

**Appendix A**

(Refers to Para 1.34 (e) of Research Report)

**IRS QUERY POSTED ON THE NET**

**From:** Brigadier Alok Raj [mailto:arajjpr@yahoo.co.in]

**Sent:** Friday, January 31, 2014 2:09 PM

**To:** se-drm@solutionexchange-un.net.in

**Subject:** [se-drm] Query: Implementation of Incident Response System-Experiences; Examples. Reply by 13 February 2014

**Moderato's note:** We are posting a new query on Implementation of Incident Response System. The query seeks inputs on the current status of implementation of the IRS Guidelines and how can IRS be made more effective, user friendly and an easily adaptable system. We look forward to your inputs

Dear members,

The National Disaster Management Authority (NDMA) had issued the National Disaster Management Guidelines on Incident Response System (IRS) in July 2010. The Guidelines are available at

[http://ndma.gov.in/ndma/guidelines/Incident\\_Response\\_System\\_July.pdf](http://ndma.gov.in/ndma/guidelines/Incident_Response_System_July.pdf)

The objective of NDMA in formulating the Guidelines was to minimize loss of life and property by strengthening and standardizing the disaster response mechanism in the country. The Guidelines aims to establish an effective, efficient and comprehensive disaster response system by putting in place a well-coordinated response mechanism at all levels of administration to avoid adhocism and reduce avoidable loss of life, sufferings of people and damages to property.

Apparently, IRS was not put into practice while responding to the recent Uttarakhand disaster. Had IRS been put to good use, may be the response would have been much better. In this context, I would like to seek experiences from members of the Disaster Management Community on the following:

-What is the current status of implementation of the IRS Guidelines and what efforts are being made for its adoption and training of stakeholders by states and districts? Is there any road map for its adoption, training and institutionalization in the disaster prone states and across the country?

-Whether IRS has been put into practice by any state or district for managing disasters? If so, what has been the experience? Is there any report on the efficacy of the System?

-What mechanisms have been built in the system to fit Armed Forces units into the System as they normally have their own 'chain of command and control' and do not operate under other services or civilian commanders?

-What changes are required for integration of government and voluntary organizations in post disaster response and relief? How can IRS be made more effective, user friendly and an easily adaptable system?

Your inputs will help in better implementation of the IRS Guidelines.

Regards,

Brigadier Alok Raj,

Indian Institute of Public Administration (IIPA), New Delhi

**Appendix B**

(Refers to Para 1.35 of Research Report)

Category National - DR/ EForm Ser.....**QUESTIONNAIRE - DISASTER RESPONSE SYSTEM FOR INDIA**

May I request you to please spare 20 mins to respond to the Questionnaire and post it at the following address:

Brig Alok Raj,

Cell 9582764501

APPPA 39, Indian Institute of Public Admin (IIPA)

IP Estate, Ring Road, New Delhi 110002

[arajipr@yahoo.co.in](mailto:arajipr@yahoo.co.in)

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**Name**..... **Organisation**.....

**Designation**..... **email ID (optional)**.....

**Cell No (optional)**..... **Address**.....

**State**..... **Distt**.....

**Date**.....2014

**Efforts Made to Institutionalise Incident Response System (IRS), Progress, Impediments and Remedial Measures**

1. **Felt Need for India's Disaster Prone States**. Disaster response is a multi-agency, multi-dimensional operation, required to be carried out, often without any prior warning or at very short notice. Therefore, there is a felt-need for well-structured, pre-planned, straight jacketed operations to ensure synergised response by the stake holders and relief agencies in the least possible time to achieve optimal outcomes. Incident Response System (IRS) is an Indian version

of Incident Command System (ICS) of USA. IRS has been customised for to ensure a cogent response in the country.

2. **Institutionalisation of IRS**. With the paradigm shift in 2005, from our relief centric approach to prevention, mitigation and preparedness approach, ICS / IRS has assumed significant importance. Therefore, IRS needs to be operationalized in the disaster prone states on top priority and institutionalised down to grassroots level for effective response, when needed. Notwithstanding this, IRS is yet to be institutionalised in the country even though the country has been working on ICS since 2004 and IRS has been promulgated through National Disaster Management Guidelines in July 2010 by NDMA. Numerous measures have been initiated by the MHA, Govt of India, NDMA, NIDM to train resource personnel, key functionaries in IRS in last few years. However, the tragedy at Kedarnath in Uttrakhand in June 2013 has exposed our low response capacity. It is therefore imperative to examine the efforts made by us to institutionalise IRS in our country and progress made. It is also important to identify impediments in institutionalisation of IRS and find remedial measures to provide impetus to our efforts.

3. **Efforts Made by us to Institutionalise IRS in Our Country.**

(a) **Has disaster response training been organised in various states /districts/ talukas?**

(Regularly / sometimes/ Only once a while/Not to my knowledge/ Never).

(b) **Has ICS / IRS training been organised in states /districts/ talukas?**

(Regularly / sometimes/ Only once a while/Not to my knowledge/ Never).

