CODIFICATION MANUAL

1. **Scope**. This Chapter describes:-

(a) Definition of Codification.

(a) Codification Process.

(b) Definition of cataloguing.

(c) Need for Codification in Defence.

(d) Benefits of Codification.

(e) Importance of Codification on Joint Services Basis

(f) Defence Stores Codification System.

(g) NATO Codification system.

2. **Definition of Codification.**Codification implies evolution and employment of a code or a system that uses a uniform pattern of numbering the items and denoting each item by a well-defined scientific nomenclature which will uniquely identify a store when so referred to.

3. **Codification Process.**Codification process involves:-

(a) **Item Identification.** Identifying items on the basis of their characteristics, usage and manufacturer and assigning an approved item name and description as per NATO System of Item Identification (H6 Series) .

(b) **Classification.** Classifying items into appropriate classes in accordance with NATO Supply Classification System (H2 Series).

(c) **Allotment of Number.** Assigning a unique item identification number to a item which is called Defence Codification Authority Number (DCAN).

(d) **Recording of Identification Data.** Keeping a record of the identification data of all items codified along with allotted DCAN.

(e) **Hosting of Data on MPLS and Web Site**. The records of all items codified are required to be catalogued into a proper document and same needs to be hosted on CodiSAP software on MPLS and Directorate web site for the benefit of the users and environment.

Cataloguing

4. Catalogue is a list of items arranged in a particular sequence of their nomenclature (i.e., item name and description). To prevent confusion, there must be no ambiguity, vagueness or variation in the exact nomenclature. Hence, the nomenclature must be laid down by a central

authority; in our case we follow DLIS guidelines. A catalogue is arranged in groups and classes based on technical, functional, user or technical-cum-user affinity basis. As nomenclature of the items, consisting of an item name and description are usually rather long, each item must have a short reference or code from which an identifiable description can be decoded. This is provided by allotting a catalogue number to the item as each catalogue number is associated with an appropriate description.

5. A catalogue, therefore, consists of the list of items arranged in a number of logical groups and classes. This is a universal system of cataloguing. Additional information like specification, titles and references, drawing authority and reference, supplier's/manufacturer's identity and reference are covered in a Catalogue.

Need for Codification in Defence

6. Presently our Defence Inventory consists of largely uncodified and unidentified items whose full particulars are not known and recorded. Provision, procurement, inspection, storage, maintenance and issue documents are held in the three services for these inventories of items using different system of identification. Quite a number of these are common usage items having identical or similar specifications but known by different names in the three services and held under different cat/part numbers, pattern number or reference number as in vogue in that service. This results in duplication and multiplication of stores. The system of classification of stores in the Army, Navy and Air force is different from each other. Therefore, present system does not encourage identification of common items, inter-operability and standardisation.

7. The Codification system is a process under which equipment, components and parts of the defence supply systems are uniformly named, described, classified and assigned a code known as DCAN/NATO Stock Numberbased on physical, operational, chemical etc. characteristic of an item. Thus it enables to identify an item uniquely. Any item codified in using such system provides a common supply language which operates effectively in a multilingual environment, facilitate inter-operability curbs duplication (both within particular service or organisation and between services and organisations), permits interchangeability, promotes standardization and maximises logistics support in the most economical manner possible. It ensures that defence personnel deployed in an operational scenario can be assured of getting the right items to successfully complete their mission. The system is required to achieve maximum effectiveness in logistic support, to facilitate data management in the area of material identification and to identify items with identical characteristics. It thereby becomes possible to reduce inventory (equipment, assemblies, components and spare parts) and to keep the required quantity of stocks under control.

Benefits of Codification

8. A proper and uniform codification of Defence Stores will facilitate inventory control and management of inventory in many ways. These advantages can be operational, economical or environmental. Few of these advantages are enumerated below:-

9. **Operational Advantages.**

(a) This system contributes to equipment standardization efforts, which support interoperability, as several weapon systems spare parts can be used interchangeably with others.

