Denial of
27 Shipments consisting of interested Member States, experts, and industry representatives
28 to consider options for addressing the problem. As a result, the Agency established a
29 Denial of Shipment Working Group (DoS WG) for a period of four terms from 2023-
30 2026.

31 The first meeting of the DoS was held in Vienna in January 2023. During the meeting,
32 the participants agreed that the non-binding instrument should take the form of a Code of
33 Conduct and held initial discussions on a draft text."

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II. PREAMBLE

THE IAEA'S MEMBER STATES,

1. **Noting** that radioactive material is transported throughout the world for a wide variety of beneficial purposes; e.g. in industry, medicine, research, agriculture and education,
2. **Aware** that many millions of packages of radioactive material are shipped every year around the world;
3. **Conscious** that transporting radioactive material places it outside installations, but within the scope of regulated practices;
4. **Recognizing** their duty to protect individuals, society and the environment from potential detrimental consequences that might arise from the unsafe or unsecured transport of radioactive material;
5. **Aware** that, at the request of the United Nations Economic and Social Council (ECOSOC), international and intergovernmental Regulations for the Safe Transport of Radioactive Material (the Regulations) have been developed and established under the aegis of the International Atomic Energy Agency (IAEA)¹;
6. **Aware further** that these Regulations:
 - a) are founded on an international consensus on the potential effects of exposure to ionizing radiation, provided by the United Nations Scientific Committee on the Effects of Atomic Radiation (UNSCEAR), and on the globally used radiation protection paradigm recommended by the International Commission on Radiological Protection (ICRP)²,
 - b) are based on universal *Fundamental Safety Principles*, jointly sponsored by the European Atomic Energy Community (EAEC), the Food and Agriculture Organization of the United Nations (FAO), the IAEA, the International Labour Organization (ILO), the International Maritime Organization (IMO), the OECD Nuclear Energy Agency (NEA), the Pan American Health

¹ In July 1959, the United Nations Economic and Social Council (ECOSOC) requested the United Nations Secretary-General, in the light of recommendations made by its Committee of Experts, to inform the IAEA of ECOSOC's desire that the IAEA be entrusted with the drafting of recommendations on the transport of radioactive material [ECOSOC, 1959]. As a result, the IAEA was assigned the task of developing, establishing and maintaining standards for the transport of radioactive material and providing for their application at the request of States. The last edition of IAEA Safety Standards, «Regulations for the Safe Transport of Radioactive Material» is Edition 2018, Specific Safety Requirements No. SSR-6 (Rev. 1).

² The United Nations Scientific Committee on the Effects of Atomic Radiation (UNSCEAR) compiles, assesses and disseminates information on the health effects of radiation and on levels of exposure to radiation from different sources. Its findings and the recommendations of international expert bodies, notably the International Commission on Radiological Protection (ICRP), are taken into account in developing the *Regulations*.

- 1 Organization (PAHO), the United Nations Environment Programme (UNEP)
2 and the World Health Organization (WHO)³,
3
4 c) are sustained by basic safety standards for radiation protection (termed, in
5 short, the ‘Basic Safety Standard’ or ‘BSS’), which are jointly sponsored by
6 the European Commission (EC), the Food and Agriculture Organization of
7 the United Nations (FAO), the International Atomic Energy Agency (IAEA),
8 the International Labour Organization (ILO), the OECD Nuclear Energy
9 Agency (OECD/NEA), the Pan American Health Organization (PAHO), the
10 United Nations Environment Programme (UNEP) and the World Health
11 Organization (WHO)⁴,
12
13 d) are supplemented by a hierarchy of Safety Guides, which provide
14 recommendations and guidance on how to comply with the *Regulations*,
15 indicating an international consensus on what measures are necessary to
16 comply with the regulated requirements or equivalent alternative measures⁵,
17
18 e) serve as a component of the United Nations Recommendations on the
19 Transport of Dangerous Goods (usually termed UN Model Regulations or
20 more prosaically ‘the orange book’ because of the colour of its covers) [UN,
21 2015], which are developed by the United Nations Economic and Social
22 Council (UNECE)⁶,
23
24 f) are in turn used by the relevant ‘modal’ organizations of the UN family for
25 regulating transport in specific modes of transport⁷; and, consequently, and

³ The *Fundamental Safety Principles* [IAEA, establish the fundamental safety objective Of protecting people and the environment from harmful effects of ionizing radiation, as well as safety principles and concepts that provide the bases for the *Regulations*.

⁴The objective of the BSS is to establish requirements for the protection of people and the environment from harmful effects of ionizing radiation and for the safety of radiation sources [IAEA, 2014]

⁵ The Guides supporting the *Regulations* include detailed advisory material [IAEA, 2018], as well as, by comprehensive guidance on, *inter alia*, schedules of provisions [IAEA, 2018] compliance assurance [IAEA, 2009], management systems [IAEA, 2008], and radiation protection programmes [IAEA, 2007], all for the safe transport of radioactive material.

