CHAPTER III – INCIDENT RESPONSE SYSTEM

"***An ounce of practice is far better than tons of precepts***"

(HPC Report, 2001)

Incident Command System

3.1. **Disaster Response and Incident Command System (ICS)**. One of the *greatest challenges of the 21st century is protecting people, especially the world's poor, from the devastating impacts of disasters. Along with the challenge has come new thinking on how to deal with disasters*[65]: Thus, several countries around the world are transitioning to the ICS as a more effective disaster response management system while adapting it to the context of their own countries. ICS is

[65] USAID Side Event 4, 'Preparedness for Professional Disaster Response Management Systems: An Interactive Forum to Discuss Experiences in Using the ICS'.

a management concept that has proven it's ability to meet the challenge. If the ICS is put in place and stakeholders trained in their respective duties and roles, it will help reduce chaos and confusion during actual incident management and everyone involved will know what all needs to be done, who will do it, where the resources are and who is in command, etc.

3.2. **Textbook Definition of ICS**. As defined by USAID, *ICS is a standardized emergency management concept specifically designed to allow users to adopt an integrated organizational structure equal to the complexity and demands of single or multiple incidents, unhindered by jurisdictional or agency boundaries*[66]. The ICS is a standardized emergency management system that facilitates a rapid Govt response to emergency situations. **What is of import is that though a number of agencies may be involved in the response under the system, the jurisdiction of individual agencies remains intact, unhindered**.

3.3. **Felt Need for ICS and Adaptation in India**. The response to disasters in most cases requires involvement of number of organizations/ departments such as Police, Fire and Emergency Services, Revenue, Medical and Health, Public Works, Communications, Home, Finance, Rural Development, Roads, Agriculture, Animal Husbandry etc. Achieving coordination among these agencies during emergency times create unique challenges such as line of authority, supervision, resource management, differences in terminology and other communication problem, span of control etc. Often it is found that as a result of these difficulties, the response process suffers leading to poor incident management. India's past experience of handling disasters shows that onsite disaster response is often mounted without appropriate response plans. Coordinating agencies / authorities do not have clarity of roles or division of responsibility and often there is duplication / overlapping of efforts resulting in excessive costs, time delays and sub optimal outcomes. ICS of USA was found to be a viable option as one of the best practices

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[66] USAID Side Event 4, 'Preparedness for Professional Disaster Response Management Systems: An Interactive Forum to Discuss Experiences in Using the ICS', pp3.

from other countries[67]. ICS was developed by US Forest Services in 1970s for managing a series of forest and urban fires and was found to be very effective method to deal with incidents of any kind and magnitude. ICS is one of the best means to strengthen institutional response during all types of disasters[68]. Based on the recommendations of the HPC Report of 2002, the MHA felt that on-scene management of disasters needed to be professionalised and specialised disasters response teams needed to be developed. HPC members visited several countries, studied their respective response management system and finally made the choice in favour of ICS. Accordingly, ICS was brought by the Govt of India on HPC recommendation.

3.4. **Incident Command System (ICS) and Its Highlights.** All emergencies and crisis events are by definition and nature, chaotic and highly dynamic, creating hysterical, emotional, and social disorder. During such moments of emergencies, ICS has proven to be an effective mechanism to manage incidents of disarray and confusion and to restore order in a chaotic environment. A few highlights of the system are as follows:-

(a) ICS is a single standardized emergency management system that functions to incorporate and fully utilize all assigned resources and expertise from multiple agencies, and can operate in a multijurisdictional environment.

(b) ICS is a management system, which is on-scene, modular and flexible, that can be adapted to manage any scale of disaster situations.

(c) ICS is the combination of facilities, personnel, procedures, communications etc. operating within a common organizational structure,

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[67] PG Dhar Chakraborty, 'ICS Progress Report' by NIDM, New Delhi to MHA in 2008.

[68] JK Sinha, Member, National Disaster Management Authority, New Delhi while addressing SAARC Regional Training Programme on "Role of ICS for Disaster Response" From 15 to 19th October, 2012 at Patna, Bihar.

with responsibility for the management of assigned resources to effectively accomplish stated objectives pertaining to an incident.

