



SAFETY SERVICES ORGANISATION



Session 1.1

Introduction to Ammunition Safety

**IATG Foundation Course:
Ammunition & Explosive Safety Module**



International Ammunition Technical Guidelines (IATG)

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Reminder...

- Ammunition and explosives are inherently dangerous items and great care must always be taken when handling these items.
- Never allow complacency to creep in when handling ammunition and explosives.
- The wider aspects of ammunition and explosives safety such as security of stocks, processing and inspection and maintenance are vital components of the ammunition management capability.

Learning Outcomes

Upon the successful completion of this module, the student should be able to:

- Comprehensively interpret and communicate the legal requirements for explosives legislation.
- Critically evaluate key safety and security requirements for the design, manufacture, transport and storage of explosives.

Introduction

- **What are the dangers faced with working with ammunition and explosives including accidental explosion due to mis-handling and lack of supervision?**
- **What defines ammunition and explosives safety?**
 - Sensible legislation and regulation
 - Good infrastructure and management
 - Fire safety precautions
 - Appropriately trained personnel

IATG as a model

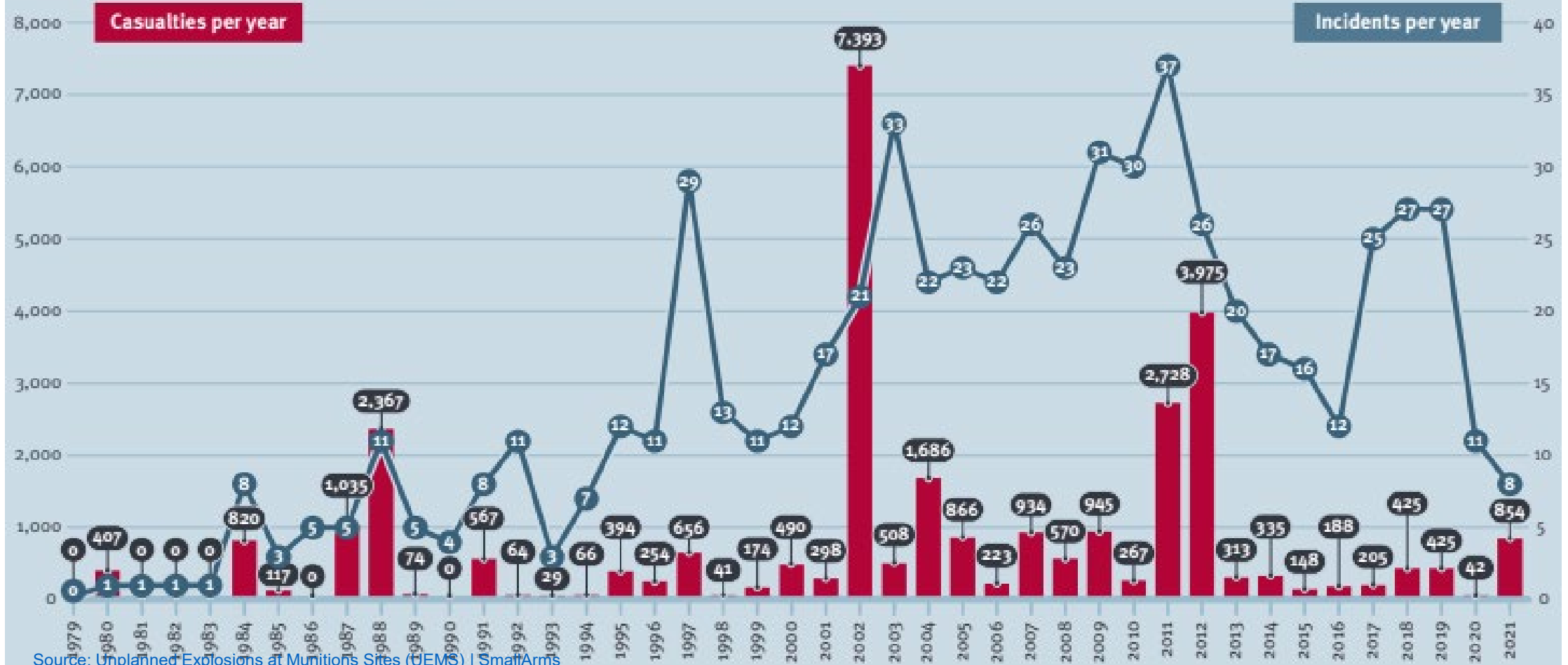
- **Ammunition (aka OME) is a liability, not an asset:**
 - **Unplanned Explosions in Munitions Sites (UEMS)**
 - **Diversion**
- **National Legislation is very specific – the underlying principles are universal**
- **The purpose of the International Ammunition Technical Guidelines (IATG) and National Ammunition Technical Guideline (NATG)**
- **It is desirable to standardise storage worldwide in order to deliver a commonality of risk and methods of reducing risk for ammunition storage**