⁶ The UN Model Regulations are developed by the UNECE’s Committee of Experts on the Transport of Dangerous Goods. These experts take account of technical progress, the advent of new substances and materials, the exigencies of modern transport systems and, above all, the requirement to ensure the safety of people, property and the environment. They are addressed to governments and international organizations concerned with the regulation of the transport of dangerous goods. Dangerous goods, such as substances, including mixtures and solutions, and articles considered hazardous are assigned to one of nine classes according to the hazard or the most predominant of the hazards they pose in transport. These are as follows: class 1, explosives; class 2, gases; class 3, flammable liquids; class 4, flammable solids, substances liable to spontaneous combustion, and substances which on contact with water emit flammable gases; class 5, oxidizing substances and organic peroxides; class 6, toxic and infectious substances; class 7, radioactive materials; class 8, corrosive substances; and, class 9, miscellaneous dangerous substances and articles, including environmentally hazardous substances. The classification of substances by type of hazard was developed to meet technical conditions while at the same time minimizing interference with existing regulations. It should be noted that the numerical order of the classes does not indicate the degree of danger. Significantly, provisions in the UN Model Regulations for class 7, radioactive materials, are transposed from the *Regulations*.

⁷ As the *Regulations* serve as the basis for the UN Model Regulations, these in turn serve as the basis for the international regulations for the various modes of transport, the so called “modal regulations”. These regulations are issued by the so-called ‘modal’ organizations, as follows: the International Civil Aviation

- 1
2 g) are universally used by States, but also, in relation to approval and prior
3 notification requirements,
4
5 h) advise that there may be deviations (such as exceptions, additions, etc.)
6 relative to national regulations relating to safety, carrier restrictions, and
7 national regulations relating to security, physical protection, liability,
8 insurance, pre-notification and/or routeing and import/export/transit licensing.
9
- 10 7. **Recognizing** the excellent safety and security record of transport of radioactive
11 material carried out in compliance with the Regulations;
12
13 8. **Attentive** that despite its very good safety and security record, the transport of
14 radioactive material has been hampered by the cumulative effect of decisions of not
15 accepting transporting radioactive material, such decisions being undertaken by
16 carriers, ports, airports, terminals, handling facilities, and other transport agents,
17 regardless that the material be transported in compliance with the Regulations,
18 which originate situations generically described and termed as **denials of shipment**,
19 usually identified with the English acronym **DoS**;
20
21 9. **Noting** that DoS is a main concern for national regulatory authorities and relevant
22 international organizations due — inter alia — to its inherent challenge to the safe
23 and secure transport of radioactive material;
24
25 10. **Noting further** that DoS prevents the timely usage of radioactive material —inter
26 alia— for diagnostic, therapeutic and also life saving medical purposes;
27
28 11. **Recognizing** therefore the need that States intervene for facilitating the safe and
29 secure transport of radioactive material by — inter alia — preventing DoS;
30
31 12. **Recognizing further** the States' jurisdiction, dominion, competence and authority
32 for facilitating the safe and secure transport of radioactive material;
33

Organization (ICAO) for air transport, which are implemented by the International Air Transport Association (IATA) that is the trade association of the world's airlines; the International Maritime Organization (IMO) for sea transport; the UNECE for road, rail and inland waterway transport in Europe; and, the Universal Postal Union (UPU) for transport by post, where the UPU sets the rules for international mail exchanges and makes recommendations for mail and parcels (Dangerous goods prohibited in international mail include 'radioactive waste', 'radioactive sources' and 'smoke detectors', according to the UPU [UPU, 2021]). Thus: the transport by air of radioactive material should comply with the Technical Instructions for the Safe Transport of Dangerous Goods by Air, published by ICAO [ICAO, 2020] and the Dangerous Goods Regulations (DGR) published by IATA [IATA, 2020]; the transport by sea of radioactive material should comply with the International Maritime Dangerous Goods (IMDG) Code, published by IMO [IMO, 2019]; the transport by inland waterways of radioactive material should comply with the European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways (ADN) [ECE, 2011]; the transport by rail of radioactive material should comply with the Regulations concerning the international carriage of dangerous goods by rail (RID), appearing as Appendix C to the Convention concerning International Carriage by Rail (COTIF) [OTIF, 2011]; and, the transport by road of radioactive material should comply with the European Agreement concerning the International Carriage of Dangerous Goods by Road (ADR) [UN.1957]. Therefore, the Member States of these 'modal', transport-related, organizations are generally bound through various legal instruments to regulate according to the requirements of the IAEA Transport Regulations.

- 1 13. **Being nonetheless aware** that States might lack appropriate infrastructure for
2 facilitating the safe and secure transport of radioactive material, and specifically for
3 dealing with DoS situations, and that such States may request and need to be
4 provided with appropriate technical cooperation;
5
- 6 14. **Stressing** the importance of international cooperation;
7
- 8 15. **Recalling** the Resolution GC(66)/RES/6 of the Sixty-sixths regular session of the
9 IAEA General Conference, adopted on 30 September 2022 during the eleventh
10 plenary meeting, and its supporting previous Resolutions, which —inter alia— :
11 (i) encourages efforts to avoid and address problems related to denials of and
12 delays in the shipment of radioactive material, particularly shipment by air and
13 calls upon Member States to facilitate the transport of radioactive material, and
14 to identify, if they have not done so, a national focal point on denials of
15 shipment of radioactive material to achieve a satisfactory and timely resolution
16 of this issue; and,
17 (ii) welcomes the IAEA's efforts to establish a Working Group, with full
18 participation of interested Member States and relevant experts, to consider the
19 options for addressing denials of and delays in shipment including a code of
20 conduct on facilitation;
21
- 22 16. **Aware** that the IAEA established a Working Group on DoS (WG DoS), and that
23 such WG DoS has recommended the establishment of a code of conduct for
24 facilitating the safe and secure transport of radioactive material, which should help
25 avoiding transport impediments related to DoS.
26
- 27 17. **Recognizing** that DoS may affects security and the predictability of the choice/use
28 of routes, including any stops necessary to the transport operation and the
29 intermediate storage of radioactive material during the course of intermodal or
30 transshipment between units, as appropriate.
31
- 32 18. **Concluding**, after taking account of the considerations heretofore, that an
33 intergovernmental agreement, e.g., in a form of this non-legally binding code of
34 conduct, should be accorded for DoS.
35
36