(d) ICS is a model tool for Command, Co-operation & use of resources.

(e) In ICS, field level functionaries at various levels when trained properly, can carry out disaster response functions in the most professional and effective manner.

(f) ICS is a way to organize the functions of a team, so that every aspect of an incident response is addressed. This leadership model enables a team to communicate, cooperate, and get the job done efficiently and effectively.

(g) ICS provides accurate information, strict accountability, planning, and cost effective operations and logistical support for any incident.

(h) ICS is a tool for managing emergency situations which provides a set of principles, procedures, facilities and equipment, integrated into a common organisational structure designed to improve emergency operations of all types and complexities.

(j) ICS is structured to integrate any type of resource including police, military, technical experts, international resources, and NGOs, and can be used to manage sudden onset disasters, long-term relief efforts, or even non-emergency events.

3.5. **System Architecture**. ICS entails employment of an IRT headed by an incident commander. The system architecture is as follows (refer Fig 3.1) :-

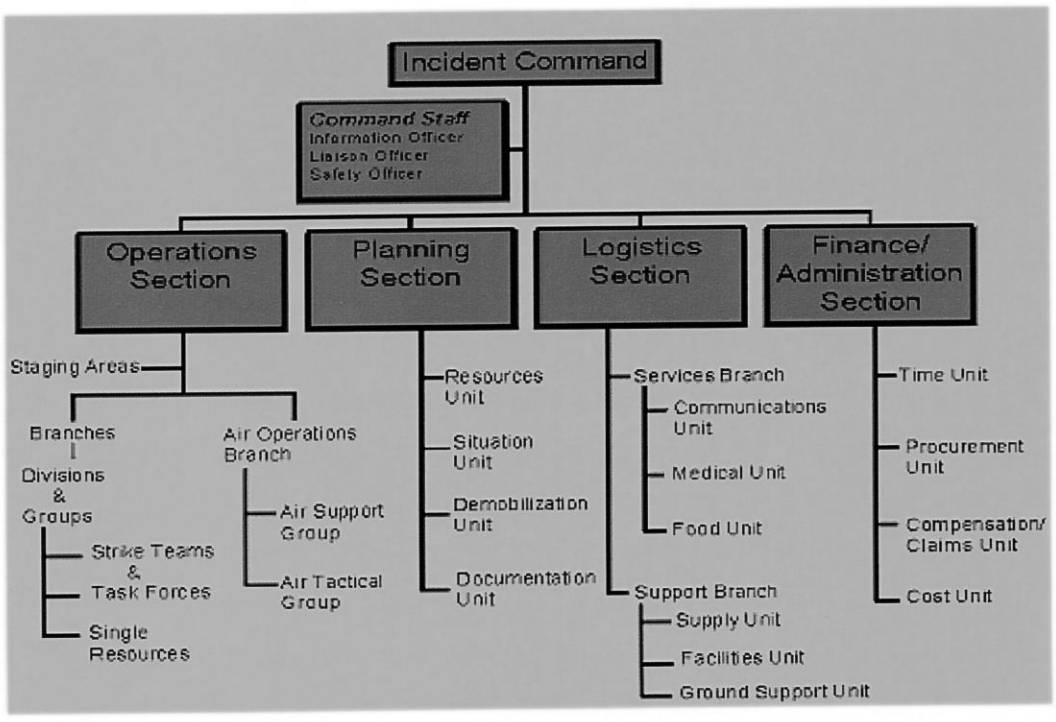

Fig 3.1 : ICS System Architecture

(Source : USAID Training Manuals for Basic cum Intermediate Course)

3.6. **Functional Areas of ICS**. ICS establishes the following five major functional areas for managing an incident (refer Fig 3.2):-

