

**ATP-45(D)**

**WARNING AND REPORTING**

**AND**

**HAZARD PREDICTION OF**

**CHEMICAL, BIOLOGICAL, RADIOLOGICAL**

**AND NUCLEAR**

**INCIDENTS**

**(OPERATORS MANUAL)**

## CHAPTER 1 CBRN WARNING AND REPORTING

### SECTION I - GENERAL INFORMATION

#### 0101. Aim

1. The aim of Chapter 1 is to describe CBRN warning and reporting procedures.

#### 0102. General

1. Defence against Chemical, Biological, Radiological and Nuclear (CBRN) weapons has traditionally been treated as a single subject area within NATO military doctrine publications. This approach derives from: the wide geographic areas that may be affected by such attacks; the large numbers of personnel potentially at risk; the similarity of some hazard impacts at the individual level; certain commonalities in protection measures; and the supposed 'novelty' of each of these classes of science-derived weapons. It must also be recognized that CBRN weapons and their means of delivery are subject to continuous development, with consequent alterations to their employment characteristics and impacts. Finally, the nature of military operations is itself in a period of rapid change, led in part by shifting public perceptions of acceptable risk and increasing concerns about environmental hazards.

#### 0103. Purpose of ATP-45

1. The purpose of this publication is to prescribe the CBRN procedures to be followed by Land, Air and Naval forces for the:
  - a. Reporting of all chemical, biological or radiological attacks and nuclear detonations and resulting contamination.
  - b. Predicting and warning of hazard areas from CBRN incidents.
  - c. Contributing to the evaluation of CBRN information in order to complete the common operational picture for the commander.
  - d. Warning of friendly nuclear strikes and the interception of an adversary incoming missile.
  - e. Transmitting of advanced hazard warning of a potential CBRN agent or Toxic Industrial Materials (TIM) release.
  - f. Interchange of reports, quoted in a., b., c., d. and e. above, as required.

#### 0104. Classes of Weapons/Devices

1. The 4 established classes of CBRN weapons/devices together with analogous risks and the unique distinguishing characteristics of each are:
  - a. Chemical. A chemical weapon/device is an item of materiel that projects, disperses, or disseminates a chemical substance. Depending upon volume and dissemination means, chemical attacks may be expected to encompass lesser areas of ground than nuclear fallout or biological attacks whilst the time-to-effect will lie between the instantaneous impact of a nuclear detonation and the delayed onset of biological agent effects.

- b. Biological. A biological weapon/device is an item of materiel, which projects, disperses, or disseminates a biological agent including arthropod vectors. Depending upon the volume of substance employed and the means of dissemination, the area of effect may be comparable to or even greater than that encompassed by the residual radiation from a low yield nuclear weapon.
- c. Radiological. A radiological device is designed to employ radioactive material by disseminating it to cause destruction, damage or injury by means of the radiation produced by the decay of such material.
- d. Nuclear. A nuclear weapon is a complete assembly (i.e. implosion type, gun type or thermonuclear type) in its intended ultimate configuration which, upon completion of the prescribed arming, fusing and firing sequence, is capable of producing the intended nuclear reaction and release of energy. This form of words points towards the 2 distinctive features of such weapons as compared to chemical and biological weapons: their effects derive from physical energy and some of this is released in the form of radioactivity.

#### **0105. CBRN Defence Principles**

1. The principles for the application of CBRN defence measures in support of Joint Force operations are as follows:
  - a. Intelligence Assessment. A current, comprehensive and accurate intelligence assessment of the potential CBRN threat and Toxic Industrial Hazards (TIH) in a Joint Operations Area (JOA) provides the essential underpinning or foundation for all other measures. This assessment must be regularly updated.
  - b. Force Preparation. The components of the Joint Force need to be well prepared for CBRN Defence in terms of the appropriate doctrine, equipment, procedures, organization and training. These CBRN Defence measures need to be prepared before deployment so that the necessary operational capability is present in-theatre. Such preparations are also to deter potential adversaries from considering the use of CBRN weapons or TIM.
  - c. Risk Management. A complete response to the wide range of potential CBRN risks is unrealistic. Risks need to be anticipated, planned for, recognized and managed so that freedom of action can be maintained across the JOA.
  - d. Flexibility, Integration and Co-ordination. The CBRN threat can be diverse; hence the Joint Force response needs to be comprehensive, flexible and coordinated. In addition, the CBRN defence posture must be coherent across all components of the force, and flexible enough to meet the diverse needs of all elements. Where possible, integration of capability needs to be extended to embrace the Host Nation and other in-theatre agencies and forces.
  - e. Sustainability. CBRN incidents may place additional burdens on the sustainability of the Joint Force. CBRN Defence will require additional logistic resources and attacks may degrade the functioning of the supply chain. The Joint Force logistic plan will need to address the inherent vulnerability of fixed assets and facilities to CBRN incidents at entry points into theatre and on lines of communication (LoC) by the use of protection and redundancy.