Quick facts on unplanned explosions at munitions sites (UEMS)*

* Figures for 2021 include data up to 15 December.

UEMS: Incidents and consequences

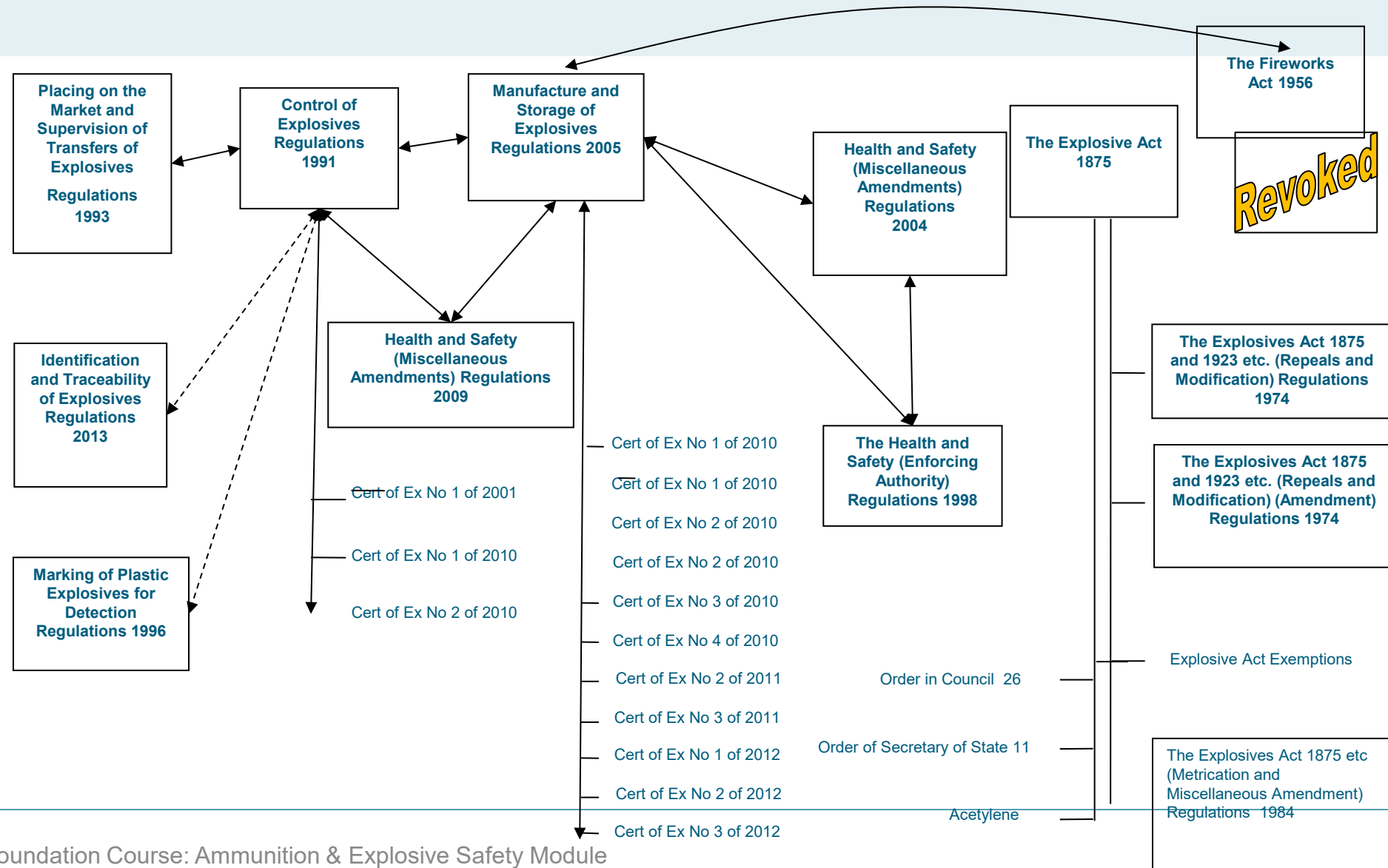
Casualties of UEMS, 1979–2021: During the period January 1979 to December 2021, more than 30,000 casualties resulting from UEMS incidents were recorded. The highest number of casualties was recorded in 2002, mainly due to the devastating UEMS incident that occurred in Lagos, Nigeria. Similarly, the incident in Abadan, Turkmenistan, in 2011 and the one in Brazzaville, Republic of Congo, in 2012 contributed strongly to the spikes in 2011 and 2012.