(b) A national knowledge of all available military assets and resources allows for :

(i) Rationalisation of inventory management by sharing resources, spare parts and maintenance activities.

(ii) The minimum distribution of essential spare parts during the deployment of forces in a theatre of operation.

(iii) Cross service supply between the military branches.

(iv) Sharing of supply support between services.

(c) An accurate description of the items permits users to readily find equipment, which meets requirements and accomplish replenishment without delay.

(d) The use of a common language simplifies the technical dialogue between users. Maximum use of coded data allows language independent communications.

(e) Reveals inter-changeability of items within and between the Services.

(f) Codification reduces variety, prevents overstocking and reduces purchase costs by revealing duplicate and interchangeable items.

(g) Codification helps in rationalization, standardization and propagates the use of standard items.

(h) The use of computer technology allows the recording, processing, and transmitting of identification and management data through easily accessible databases.

10. **Economic Advantages.**

(a) The database allows designers and project managers to screen for parts which are already stocked in the supply system and which could be used, rather than introducing a new item.

(b) This practice reduces the variety of items to be managed and eliminates unnecessary costs for experimentation, identification, storage and other related supply functions.

(c) A widespread knowledge of spare parts used within the Armed Forces allows purchasing agencies to:

(h) Avoid unnecessary procurement for a specific user when another user has surplus stocks.

(ii) Combine orders from several users to benefit from price reductions on large purchases.

(iii) Access several potential sources of supply, thus generating significant savings by promoting competitiveness between suppliers.

(d) The system contributes to the standardization of the range of equipment performing the same functions, thus reducing the number of spare parts required to manage each weapon system.

(e) The cancellation of duplicates reduces the stock levels and generates savings in storage space, handling assets and personnel.

11. **Environmental Advantages.**

(a) The in-depth knowledge of the composition of materials, through detailed descriptions, promotes proper hazardous material handling recycling activities that will ensure the protection of the environment and avoid prohibitive restoration costs of polluted sites. This information also ensures required demilitarization activities of militaryequipment.

(b) Track important information: The system makes it easier for logisticians to recognise whether precious metals may be embedded in a supply item, whether it is hazardous to the environment, or of such high value that it requires special storage procedures. Data in the system can also alert users when supply items may be susceptible to harm during storage or transportation, thus requiring special handling.

Importance of Defence Codification on Joint Services Basis

12. A common method of Codification of Defence Stores on Joint Services basis is an essential requirement for promoting standardization. No meaningful standardisation can be achieved without adopting uniform codification by the services and other organisations. Codification provides the common language and medium amongst services for necessary cataloguing of items on Joint Services basis.

13. In the Standardisation Directive issued by Ministry of Defence on 05 Oct 1977, the policy laid down with regard to codification and cataloguing is as follows :-

"Services Inventory shall be codified and catalogued under the Defence Stores Cataloguing System. This will prove a uniform supply language for the three services. All new introductions shall be catalogued at the first instance so as to avoid accumulation while the remaining Services Inventory will be catalogued on "Priority Weighing".

NATO Codification System

14. The Codification process followed at Directorate / NCB India is NATO Codification system. NATO Codification system is a uniform and common system for identification, classification and stock numbering of item. It is managed and run by a NATO Codification group consisting of the National Directors on Codification Allied Committee 135 (AC/135), NCB India is a Tier II member of AC/135.

15. **ACodP-1.** The ACodP-1 publication sets out principles, responsibilities, procedures, forms and general guidance on the operation of the NATO Codification System (downloadable from the AC/135 web site at www.nato.int/structure/AC/135/main/links/acodp1.htm.)

16. **FLIS.** Federal Logistic Information System employed by Defence Logistics Agency of US DoD is the guiding agency for NATO Codification System. The applicability of FLIS is brought out in various Standard NATO Agreements (STANAGs) of AC/135 described in ACodP-1.

17. **NATO Standardisation Agreements (STANAGs) on Codification.** NATO STANAGs are governing policy for development of NCS by AC/135. Following STANAGs are governing the NATO Codification System.