III. DEFINITIONS

For the purposes of this Code:

1. **“Code of Conduct”** – A non-legally binding set of declarations outlining the norms, rules and responsibilities for performing properly a practice or endeavour to be followed by individuals, organisations or governments, and which includes what is and is not acceptable or expected behaviours.
2. **“Denial or Delay of Shipment”** – A denial of shipment has previously been defined as “a (explicit or implicit) refusal to carry a shipment of radioactive material though it conforms to all the applicable Regulations.” While that definition is still relevant, some circumstances that are not covered by this definition warrant some updates to this definition. There are three situations that characterize a Denial or Delay of shipment, which are listed below:
 - a) Delay, when an intentional delay adds journey time, which reduces the effectiveness of the material or renders the material unusable when delivered. A typical example could be radiopharmaceuticals, which have a very short half-life and achieving the scheduled delivery programme is essential, being slowed solely because they are Class 7 material.
 - b) Denial, when a consignment is not accepted at a point during the journey, even though the consignment complies with all regulatory requirements, including documentation. An example of this type of denial could be a pilot or ship captain refusing to take a consignment of Class 7 material on board.
 - c) Denial, when there is a policy decision not to accept Class 7 by one of the parties involved in a route, resulting in the route being unavailable. An example of this type of denial could be an airline carrier, airport authority, sea vessel carrier or seaport authorities deciding not to accept any Class 7 material while accepting other dangerous goods.
3. **“National Focal Points” (NFP)** – Member State designated personnel that oversees the facilitation of Class 7 dangerous goods transport. Their responsibilities include knowing the main air/sea/land ports of entry / exit for Class 7 cargo, bringing together the main interested parties for Class 7 transport (regulators, operators, port authorities, etc.) on a regular basis to share experience and challenges, and helping to overcome obstacles that might be causing unnecessarily long shipment times.
4. **“Parties Involved”** – Member States (including Competent Authorities and other regulatory organizations), International Organizations, National Focal Points, Regional groups, Non-Governmental Organizations, carriers, producers, shipment consignors and consignees, ports, airports, freight forwarding organizations, users and other organizations.
5. **“Interested Parties”** – A person, company, etc., with a concern or interest in the activities and performance of an organization, business, system, etc. Interested parties have typically included the following: customers, owners, operators, employees, suppliers, partners and trade unions; the regulated industry or professionals; scientific bodies; governmental agencies or regulatory bodies (national, regional and local) whose responsibilities may cover nuclear energy; the

- 1 media; the public (individuals, community groups and interest groups); and other
2 States, especially neighbouring States that have entered into agreements providing
3 for an exchange of information concerning possible transboundary impacts, or
4 States involved in the export or import of certain technologies or materials.⁸
5
- 6 6. **“Shipment”** – The specific movement of a consignment from origin to destination
7 (see SSR-6 (Rev. 1) [11]).
8
- 9 7. **“Transport”** – The deliberate physical movement of radioactive material (other
10 than that forming part of the means of propulsion) from one place to another (see
11 SSR-6 (Rev. 1) [11]). In the context of this code of conduct and the Transport
12 Regulations, transport comprises all operations and conditions associated with, and
13 involved in, the movement of radioactive material; these include the design,
14 manufacture, maintenance and repair of packaging, and the preparation, consigning,
15 loading, carriage including in-transit storage, shipment after storage, unloading and
16 receipt at the final destination of loads of radioactive material and packages.
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⁸ See definition of “interested party” in IAEA Nuclear Safety and Security Glossary, 2022 (Interim) Edition, and the Handbook on Nuclear Law, IAEA, Vienna (2003)

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IV. SCOPE AND OBJECTIVES

1. The Code applies to the transport of radioactive material by all modes on land, water, or in the air, including transport that is incidental to the use of the radioactive material, within the scope defined in the Regulations.
2. The objectives of the Code are:
 - a) to develop and harmonize policies, laws, and regulations between States adhering to it for facilitating the safe and secure transport of radioactive material
 - b) to address, reduce and avoid DoS for facilitating the safe and secure transport of radioactive material.

V. BASIC PRINCIPLES

Every interested party involved in the shipment of radioactive material should ensure the safe and secure transport of radioactive material.

VI. STATES' PRONOUNCEMENTS

The States adhering to the Code declare that with their adherence they accept the following:

1. States should, as appropriate, inform interested parties involved in the transport of radioactive material, of the measures it has taken to implement this Code, and should take steps to disseminate that information.
2. States should ensure that their national laws and regulations related to the transportation of radioactive material are in line with the Regulations, and that their relevant authorities are clearly defined, properly trained, and equipped to enforce these regulations.
3. States should ensure that their relevant authorities responsible for the transportation of radioactive material act transparently and in accordance with international norms and standards. They should also promote public awareness and education on the risks associated with the transportation of radioactive material.
4. States should ensure, within their national jurisdiction, the availability of ports and airports being capable of allowing import, export, transshipment and transit of radioactive material that comply with the Regulations, and staffing these ports and airports with qualified personnel responsible for safety and security if necessary.