#### **0106. CBRN Warning and Reporting**

1. CBRN incidents and resulting contamination can have a significant effect on any military operation, be it on land, in the air or at sea, and a decisive influence on a commander's decisions and estimates.

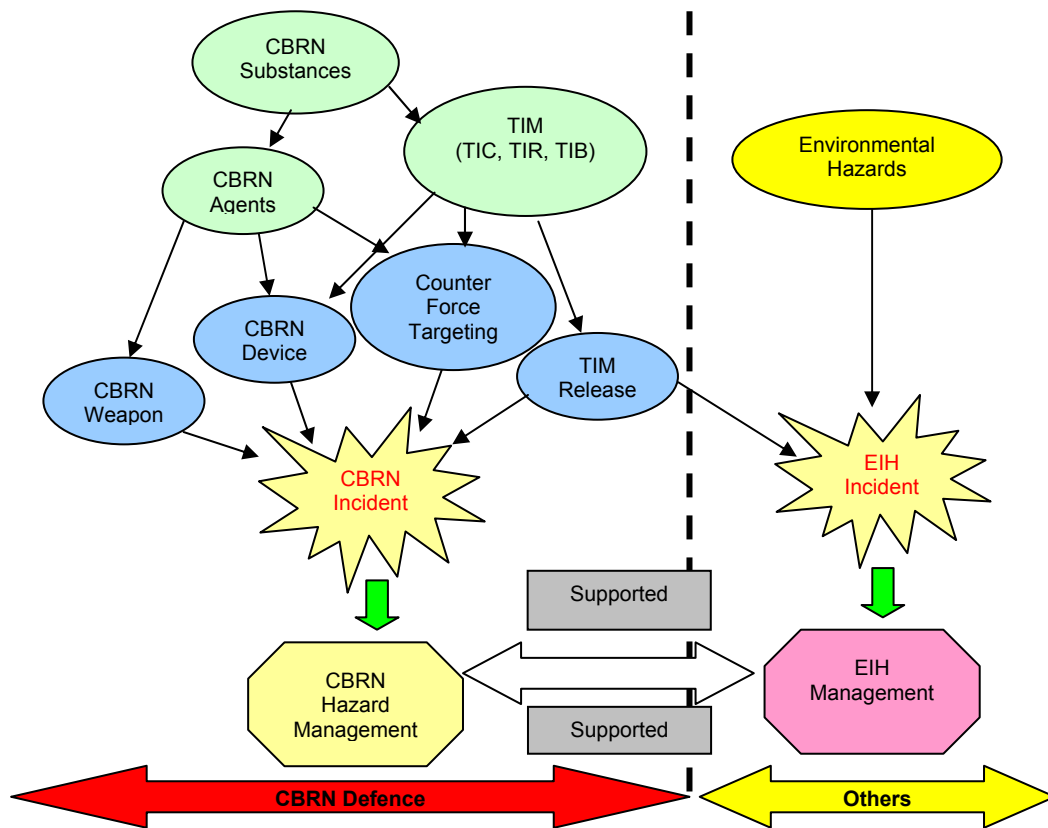


Figure 1 - 1. Chemical, Biological, Radiological or Nuclear Incident

Note. TIM – Toxic Industrial Material  
 TIC – Toxic Industrial Chemical  
 TIB – Toxic Industrial Biological  
 TIR – Toxic industrial Radiological  
 EIH – Environmental Industrial Hazard

2. In order to enable commanders at all levels to assess the impact of CBRN incidents on plans and decisions, they must be provided with timely, accurate and evaluated information on these incidents. Collection, evaluation and exchange of information on CBRN incidents form an extremely important part of CBRN defence. To ensure timely provision of the most accurate data on CBRN incidents and the resulting hazard areas, a CBRN warning and reporting capability is required. It is the responsibility of commanders at all levels that plans take into account CBRN defence and that directives and Standing Operating Procedures (SOPs) are available and that these fully meet the requirements of this Allied Tactical Publication (ATP) and their respective commands.