(a) STANAG 3150 : Codification- Uniform System of Supply Classification.

(b) STANAG 3151 : Codification- Uniform System of Item Identification.

(c) STANAG 4177 : Codification- Uniform System of Data Acquisition.

(d) STANAG 4199 : Codification- Uniform System of Exchange of Materiel Management Data.

(e) STANAG 4438 : Codification- Uniform System of Dissemination of Data Associated with NATO Stock Numbers(NSN).

18. **STANAG 3150: Codification- Uniform System of Supply Classification.** The aim of this agreement is to provide a uniform system of supply classification for use by the Armed Forces of the NATO countries. The United States "Federal Supply Classification System" is adopted as the NATO Supply Classification System. The System is described in the:-

(a) FLIS Procedures Manual (DOD 4100.39-M) Volume 4, Chapter 2.

(b) Cataloging Handbook Federal Supply Classification (H2 Series).

(c) NATO Multilingual Supply Classification Handbook (ACodP-2).The Allied Codification Publication Number 2 (ACodP-2), NATO Supply Classification Handbook

has been developed by AC/135 and is based on the US Federal Classification Handbook (H2).

19.**STANAG 3151: Codification- Uniform System of Item Identification.**The aim of this agreement is to provide a uniform system of Item Identification for use by the Armed Forces of the NATO countries. The United States "Federal System of Item Identification" is adopted as the basis for the NATO Item Identification System. The Federal System of Item Identification is maintained and updated by Defence Logistics Agency of US DoD. The FLIS Procedures Manual Volume 4 Item Identification (Last updated n May 2010) is the master guide of Item identification, maintenance of data and all transaction related to Item identification. The System of Item Identification is described in:-

(a) FLIS Procedures Manual (DOD 4100.39-M) Volume 4.

(b) Federal Item Name Directory (Cataloging Handbook H6).

(c**)** NATO Multilingual Item Name Directory (ACodP-3).The Allied Codification Publication Number 3 (ACodP-3), NATO Item Name Directory has been developed by the AC/135, and serves as the internationally agreed dictionary of Approved item Names required in the preparation of all Item Identification. The ACodP-3 contains Approved Item Names, Basic Names, their definitions together with any appropriate inclusions or exclusions and colloquial Names. It is based on the US/Federal Item Name Directory for supply Cataloguing (H6).

20. **FIIG System of Codification.** A Federal Item Identification Guide is self contained document for collection, coding, transmittal and retrieval of characteristics and related supply management data for an item of supply for logistical use. The FIIG contains:-

(a) Index of Approved Item Name (under that FIIG).

(b) Applicability Key Index.

(c) Item characteristics data requirement.

(d) Reply tables.

The FIIG is updated, revised and maintained by Defence Logistic Agency of DoD. Introduction of new FIIG was stopped by FLIS in 2011. Also the FIIG link on DLA LIS website will no longer have available from 1 Oct 2014.

21. **Transaction from FIIG system to IIG System of Codification.** The NATO Codification system transformed from FIIG to IIG system when FLIS decided to simplify the item identification. New IIG system is a simple XML based utility available on DLIS website/ NACS/ CodiSAP. Under this system, the INC is the basis of IIG and contains all information related to Item Identification requirement along with supply classification. The difference between the two systems is given below:-

SNO	FIIG	IIG
1.	Lengthy System for identifying INC and its MRC.	Simplified with INC itself the basis of IIG with applicable MRC.
2.	Varying non mandatory MRCs (AR-As required).	Fixed non mandatory MRC ('*' marked).
3.	Separate references to MRC/ SAC, by applicability Key and reply table.	Single document contain all related data, No separate reference required.
4.	Supply classification data needs separate reference to H2 handbook.	INC/ IIG contains FSC/ GPCL information also for easier and effective supply classification.

22. The softwares employed by Directorate i.e. NACS and CodiSAP are fully compliant with NATO Codification System and procedures and are continuously updated to match the requirements of NATO Codification.