- 1 5. States should allow transit of cargos of radioactive material being transported in
2 compliance with the regulations, via designated ports and airports under their
3 jurisdiction, even if the cargo is not destined for the State.
4
- 5 6. States should establish and maintain a national legislative and regulatory
6 framework to govern the safety and security of the transport of radioactive material,
7 which shall provide for:
8 a) the establishment of applicable national safety and security requirements and
9 regulations (desirably, these requirements and regulations with the necessary
10 modifications may be reproduced from the Regulations and the relevant parts
11 of the United Nations Recommendations on the Transport of Dangerous
12 Goods ('UN Model Regulations'), and, those international norms regulating
13 transport in specific modes, such as those of ICAO for air transport and those
14 of IMO for sea transport); and international norms (ISO standards) if
15 applicable;
16 b) a system of regulatory inspection and assessment of the transport of
17 radioactive material to ascertain compliance with applicable regulations and,
18 the terms of licences if applicable;
19 c) the enforcement of the regulations and of the terms of licences if applicable,
20 including suspension, modification or revocation.
21
- 22 7. States should ensure that, in cases where there are multiple responsible authorities,
23 they cooperate closely and establish legal or formal agreements outlining the
24 responsibilities of each authority. Additionally, each competent authority should
25 communicate and share information with other governmental and non-
26 governmental organizations that have related responsibilities.
27
- 28 8. States should inform the International Atomic Energy Agency of any variations,
29 between their national regulations for transport of radioactive material and
30 a) the Regulations, and
31 b) the relevant parts of the United Nations Recommendations on the Transport
32 of Dangerous Goods ('UN Model Regulations'), and
33 c) those international norms regulating transport in specific modes, such as the
34 of ICAO for air transport and the of IMO for sea transport particularly, in
35 relation to approval and prior notification requirements.
36
- 37 9. States should maintain and publish an updated accessible database describing:
38 a) the relevant national legislative and regulatory framework governing the
39 safety of the transport of radioactive material and the differences between the
40 national regulations and the regulations [11] and any relevant transport
41 regulations for dangerous goods that may apply in addition to the regulations
42 [11].
43 b) the relevant national legislative and regulatory framework governing the
44 security of the transport of radioactive material.
45 c) the competent authorities designate as the regulatory body entrusted with the
46 implementation of the legislative and regulatory framework for the safe and
47 secure transport of radioactive material.
48
- 49 10. States should designate a 'national focal point (NFP)' within each State for
50 facilitating implementation of the State's undertakings under this Code.

ZU

Zimmermann Ulrich

To be discussed in plenum

Türkiye propose: national and international regulations

Zimmermann Ulrich

Türkiye agreed to use only the word
"regulation" as long it refers national and
international regulations

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11. States should establish liaison and a national network for facilitating the safe and secure transport of radioactive material, involving relevant interested parties, including regulators, government agencies, customs, shippers, freight forwarders, transport companies; port and airport authorities, and insurers, and;
 - a) hold regular meetings of such a network with the purpose of identifying safety and security challenges, including DoS and,
 - b) invite interested parties, as observers to such regular meetings, including representatives of relevant international organizations.
 12. States should conduct periodic appraisals of impediment to transport of radioactive material, particularly of DoS situations, in the State, in order to determine national resilience for the facilitation of the safe and secure transport of radioactive material.
 13. States should report periodically on the implementation of this Code to IAEA via proper channel. The report should include status and experiences, success and disappointment on the denial of shipments of radioactive material.
 14. States should ensure :
 - a) Promote public awareness, education and benefit on the safe and secure transportation of radioactive material.
 - b) Encourage the sharing and exchange of information regarding the safe and secure transportation of radioactive materials among individuals and organizations involved in the transportation of such materials. This may be by organizing activities such as training courses and seminars.
 - c) Provide a point of contact (NFP) for matters related to denials of shipments of radioactive material.
 - d) Maintain a national network for coordinating and communicating at the national level with all Interested Parties, including on safety and security issues associated with DoS.
 - e) Implement clear guidelines for any additional national requirements, such as licenses for carriers.
 - f) Implement procedures for cooperation of involved authorities to ensure transparent and effective authorization processes.
 15. States should ensure that their National Focal Points (NFP) should:
 - a) be the focus for the implementation of the pronouncement of the Code of Conduct;
 - b) identify and validate reported instances of denials to determine whether it is in fact a denial that should be reported to IAEA;
 - c) notifies DoS events to the IAEA to enable evaluation and the dissemination of lessons learned;
 - d) promote the awareness of denials to those national agencies involved in dangerous goods transport of class 7;
 - e) develop process for solving denials;
 - f) initiates actions necessary to resolve denials in cooperation with the Interested Parties and other agencies;
 - g) identify national needs including training to minimize DoS with the cooperation of the Interested Parties and other agencies;

- 1 h) review the successes and failure of interventions and provide feedback to
2 the Interested Parties and other agencies, and IAEA;
3 i) maintain records of denials and actions taken regarding resolution activities.
4

5 **VII. ROLE OF THE IAEA**

6
7 The IAEA should:

- 8
9 1. Continue to provide for the application of the Regulations at the request of any State,
10 inter alia by advising and assisting on all aspects of the safe and secure transport of
11 radioactive material and fostering information about the Code;
12
13 2. Establish and ad hoc technical cooperation programme to facilitate to States the
14 implementation of their obligations under the Code; and,
15
16 3. Formally invite States to adhere to the Code;
17
18 4. Disseminate this Code and related information widely;
19
20 5. Gather and disseminate lessons learned from instances denials of shipments of
21 radioactive material;
22
23 6. Maintain a public accessible up-to-date list of the «NFP» described in Appendix II;
24 and
25
26 7. In particular, implement the measures approved by its policy-making organs.
27
28 8. Establish Webpage for DoS.
29
30 9. Database for notified DoS events, which is accessible for competent authorities,
31 NFP and interested parties.
32
33 10. Periodically evaluation of the DoS events reported.
34
35 11. Organize annual meetings of NFP to share DoS experience and to identify lessons
36 learnt.
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VIII. IMPLEMENTATION OF THIS CODE

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Implementation of this Code should be accomplished through the development, harmonization and implementation of national policies, laws, regulations, guidance, and strategies, as applicable, and through the fostering of international cooperation. In implementing this Code, States are encouraged to make appropriate use of the IAEA's safety standards.

Every State should report periodically on the Implementation of this Code to IAEA via proper channel. The report should include status and experiences, success and disappointment on the denial of shipments of radioactive material.

Every State should encourage the interested parties to cooperate in order to meet the objectives of this Code and in particular, to ensure the safe and secure transport of radioactive materials in order to protect people, property and the environment.

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- 1 **CONTRIBUTORS TO DRAFTING AND REVIEW**
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1 ANNEX I: EXAMPLES OF APPLICATIONS OF RADIOACTIVE
 2 MATERIALS ADDRESSED BY THE CODE

3
 4 TABLE I. EXAMPLES OF APPLICATIONS OF RADIOACTIVE MATERIALS
 5 ADDRESSED BY THE CODE
 6

Sector	Product	Application
Industry	Gammagraphy devices	Ultrasonic testing for pipes, instruments and pressure vessels to ensure safety of workers und public
Industry	Gamma Irradiation Processing, Co-60	Irradiation food, sterilization and medical therapy
Industry	Nuclear fuel cycle	Ensure electricity supply and scientific research
Industry	Individual samples	Safety analysis for radioactive waste disposal to ensure safety
Medicine	Tc-99m In-111	Tracer for diagnostics to timely detect cancer and to save human lives
Medicine	F-18, C-11, Cu-64, Ga-68, Zr-98, ...	Diagnostic imaging
Medicine	Cu-64, Cu-67, Ga-68, Lu-177, ...	Radiopharmaceuticals for cancers
Medicine	P-32, Y-90, Sm-153, I-131, Lu-177, Ac-225, ...	Medical radioisotopes for therapy
Medicine	Sc-43, Sc-44, Sc-47 Tb-149, Tb-152, Tb-155, Tb-161, ...	Radionuclides for nuclear medicine
Research	Individual radioactive samples	Individual projects to improve existing applications and to identify new ones
Research	Individual samples	Various Investigations, Verification and Safety analysis, scientific justification of safe and secure management of radioactive material
Norm / Mining	Tantalum / Monazite	Electronic for aerospace and engines, corrosion resistant, cars, computers and communications, sensors and lenses, medical tools, dental and prosthetic implants,
Norm / Industry	Radioactive substances	Radionuclides in building materials
Norm / Industry	Industrial residues	Geothermal energy

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1 ANNEX I: EXAMPLES OF APPLICATIONS OF RADIOACTIVE
 2 MATERIALS ADDRESSED BY THE CODE

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TABLE I. EXAMPLES OF APPLICATIONS OF RADIOACTIVE MATERIALS
 ADDRESSED BY THE CODE

Sector	Product	Application
Industry	Gammagraphy devices	Ultrasonic testing for pipes, instruments and pressure vessels to ensure safety of workers und public
Industry	Gamma Irradiation Processing, Co-60	Irradiation food, sterilization and medical therapy
Industry	Nuclear fuel cycle	Ensure electricity supply and scientific research
Industry	Individual samples	Safety analysis for radioactive waste disposal to ensure safety
Medicine	Tc-99m In-111	Tracer for diagnostics to timely detect cancer and to save human lives
Medicine	F-18, C-11, Cu-64, Ga-68, Zr-98, ...	Diagnostic imaging
Medicine	Cu-64, Cu-67, Ga-68, Lu-177, ...	Radiopharmaceuticals for cancers
Medicine	P-32, Y-90, Sm-153, I-131, Lu-177, Ac-225, ...	Medical radioisotopes for therapy
Medicine	Sc-43, Sc-44, Sc-47 Tb-149, Tb-152, Tb-155, Tb-161, ...	Radionuclides for nuclear medicine
Research	Individual radioactive samples	Individual projects to improve existing applications and to identify new ones
Research	Individual samples	Various Investigations, Verification and Safety analysis, scientific justification of safe and secure management of radioactive material
Norm / Mining	Tantalum / Monazite	Electronic for aerospace and engines, corrosion resistant, cars, computers and communications, sensors and lenses, medical tools, dental and prosthetic implants,
Norm / Industry	Radioactive substances	Radionuclides in building materials
Norm / Industry	Industrial residues	Geothermal energy

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1 **ANNEX II: THE NATIONAL FOCAL POINT**

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3 Every Member State should designate personnel «National Focal Point (NFP) » that
4 oversees the facilitation of Class 7 dangerous goods transport. If more than one «NFP» is
5 designated by a State, the State should indicate which «NFP» should be contacted under
6 which circumstances. States are encouraged to provide the details and mutations of these
7 «NFP» to IAEA via proper channel.

