SAFE, SECURE AND SUSTAINABLE
TRANSPORT OF RADIOACTIVE MATERIAL

Nancy CAPADONA1, Ankika CIZMEK2, Polona TAVCAR3, Serge GORLIN4

1 IAEA, Austria; 2 State Office for Radiological and Nuclear Safety, Croatia; 3 Slovenian Safety Administration, Slovenia; 4 WNA, United Kingdom

Why?
• Diagnosis, therapy, sterilization of materials, foods and medicines
• Lighting products, semiconductors, plastics, energy, control devices

How?
• Several millions of shipments each year, most of them non-nuclear
• Regulations: TS-R-1 (SSR-6), UN Orange Book, ICAO, IMDG
• Universal goals: radiation protection (containment, shielding, criticality), heat control

What is DoS?
• Inability to ship RAM packages in timely way despite compliance with regulations
• Mainly affects international shipment by air or maritime mode

Causes of Denials of Shipment

Perception
Unions do not want to handle RAM
Ports and carriers concerned that other customers do not want their cargo sitting near RAM
Negative publicity if incident

Economics
Ports and carriers do not see value in investing in training and equipment needed for RAM
Low proportion of RAM related to other dangerous goods
Carrying RAM reduces carrier flexibilities at ports

Regulations
Inconsistencies in regulations between countries and organizations
Inconsistencies among different regulations within the same country
Unworkable policies at specific ports

Consequences of DoS
• Time-sensitive medical isotopes can no longer be used for diagnosis and treatment
• Patients do not receive potentially life-saving or pain-relieving radiotherapy
• Sterile single use medical devices are not available
• Safety-critical non-destructive testing of vehicles, buildings, etc. cannot be carried out

What is being done
INTERNATIONAL STEERING COMMITTEE ON DENIALS OF SHIPMENT was created to minimize denials and delays, with participation of IAEA, United Nations modal organizations (IMO and ICAO) industry organizations and national authorities. They have jointly developed an international action plan actively supported by Regional Networks in Africa, America, Asia-Pacific, Europe and Mediterranean region focusing:

AWARENESS
Regional workshops involving regulators, industry and authorities
articles, presentations

TRAINING
IMO e-learning course, IAEA Safe
Transport training course

HARMONIZATION
Recommendation by ICAO to list differences in national regulations
Harmonization between TS-R-1 (SSR-6) and UN Orange Book

COMMUNICATION
IAEA Safe Transport film
brochures

LOBBING
Participation in FAL, NEA/OECD expert committee Mo-99 crisis, TRANSSC
Expert delegations to carriers/ports with policies not to accept RAM

ECONOMICS
Analysis of economic cost of denials
Reduction of regulatory burden

Objective: to reduce denials and delays to insignificant level by 2013