(c) **Are you acquainted with 'National Disaster Management Guidelines – IRS' issued by NDMA in July 2010?**

(Fully / Fairly / Once/ in bits / Not at all).

(d) **Have you participated in the mock or table top exercises conducted to train in disaster response at national /state level?**

(Regularly / sometimes/ Only once a while/Not to my knowledge/ Never).

(e) **Has ICS / IRS ever been used / implemented in disaster response situation in any of our states / districts?**

(Many times /Sometimes /Once / Partially used / No idea).

(f) Please specify **where and when IRS was used** to manage disasters in our states, if any.....

4. **Impediments in Institutionalisation of IRS in Our Country.** Please rate (tick mark) following factors which might be impediments in institutionalisation of IRS in disaster prone states / districts:-

Ser No	Likely Impediments	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
i	Non-dissemination of National Disaster Mgt Guidelines–IRS by NDMA/ MHA					
ii	Inadequate efforts and weak resolve on the part of NDMA					
iii	Inadequate efforts and weak resolve on the part of MHA (GOI)					
iv	Non establishment of SDMAs / DDMA					
v	Inadequate efforts on the part of SDMA/State Govt					
vi	Lack of knowledge and faith in efficacy of IRS					

vii	IRS needs proper training before institutionalisation in the state / districts					
viii	Non availability of time on part of state / districts officials for institutionalisation of IRS					
ix	Fast rotation / frequent transfers of trained govt officials in IRS					
x	Though understood, IRS is difficult to implement /execute on ground in disaster situations					
xi	Lack of funding in the state for training and supporting the initiative					
xii	Adhocism in efforts for preparedness for disasters in the state/districts					
xiii	Lack of interest and resolve by individual officials involved in disaster response					
xiv	Fear that IRS if used, will demand accountability					
xv	Difficulty in various getting agencies (other than govt) on board in use of IRS					
xvi	Non finalisation of state / district disaster management plans/ SOPs					

xvii	Shortage of trainers in IRS at state level					
xviii	IRS not suited for Indian set up, existing administrative set up is adequate for response					
xiv	Tendency of guarding of own turf and not sharing of credit - a major attitudinal challenge					

5. Any other impediments visualised by you :-

6. **Recommended Remedial Measures to Institutionalise IRS in Disaster Prone States in Our Country.** Please rate (tick mark) following recommended remedial measures to facilitate institutionalisation of IRS in your state / districts:-

Ser No	Recommended Remedial Measures	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
i	Time bound dissemination of National Disaster Mgt Guidelines – IRS down to grassroots level by NDMA/ MHA / SDMA / DDMA's					
iii	Include IRS in disaster response SOPs at various levels and review regularly					
iv	States / distts must incorporate all agencies who are likely to be involved in disaster response from the very planning stage					
v	Pre planning of IRS structure in every Taluka / distt / state in					

	advance so that officials can be designated for the role they are expected to play in disaster response					
vi	Institutionalised training of trainers (ToT) in IRS at state level followed by training of stake holders down to grassroots level					
vii	Training of all officials in IRS immediately on assuming new appointment in disaster prone state / distt / taluka					
viii	Conduct of refresher training for all concerned periodically to review progress in IRS					
ix	Conduct one table top exercise and one mock exercise for state / districts officials using IRS at least once a year					
xi	Organise periodical coordination meetings of all stakeholders to fine tune IRS at state / distt level					
xii	Knowledge management in IRS be encouraged at various levels and lessons learnt be shared with other distts / states					



xiv	Include IRS in the syllabus of various programmes / courses pertaining to disaster management					
xv	Include preliminary training in IRS at various academies at national / state levels to initiate future administrators / officials likely to be involved in governance					

7. What **additional measures do you recommend to institutionalise IRS** in disaster response at state and distt level in disaster prone states in our country?

**Likelihood of Conflicts when Employing Armed Forces and NDRF within the Ambit of IRS and Remedial Measures**

8. **Integration of Armed Forces and Conflict Resolution**. Armed Forces when deployed for disaster response are guided by instructions contained in Defence Publication 'Aid to Civil Authority' published by the MoD in 2004. Armed Forces have their own chain of command and are not normally put under command a civilian officer for conduct of operations whether military or any other operations. As IRS warrants all resources coming under command and control of an Incident Commander who in all likelihood would be a District / State Govt official, there are bound to be conflicts in terms of role, tasking, responsibility, chain of command and validation of completion of assigned tasks of Armed Forces SAR columns. In fact even when the Armed Forces units operate in tri-service/ bi-service environment, the issue of command & control has to be resolved and lead agency commander of either of the services becomes Commander of a particular operation for a particular phase. In view of this, there are bound be issues which will kick up conflicts when Armed Forces units are deployed alongside various civil

agencies esp in the context of ICS/IRS. In fact one of the role of **Responsible Officer as part of IRS** has been specified as to **resolve conflict** with Armed Forces units deployed in disaster response situations when using IRS. **Please rate (tick mark) following factors which might be possible causes of conflicts when deploying Armed Forces within the ambit of IRS in states/ districts:-**