8

9 Purpose

10 A National Focal Point (NFP) for delay and denial of shipment of radioactive material
11 acts as an interface between governments and those entities directly involved in the
12 radioactive material transport chain including various authorities and industry. The NFP
13 needs to identify and validate reported difficulties of delay and denial as well as
14 coordinate and communicate with interested parties / stakeholders in finding solutions.

15

16 Role and responsibilities

17 The role of an NFP may involve the following tasks:

- 18 (i) Understanding the stakeholders and cargoes shipped;
- 19 (ii) Identify the interested parties, main stakeholders (port and custom authorities,
20 freight forwarders, airlines and shipping lines etc.) acting in the supply chain for
21 transport of radioactive materials and the categories and volumes of radioactive
22 cargoes shipped; (knowing the network)
- 23 (iii) Understand the main routes for import / export and transit – including boarders,
24 ports and airports for entry / exit – and modes of transport used for shipping
25 radioactive material at a national level;
- 26 (iv) Organizing a regular dialogue (network)
27 Liase with the main stakeholders involved in the transport chain for radioactive
28 materials to exchange information relating to the delay and denial of shipment and
29 aiming to identify solutions;
- 30 (v) Collecting and analysing data
31 Compile and analyse relevant data to identify difficulties, and to measure the
32 robustness of the supply chain for radioactive material transport;
- 33 (vi) Report periodically to IAEA through proper channel (Division of Radiation,
34 Transport and Waste Safety)
- 35 (vii) Liaising with regional and international organizations
36 Take part in a network of NFPs at a regional level to understand problems and
37 facilitate solutions; communicate with international organizations such as IAEA,
38 ILO, IMO, ICAO (IATA) and UNECE.
- 39 (viii) Encourage uniformity between national regulations and harmonization with
40 international regulations for the transport of radioactive materials. The state
41 variations to limit the transport of radioactive materials should be identified and
42 public accessible.

43

1 Who to appoint as an NFP?

2 NFP should be familiar with the practical procedures and regulations for the safe and
3 secure transport of radioactive materials.

4 NFPs are normally from within the national competent authority. NFPs can also come
5 from technical support organisations or government sponsored organisations.

6 The conditions of NFP belongs to the responsibility of the member state.

7

8 Training and support of IAEA

9 The IAEA will develop educational and training materials and tools to help an NFP to
10 perform the role.

11

12 The IAEA will organize meetings periodically to enable sharing experiences and
13 information between NFP's.

14

15

1 **ANNEX III: EXPECTED BEHAVIOUR OF CONSIGNOR, CARRIER AND**
2 **CONSIGNEE**

3
4 Each involved or interested parties should ensure that their own safety policies give an
5 appropriately high priority to the transport of radioactive material in furtherance of this
6 Code.

7
8 That means,

- 9
- 10 1. encourage the willingness of logistic companies, ports and airports, handling agents
11 and all involved parties to transport safe and secure radioactive material.
 - 12 2. encourage the common cooperation for the transport of radioactive material.
 - 13 3. contribute actively to human health, industrial safety and energy supply by enabling
14 and ensuring the timely delivery of radioactive materials, for example avoid delays.
 - 15 4. ensure consignments are prepared and transported in accordance with international
16 and national regulations of states that the consignment will originate, transit and
17 terminate.
 - 18 5. report any DoS to «NFP» in the sense of improving and minimizing DoS events.
 - 19 6. Including DoS events in lessons learnt of management systems.
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**Communication Strategy on the Facilitation of Transport of
Radioactive Material**

27 July 2023, Version 1

1. Background

A robust international regulatory framework for the safe transport of Radioactive Material (RM) by all modes has been in place for more than six decades. The latest set of requirements for this international framework are established in IAEA Regulations for the Safe Transport of Radioactive Material, 2018 Edition (SSR-6, Rev.1) which in turn is incorporated into modal regulations that apply to international transport of dangerous goods by air and sea and regional agreements by road and rail.

Despite having a well-established international regulatory framework and a strong safety record, the problems related to denials of and delays in the international shipment of RM (classified as class 7 dangerous goods) are continuously faced by the various stakeholders. General Conference Resolutions of 2021 requested the Secretariat to establish a Working Group on Denial of Shipments from interested MS and relevant experts, to consider the options for addressing the problem. Considering this, Agency established a Denial of Shipmentⁱ Working Group (DoS WG) for a period of four years from 2023-2026.

Between 23rd January 2023 and 27th January 2023, the first Denial of Shipment Working Group took place at the International Atomic Energy Agency in Vienna, Austria.

The objective of the meeting was to establish the Terms of Reference for the DoS WG and to identify actions to address denial of shipment issues during international transport by all modes.