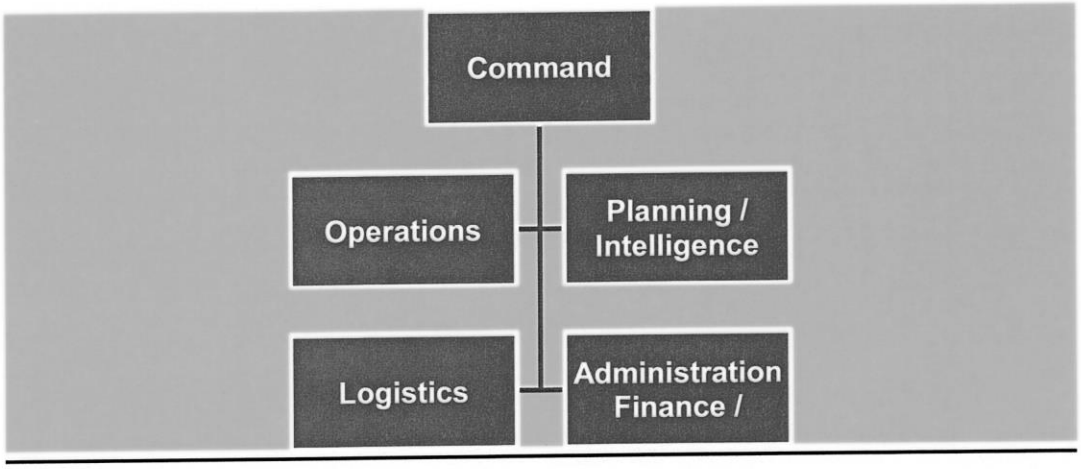

Fig 3.2 : Primary Functions of ICS

(Source : NIDM Presentation, IC & OSC Course Module)

(a) **Command** – Provides leadership and establishes incident objectives as well as having overall responsibility for managing the incident.

(b) **Planning** – Coordinates planning, resource ordering and release, record keeping, mapping, technical expertise, and documentation necessary to accomplish objectives.

(c) **Operations** – Develops and oversees tactical operational activities needed to accomplish incident objectives.

(d) **Logistics** – Oversees the development and use of infrastructures (facilities, transportation, supplies, communication, food, etc.) to support responders as they work towards accomplishing incident objectives

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(e) **Finance/Administration** – Oversees all administrative and financial aspects of the incident including cost tracking, procurement, payments, compensation, etc. in support of objectives.

3.7. **ICS in a Global Context**. ICS is currently fully implemented in Australia, Canada, New Zealand, and the United States. Other countries, including India, Mexico, Philippines, and Sri Lanka are actively transitioning to the use of ICS. The U.S. Department of Agriculture Forest Service (USFS) has been closely collaborating with other countries' emergency management agencies in curriculum development and training on the ICS. Bilingual USFS employees have translated ICS into Spanish and have taught the system to wild-land fire-fighters in Mexico and Costa Rica. USFS ICS specialists have taught courses in Brazil, Bulgaria, India, Mongolia, Sri Lanka, Taiwan, and through the Association of Southeast Asian Nations. While the basics of ICS remain unchanged, countries adopt ICS with certain modifications to suit their own peculiarities eg India has chosen to adopt ICS with due modification and has named it Incident Response System.

Incident Response System (IRS)

3.8. **National Policy on Disaster Management - IRS.** As brought out earlier, in 2003, MHA approved introduction of ICS approach and its integration into Indian emergency management system. A traditional command structure exists in the administrative hierarchy which manages disasters in India. However, the national policy on disaster management approved by the Govt of India envisages to strengthen and professionalise the existing response structure by drawing upon the principles of ICS with suitable modifications. In view of provisions of the DM Act 2005, NDMA felt that authoritative guidelines on the subject, with necessary modifications to suit the Indian administrative setup, were essential. To meet this need, a core group of experts was constituted and four regional consultation workshops were conducted. It was ensured that representatives of the State Govts and MHA participate and their views given due consideration. Training Institutes like the LBSNAA, NIDM and various RTIs / ATIs along with national core trainers also participated[69]. The adaptation of ICS by other countries was also examined. The draft prepared was again sent to all states, UTs and their final comments were obtained and incorporated. A comprehensive set of Guidelines has thus been prepared and is called the Incident Response System (IRS) [70]. The same have been issued by the NDMA in July 2010 titled as *'National Disaster Management Guidelines – Incident Response System'*. Two major differences of IRS from ICS are; firstly, as both finance are logistics are closely linked in our case, the Finance Section has been put under the Logistics Section in IRS. Secondly, the Supply unit in ICS has been renamed as Procurement unit in IRS to avoid confusion arising from that name.