Source: Unplanned Explosions at Munitions Sites (UEMS) | Small Arms Survey



Explosives Regulations in UK



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Explosives Regulations 2014
Pyrotechnic Articles (Safety) Regulations 2015
Explosives Regulations 2014 (Amendment)
Regulations 2016
Fireworks and Pyrotechnic Articles (Scotland)
Act 2022
Control of Explosive Precursors and Poisons
Regulations 2023

The Carriage of Dangerous Goods and Use of
Transportable Pressure Equipment (Amendment) (EU
Exit) Regulations 2021 (UK Enactment of ADR)

Firearms Acts 1968, 2023



IATG as a model

- **The purpose of the International Ammunition Technical Guidelines (IATG) and National Ammunition Technical Guideline (NATG)**
- **It is desirable to standardise storage worldwide in order to deliver a commonality of risk and methods of reducing risk for ammunition storage**
- Sensible legislation and regulation
- Good infrastructure and management
- Fire safety precautions
- Appropriately trained personnel



IATG as a model

- The purpose of the International Ammunition Technical Group (IATG) and National Ammunition Management
- It is desirable to standardise the commonality of risk and management of storage
 - Sensible legislation and regulation
 - Good infrastructure and management
 - Fire safety precautions
 - Appropriately trained personnel

- ✓ 01 - Introduction and Principles of Ammunition Management
- ✓ 02 - Risk Management
- ✓ 03 - Ammunition Accounting
- ✓ 04 - Explosive Facilities (Storage) (Field and Temporary Conditions)
- ✓ 05 - Explosives Facilities (Storage) (Infrastructure and Equipment)
- ✓ 06 - Explosive Facilities (Storage) (Operations)
- ✓ 07 - Ammunition Processing
- ✓ 08 - Transport of Ammunition
- ✓ 09 - Security of Ammunition
- ✓ 10 - Ammunition Demilitarization and Destruction
- ✓ 11 - Ammunition Accidents, Reporting and Investigation
- ✓ 12 - Ammunition Operational Support



Working Safely with Ammunition & Explosives

- **Key aspects of ammunition safety:**
 - Use of HCCs to determine what explosives you are working with
 - Use of RRPL to reveal any safety gaps. Use this as a management check

Working Safely with Ammunition & Explosives

- **What are the storage and stockpile management factors affecting safety?**
 - Correctly licensed storage facilities
 - Staying within the Explosives Limits Licence
 - Emergency procedures known by all
 - In-place management structure and inspection regime
 - Disposal of old or unserviceable stocks

Working Safely with Ammunition & Explosives

- **What are the consequences of poor safety?**
 - Fire
 - Mass explosion
 - Injuries to workers and civil population
 - Damage to infrastructure

Conclusion

We will be consider many safety aspects of working with ammunition and explosives during the remainder of this module.

Questions?

Lesson Objectives

At the end of this lesson you should be able to:

- Understand the constituent parts of ammunition and explosives safety
- Understand safe handling of ammunition and explosives and how this links to the RRPL levels.
- Acknowledge and understand that these safety aspects underpin the remaining lessons within these modules.



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