To facilitate the work of the Denial of Shipment Working Group, 3 Sub Working Groups have been formed,

- i. SWG-1: DoS Data Collection, Analysis and Metrics
- ii. SWG-2: Potential solutions to address Dos Problems
- iii. SWG-3: Awareness, Training and Outreach

Sub-Working Group 3 ‘Awareness, Training and Outreach’ has been tasked with developing a Communications Strategy.

In addition, the IAEA intend to appoint a consultant dedicated to support the IAEA DOS WG.

2. Previous initiatives.

The International Steering Committee on Denials of Shipment of Radioactive Material (ISC-DOS) was created in 2006 on the basis of GC(49)/RES/9 in September 2005.

At the first ISC-DOS meeting in 2006, it was decided that communications would be one of the six areas of its Action Plan.

The communications strategy, and study conducted for it, devised for the ISC-DOS informs the communication strategy now being developed for the current DOS WG.

3. Communication Objectives

The DoS WG identified that there is a need to change the perceptions of the risk associated with the transport of Class 7 radioactive materials from unacceptable to acceptable. Many of the beliefs held by those concerned by the transport of radioactive material are based on incorrect information or lack of knowledge. Often, long held beliefs have been perpetuated by emotive fear. Good communication is important to foster an understanding of the issues related to DoS. The use of radioactive materials is a vital aspect of our daily lives. Important applications of radioactive material range from medical diagnostics to the production of clean, efficient electricity from nuclear power plants. In order to realize the benefits of these applications, transport becomes the vital link between

the producers of radioactive materials and the ultimate benefactors – the consumer. If the benefits associated with the use of radioactive materials are included in the discussion of transporting these materials, the audiences will have the opportunity to better appreciate the importance of these materials being transported. To enable renewed efforts to overcome these barriers, a new and methodical communications strategy is now outlined.

4. Target Audience

To ensure a coherent approach when communicating awareness of radioactive material, the target audience must be clearly identified. Specific outreach and awareness materials can then be developed to target these groups.

Clearly, all stakeholders that are involved in the transport of radioactive materials should be represented in one of the target audience groups identified. It should be recognised that there are other stakeholders, who are not directly involved in the transport of radioactive materials, that will still be impacted by the transports, or delay and denial of, radioactive materials. Engaging with these groups, when appropriate, may yield valuable proponents of radioactive material transport.

Audience	Level of decision-making responsibility in DOS
Ports, terminals and Airports – authority/operators	High
Shipping lines	High
Vessel owners	High
Airlines	High
Courier companies	High
Customs authorities	High
National governments	High
Regional and local governments	High
Unions	Med
Protection and Indemnity Insurance (P&I) clubs	Med
Maritime Competent Authorities, Flag State, Port State	Med
Environmental pressure groups	Med
Freight forwarders	Med/low?
Consignor/consignee	Low
Ships' Captains	High
Airline Pilots	High
Stevedores, cargo handlers and baggage handlers	Low
Air transport Competent Authorities	Low
National Competent Authorities	Low
National Security Authorities	Low
Health and Safety Authorities	Low
National Environmental Protection Authorities	Low
Local communities	Low
Academia and educational institutions	Low
International Organisations	Low

Non-Governmental Organisations for industry, transport, health, commerce etc,	Low
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Outreach and awareness should be tailored to the target audience according to the level of awareness of DoS and technical knowledge of radioactive materials.

5. Partnering with other organizations

Opportunities to partner with Intergovernmental Organisations should be explored. This can be used to engage with relevant MS both through their Missions and when conducting regional outreach.

Engagement with target audiences can be greatly enhanced by first engaging with any NGO's that represent them.

6. Message Objectives

- To raise awareness of the importance of transport of Class. 7 radioactive materials.
- To communicate that radioactive medical isotopes are vital to global healthcare and that DOS can impact the medical community and public health.
- To raise awareness of the multitude of uses that radioactive material has, and to emphasize how many 'every day' activities simply could not happen without radioactive material such as,
 - Medical diagnostics and cancer therapy treatment
 - Vaccine production
 - Sterilization of medical equipment
 - Sterilization of food and other goods
 - Agricultural uses
 - Industrial non-destructive testing, gauging and monitoring
 - Smoke detectors
 - Power generation
 - As a raw material for industry producing consumer goods
- To communicate how radioactive materials are packaged and transported in a highly regulated and controlled environment to ensure compliance with safety and security requirements.
- To increase the confidence of stakeholders such that they are more likely to facilitate class 7 transport.
- To address specific concerns of the target audiences.

7. Key Messages

There are a number of messages that need to be delivered consistently by the various channels to different target audiences.

- 1) Beneficial role of RAM – A central message is the essential role RAM plays worldwide in areas such as healthcare, environment, safety, and economics. RAM is shipped for a reason. A related message is the negative consequences that result if this material is not delivered to its destination in a timely manner.
- 2) Worth the effort – To inspire the trust of stakeholders, it should be acknowledged that the transport of RAM, especially in an international context, can be complex. Balanced against this, there should be a message that qualified transport companies (national and international) carry RAM on a regular basis as a viable business.