3.9. **Elimination of Adhocism**. Disaster response is typically a six step process – prepare, assess, plan, coordinate, implement & monitor. IRS draws on this

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[69] Prabodh Pathak, Sr Consultant & ICS/IRS Expert, NIDM, New Delhi, 2013.
[70] Preamble, 'National Disaster Management Guidelines – Incident Response System' – July 2010.

process in totality and adopts a unified approach to eliminate gaps in response. To eliminate adhocism, IRS entails pre-nomination of various appointments of various departments to act as command and general staff and lay down their roles and responsibilities in the face of a disaster or on occurrence of a disaster. IRS can be comprehended better as a system wherein incident response team (IRT) acts as an engine to drive the response effort in a professional manner and various responding agencies join up as modular bogies resulting in synergized approach.

3.10. **Governing Principles of IRS**. IRS is governed by a number of management principles viz management by objectives, unity of command & unified command, chain of command, transfer of command, span of control, common terminology and a high degree of accountability & flexibility.

3.11. **System Architecture.** IRS is a modular system comprising IRT headed by a 'Responsible Officer' who depending on the level of disaster could be the Chief Secretary of a responding state or District Collector of an affected district. Depending upon the geographical spread and magnitude of the disaster, there could be more than one IRTs to respond to a disaster or multiple disasters. An IRT has an Incident Commander who is assisted by Command Staff and General Staff in organizing response to a disaster. Various responding agencies such as NDRF, Armed Forces units, SDRF, NGOs, voluntary organizations and various resources provisioned by the Central Govt or other states, PSUs or corporate houses are deployed under the aegis of Operation Section of an IRT. Unlike USA system where the ICS trained personnel IRT are summoned to respond, get demobilized after the action, in India, it is felt that the existing administrative structure can get empowered with the ICS skills so that they are effective in not only handling disaster response but also in managing any incident involving large number of people and multiple events simultaneously. A typical system architecture of IRS is as given below (refer Fig 3.3 & 3.4):

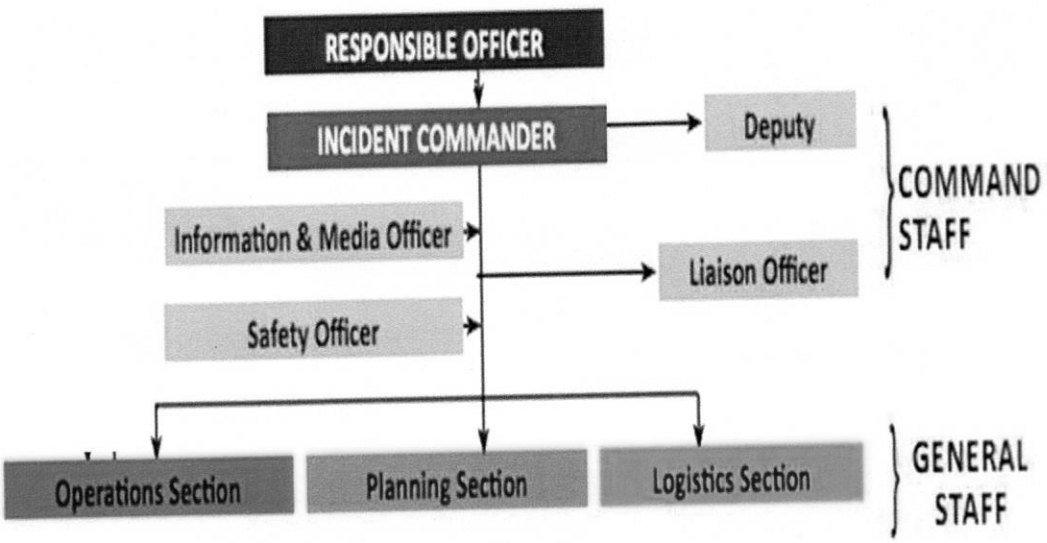

Fig 3.3 : IRS System Architecture

(Source : National Disaster Management Guidelines –IRS 2010, NDMA)

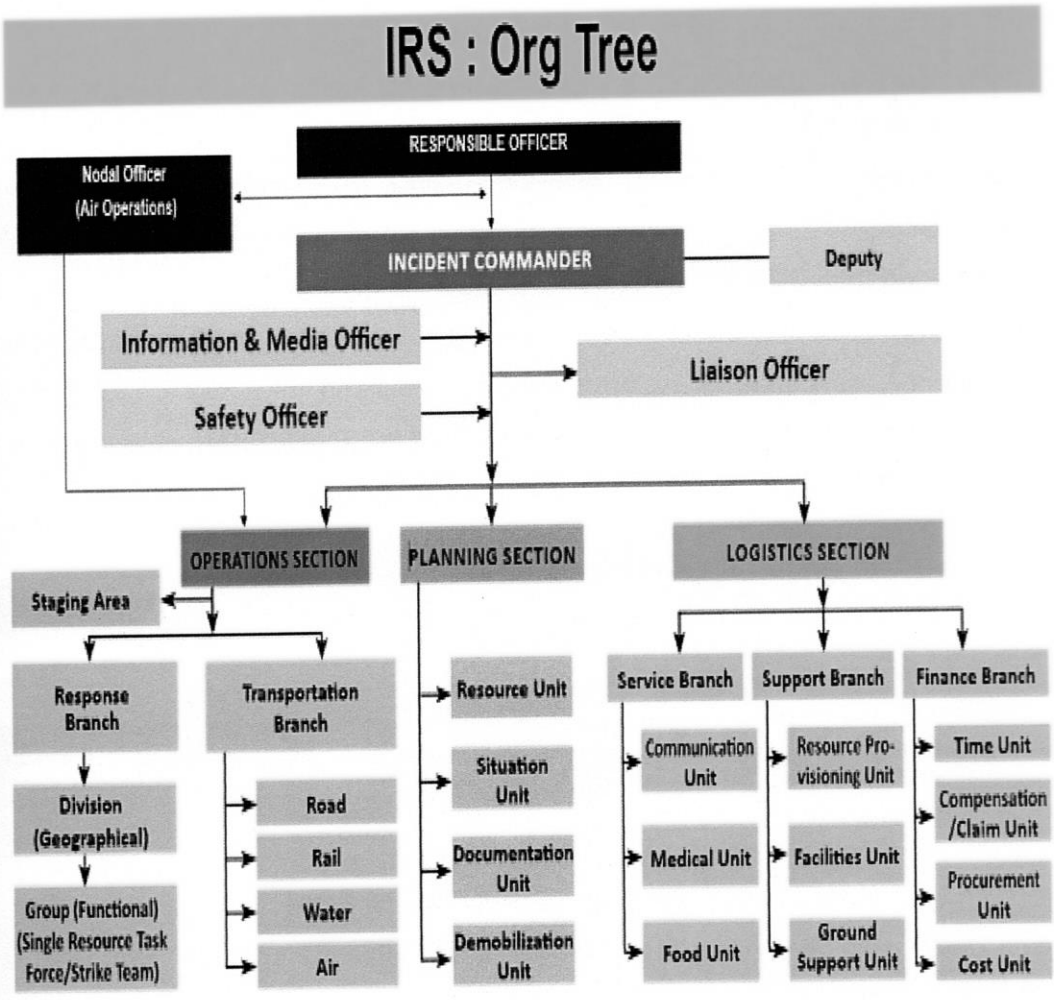

Fig 3.4 – IRS Organisation Tree

(Source : National Disaster Management Guidelines –IRS 2010, NDMA)