- 3) Strong safety record – Historically, the safety record of transport of radioactive materials has been strong and not taken for granted. This is achieved by diligent application of the transport regulations.
- 4) Existence of emergency response plan that outlines the preparation for, assessment of, in response to an emergency during transport

8. Deliverables

1. A joint letter ideally from the heads of IAEA / IMO / WHO to port authorities and shipping lines, and a similar joint letter from the heads of IAEA / ICAO /IATA/ WHO to airport authorities and airlines, both copied to the relevant country's NFPs, RCs, relevant ministries and IAEA Permanent Missions.
2. A new webpage on sustaining RAM shipments hosted by the IAEA. This may include a portal for the reporting of DoS
3. Resource Centre:
 - a) Articles for various journals, such as Dangerous Goods Bulletin, Ports and Harbours, IAEA Bulletin, read by the target audience.
 - b) PowerPoint slides with accompanying notes to be used for face-to-face meetings.
 - c) A set of FAQs and answers.
 - d) Brochure and factsheets.
 - e) A multi-media packages (print article, photo, essay, video-clips) focused on specific issues.
 - f) Infographics.

9. Getting the Messages Across

The message needs to be presented in such a way that it captures the attention of the audience, it is easy to understand, and will be remembered. This can include,

- a) Using clear and simple language, and not by using scientific and technical jargon, or abbreviations.
- b) Using images to illustrate messages.
- c) Having consistency and uniformity of messaging. By this it is meant that each material, such as slides and pamphlets, will have similar layouts, graphics and typeface.

10. Channels that may be used by the DOS WG.

Online

- 'Website' (to be defined by IAEA)
- Email broadcasts
- Social networks such as LinkedIn
- Partner channels e.g. IMO, ICAO, IATA, Industry associations

- Webinars
- Class 7 E-Learning Modules

Public Relations

- In person outreach (Telephone, email, meeting)
- Industry ‘influencers’ e.g. statement by IAEA DG.
- Industry events
- Workshops

Press

- Publications,
- Articles
- Journals
- Other Class 7 transport training materials

11. Evaluation

All materials used as part of the communication strategy should be evaluated before launching on a cross section of the target audience; a checklist would be created for the purpose of evaluating. To help with conducting evaluation, the assistance of appropriate NGOs will be sought. Members of the DoS WG and active NFPs should also be used as a means of obtaining stakeholder feedback. Evaluation will also be conducted after launch to determine the use and effectiveness of the materials. This will primarily consist of:

- Regular analysis of the hits, downloads, time spent on the DoS webpage
- Survey of the opinions of NFPs and DOS WG members on the impact of the materials

Annex-X: SWGs Action Plan

SWG-1 next steps:

- 1) Finalise the two questionnaires and covering letters with the Secretariat by September. Including confirming whether these are online or by email response.
- 2) Confirm the industry recipients (by September, but may take longer depending on feedback from industry groups – WNTI, WNA, etc.).
- 3) IAEA to issue the questionnaires (SWG-1 will inform industry members, through the industry groups, in parallel to expect these so they are not considered spam).
- 4) SWG-1 to analyse results as they are received. Present results to SWG-2 and SWG-3.

Noting the request from SWG-2:

- 5) Work with SWG-2 to design a DoS database (inputs, purpose and outputs) and then decide whether it is worth implementing, including how it would be hosted, who would enter data / have access to analyse data and who would manage it. This will also require input from IAEA Secretariat.

SWG-2 next steps:

- 1) Virtual meetings, depending on the needs (1-3), will be organized until 3rd DoS Meeting in April 2024. Chair / Co-Chair will send out meeting polls with topics for the virtual meetings (usually between 13h – 16h CEST). For the selected meeting date, the invitation with small agenda will be send out to the SWG-2 members.
- 2) Task 1 - Draft of Code of conduct on the facilitation of the safe and secure transport of radioactive material
 - a) Actions
 - i. Support preparation of Technical Meeting for CoC;
 - ii. Support for developing DoS Database (content of database, structure, workflow, accessibility).
- 3) Task 2 - Establish NFP, Re-establishment of NFP network (with co-ordination from centre), formulate and review NFP job description
 - a) Actions
 - i. Guidance for NFP:
 - Support for developing FAQ for NFP tasks;
 - Support for webpage;

- Support for developing Checklist for NFP as tool to build up the network
 - ii. Form / Template for reporting DoS
 - iii. Support for training material for NFP.
- 4) Task 3 - Formulate proposals to increase the number of routes and carriers available for Class 7 shipments
- a) Actions
 - i. Data analysis from SWG-1 required
 - ii. Collect and formulate the needs.
- 5) Additional proposed Task for SWG-2 and SWG-3: Develop a process for reducing denials (Input from U. Schwela)
- a) Actions
 - i. Develop a process for solving denials taking into account the DoS WG communication strategy.
- 6) DoS WG virtual meetings – next steps: virtual meetings between Chair / Co-Chair and SWG Chairs and Co-Chairs for the follow-up depending on the needs.

SWG-3 next steps:

- 1) Complete the Glossary in the DoS WG Communications Strategy.
- 2) The previously used NFP educational workshop material, devised by the TFWG, to be provided to the SWG-3 members for review.
- 3) Develop a new NFP educational and training package.
- 4) Finalise the list of ‘Topics to Cover’. This is the list which includes all the possible areas that may need Awareness, Training and Outreach materials to be developed.
- 5) Create a list of Questions and Answers (Q&A) relating to radioactive material transports, and other topics that may be relevant to the work of the DOS WG.
- 6) Hold virtual meetings of SWG-3 (inviting WG/SWG chairs/co-chairs) to further discuss the groups progress.
- 7) The DOS WG Communications Strategy should be maintained on the DoS webpage, from where it can be offered to the NFPs.