3.12. **IRS Architecture at State Level**. The NDMA guidelines on IRS recommends[71] that there will be IRTs at the state, district, sub-division, and block levels comprising players like Responsible Officer (RO), Incident Commander (IC), Operation Section Chief (OSC), Planning Section Chief (PSC) and Logistic Section Chief (LSC). The guidelines have given a suggestive list of officers who can perform the concerned activities. The idea is to pre-designate officials to perform

[71] IGNOU Training Manual, Booklet 3, 'Responding to Disasters', pp 30.

different functions and to train them on their responsibilities so that whenever there is a disaster, everyone knows who has to perform what duty and how will it be done. This will remove adhocism in responses and make the response process smooth and effective. The Chief Secretary (CS) has been designated as Responsible Officer (RO) and overall in-charge of Disaster Response in their jurisdiction as the CS is CEO of SDMA, Chairperson of SEC and head of state administration. At state level Principal Secretary Revenue may head the state IRT. Refer Fig 3.5 below for disaster response structure at state level - hierarchical representation of RO with State EOC, HQ IRT, lower level of IRTs at district levels.

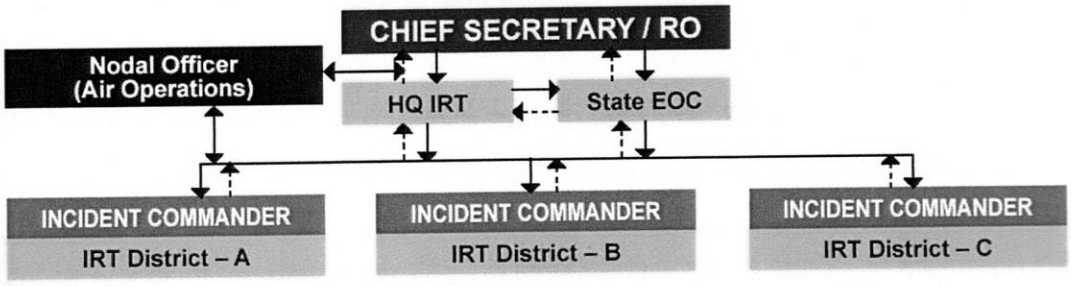

Fig 3.5 : IRS Structure at State Level

(Source : National Disaster Management Guidelines –IRS 2010, NDMA)

3.13. **IRS Architecture at District Level.** The District Magistrate/DC is the head of the District administrative set up and chairperson of the DDMA as per the DM Act, 2005. Although Chairperson of Zila Parishad is the Co-chairperson of DDMA alongside the DC, responsibility of the district lies with the District Magistrate / DC being responsible for all planning, coordination and execution of disaster management plans. Hence District magistrate / DC has been designated as the RO in the District. The co-chairperson of DDMA however may be used to seek / elicit help from NGOs, PRI and community. The structure may be activated as and when required. For monitoring and support of incident response, the RO will involve all required Emergency Support Function (ESF) and headquarter IRT to support the on – scene IC. Under the RO, there will be IRT at district, subdivision

and block level, who will work in close coordination with EOC and report to RO. At district level an IRT may be headed by the ADM. Or additional district collector. Refer Fig 3.5 below for disaster response structure at District level - Hierarchical representation of RO with District EOC, District HQ IRT, lower level of IRTs

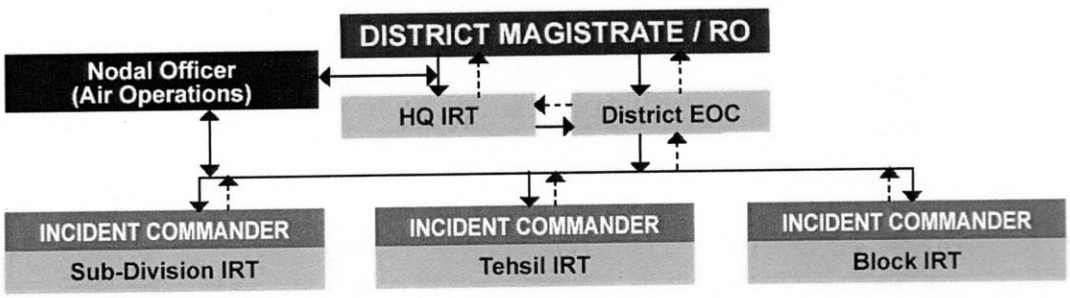

Fig 3.6 : IRS Structure at District Level

(Source : National Disaster Management Guidelines –IRS 2010, NDMA)

On receipt of information regarding the impending disaster, the EOC will inform the RO, who in turn will activate the required IRT and mobilize resources. The scale of their deployment will depend on the magnitude of the incident. At times, the information about an incident may be received only on its occurrence without any warning. In such cases, the local IRT (District, Sub-Division, Tehsil / Block) as the case may be, will respond and inform the higher authority, and if required seek reinforcement and guidance.

3.14. **Adaptation of ICS**. IRS in the current form is the Indian adapted ICS. This adaptation process was guided by first hand understanding of the ICS adaptation by other countries like Australia, Canada and ASEAN. Senior level officials from NDMA, MHA, NIDM and the SDMAs (in two batches) had visited USA and Australia to study the adaptation process and accordingly, the entire adaptation

process got guided across the country. As per Mr Prusty[72], there are certain elements which are the key to effective adaptation/ application of IRS. These are as follows:-

(a) A state-of-the-art EOC at state as well as district level.

(b) Building IRS training capabilities in the national training institutions (beyond NIDM and LBSNAA), ATIs and other departmental training institutions.

(c) Capacity building of the district and state administrative functionaries (not only administrative officers but also officers from the line departments).

(d) Creating cadre of local IRS trainers (at state and district level).

(e) Regular simulation exercises (both table top as well as full cycle and full scale, there seems to be a necessity to improve on our currently conducted mock drills).

Training Efforts in ICS / IRS

3.15. After intensive consultations with states / UTs and detailed discussions with the LBSNAA, and other training institutes, MHA decided to introduce ICS to the Indian civil administration system under the collaborative arrangements of USAID and USFS (US Fire Services). *Training was made principal driver for effective integration of ICS within the existing administrative system and its institutionalisation in India*[73]. Accordingly, LBSNAA took the first step to develop a

[72] NM Prusty, Centre for Development and Disaster Management Support Services (CDDMASS)- A Strategy Centre, New Delhi . https://in-mg61.mail.yahoo.com/neo/launch?.rand=20n2bcdl96pdk#mail , 22 Feb 14.

[73] Prabodh Pathak, Sr Consultant, ICS & IRS Expert, NIDM, in an unstructured interview, New Delhi, Jan 2013.

small group of administrators who not only got specific training but also got first exposure to the application in the USA. Subsequently, LBSNAA developed a course module for ICS Basic training and it was offered to all IAS probationers and also to the serving officers in batches. Later, three pilot training were implemented in Gujarat, AP and Assam. While the pilot projects were being implemented in three states, MHA took a decision to scale up and customize the training through the NIDM and the ATIs, the reason being that the 'response' is a state function and more and more state level civil servants need be trained on ICS / IRS.

3.16. LBSNAA conducted training of trainers (TOT) in ICS from 2004 to 2008, and later the MHA directed that NIDM be the nodal agency for conduct of training in IRS. MHA directed that training be conducted at two levels; on TOT basis and training of responders in respective states. Training in IRS is now being conducted by various states, NDRF and few training institutes. Details of 11 IRS Course Modules & broad training contents of Incident Commander's Course conducted by NIDM are as at Appendix E.

3.17. NIDM has developed a complete range of course modules (11 of these, for all functions and all levels) which is being used by not only NIDM but also all national and state level Govt training institutions while offering disaster response management training. In 2011-12 year, 12 master trainers were developed in ToT, they also sent to USA for ICS tour. In 2012-13, 15 instructors were trained in IRS. In all, approximately 350 personnel have been trained in IRS till date[74].

3.18. ATIs at West Bengal, UTCS, New Delhi and MCRCR, Hyderabad have been conducting Basic cum Intermediate courses in IRS on regular basis for last about two years ie since 2012.

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[74] Prabodh Pathak, Sr Consultant, ICS & IRS Expert, NIDM, in an unstructured interview, New Delhi 2013, Jan 14.

Institutionalisation of IRS in India

3.19. **Institutionalisation Process of IRS**. As has been brought out in this chapter, the institutionalisation process of ICS / IRS in India[75] has been as follows:-

(a) Adaptation of ICS into IRS led by LBSNAA.

(b) Issuance of National Disaster Management Guidelines – IRS in July 2010 including a roadmap covering short and medium term action points / goals by NDMA.

(c) Training of master trainers led by LBSNAA and NIDM on ToT basis.

(d) Preparation of all 11 Course modules of IRS (all certified by USFS) and fielding the same by NIDM and testing of these modules in field.

(e) Training of trainers and responders at NIDM and ATIs / disaster management institutes at state levels.

3.20. **Measures Recommended by USAID to Institutionalise IRS**. A project on disaster management support run by GOI and USAID support has been extended till 31 March 15[76]. The broad objective of this project is to reduce India's vulnerability to disasters and build capacity of key Indian institutes. USFS in order to build capacity and to promote understanding & integration at various levels, have recommended the following measures:-

(a) Further training and practice use of IRS at state/district / municipality levels to build capacity at functional / grassroots levels. Focal state / district/municipality be selected based on level of interest, disaster

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[75] Unstructured interviews with experts and officials at NIDM & MHA (DM) Feb 14.
[76] Ibid.

vulnerability and potential for use of IRS for planned events (elections, pilgrimage) with a view to train IRTs.

(b) Develop IRS trainers with state, districts and / municipality (pilot area) with a purpose to create 3-5 IRS trainers with pilot areas with a view to build training capacity and promote cascading of IRS. USAID recommends that to achieve this, trainers be selected from pilot areas so that Basic cum Intermediate and positional courses be conducted to train them in IRS.

(c) To inculcate interest and confidence in IRS there is a need to undertake demonstration of use of IRS in pilot areas at various levels.

(d) Need to establish IRS database to record and track availability of IRS trainers / trainees as well as to update IRS curriculum.

(e) Need to test and evaluate IRS.

(f) Need to sensitise stakeholders in IRS through NDMA while conducting mock exercises.

(g) Set up a national mechanism to guide IRS integration & strengthen IRS institutionalisation mechanism at national and state levels.

3.21. **MHA Efforts to Provide Impetus**. On interacting with MHA officials in DM Department it was learnt that efforts are being put in to institutionalise IRS across the country. Periodical meetings are held to take stock of progress made and decide on fresh initiatives. Two such meetings were held last year the details are given in the boxes[77].

[77] GautamGhosh, Dy Secretary, DM I, MHA in an unstructured interview, 16 Feb 14.

(a) **Meeting in July 13**.

(i) NIDM should plan and conduct more courses and organise more seminars/ workshops for effective implementation of IRS modules for state / UT officials 9 out of 11 modules were prepared.

(ii) NIDM should maintain IRS database to record and track the availability of IRS trainers and trainees and maintain/ update IRS curriculum.

(iii) NIDM may consider USFS request to sensitise states / districts on IRS through NDMA activities, including mock drills to create a more formalised introduction of IRS into the NDMA mock drills programme.

(iv) NIDM was to examine all issues raised by USFS and initiate necessary action for effective implementation of IRS in India.

(b) **Meeting in Oct 13**.

(i) NIDM to make available contact details of existing Master Trainers in IRS on the website.

(ii) DOPT would advise LBSNAA to make available details of master trainers, trained prior to 2009 at NIDM / MHA.

(iii) Those to be enrolled as master trainer should be less than 35 years of age on the day of enrolment.

(iv) USAID to explore avenues for training of next group of core trainers.

3.22. It is evident from the above that certain amount of efforts are being made by the Central Govt to institutionalise IRS in the states with training as the principle driver to institutionalisation and capacity building.