Ser No	Likely Causes of Conflict	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
i	Armed Forces culture of own chain of command / not coming under civilian commander in operations					
ii	Lack of joint training between Armed Forces units and Civil Admin agencies / officials					
iii	Lack of understanding of IRS on part of Armed Forces units and related grey areas					
iv	Lack of understanding of IRS on part of Civil Admin agencies and related grey areas					
v	Lack of culture of sharing of credit					
vi	Lack of mutual trust					
vii	Desire of supremacy by individual organisation / turf war					
viii	Unfounded fears – there is no scope for any such conflict.					

ix	Even if there are conflicts, can be resolved as per time and situation on ground					
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**9. Any other causes of conflicts?**

**10. What measures do you recommend to resolve conflicts** which may arise while employing Armed Forces units within the ambit of IRS?

**Appendix C**

(Refers to Para 1.35 of Research Report)

Category State - DR/ EForm Ser......**QUESTIONNAIRE - DISASTER RESPONSE SYSTEM**

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Brig Alok Raj,

Cell 9582764501

APPPA 39, Indian Institute of Public Admin (IIPA)

IP Estate, Ring Road, New Delhi 110002

[arajipr@yahoo.co.in](mailto:arajipr@yahoo.co.in)**Name**..... **Organisation**.....**Designation**..... **email ID (optional)**.....**Cell No (optional)**..... **Address**.....**State**..... **Distt**.....**Date**.....2014**Efforts Made to Institutionalise Incident Response System (IRS), Progress, Impediments and Remedial Measures**

1. **Felt Need for India's Disaster Prone States**. Disaster response is a multi-agency, multi-dimensional operation, required to be carried out, often without any prior warning or at very short notice. Therefore, there is a felt-need for well-structured, pre-planned, straight jacketed operations to ensure synergised response by the stake holders and relief agencies in the least possible time to achieve optimal outcomes. Incident Response System (IRS) is an Indian version

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(Many times /Sometimes /Once / Partially used / No idea).

(f) Please specify **where and when IRS was used** to manage disasters, if any.....

4. **Impediments in Institutionalisation of IRS in Your State.** Please rate (tick mark) following factors which might be impediments in institutionalisation of IRS in your state / districts:-

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vii	IRS needs proper training before institutionalisation in the state / districts					
viii	Non availability of time on part of state / districts officials for institutionalisation of IRS					
ix	Fast rotation / frequent transfers of trained govt officials in IRS					
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xvii	Shortage of trainers in IRS at state level					
xviii	IRS not suited for Indian set up, existing administrative set up is adequate for response					
xiv	Tendency of guarding of own turf and not sharing of credit - a major attitudinal challenge					

5. Any other impediments visualised by you :-

6. **Recommended Remedial Measures to Institutionalise IRS in Disaster Prone States in Our Country.** Please rate (tick mark) following recommended remedial measures to facilitate institutionalisation of IRS in your state / districts:-

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iii	Include IRS in disaster response SOPs at various levels and review regularly					
iv	State / distts must incorporate all agencies who are likely to be involved in disaster response from the very planning stage					



v	Pre planning of IRS structure in the state & every Taluka / distt in advance so that officials can be designated for the role they are expected to play in disaster response					
vi	Institutionalised training of trainers (ToT) in IRS at state level followed by training of stake holders down to grassroots level					
vii	Training of all officials in IRS immediately on their assuming new appointment in the state / distt / taluka					
viii	Conduct of refresher training for all concerned periodically to review progress in IRS					
ix	Conduct one table top exercise and one mock exercise for state / districts officials using IRS at least once a year					
xi	Organise periodical coordination meetings of all stakeholders to fine tune IRS at state / distt level					
xii	Knowledge management in IRS be encouraged at various levels and lessons learnt be					

	shared with other distts / states					
xiv	Include IRS in the syllabus of various programmes / courses pertaining to disaster management					
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commander of either of the services becomes Commander of a particular operation for a particular phase. In view of this, there are bound to be issues which will kick up conflicts when Armed Forces units are deployed alongside various civil agencies esp in the context of ICS/IRS. In fact one of the roles of **Responsible Officer as part of IRS** has been specified as to **resolve conflict** with Armed Forces units deployed in disaster response situations when using IRS. **Please rate (tick mark) following factors which might be possible causes of conflicts when deploying Armed Forces within the ambit of IRS in states/ districts:-**

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iv	Lack of understanding of IRS on part of Civil Admin agencies and related grey areas					
v	Lack of culture of sharing of credit					
vi	Lack of mutual trust					
vii	Desire of supremacy by individual organisation / turf war					

viii	Unfounded fears – there is no scope for any such conflict.					
ix	Even if there are conflicts, can be resolved as per time and situation on ground					

**9. Any other causes of conflicts?**

**10. What measures do you recommend to resolve conflicts** which may arise while employing Armed Forces units within the ambit of IRS?

**Appendix D**

(Refers to Para 1.35 (a) of Research Report)

**Required Sample Size<sup>†</sup>**

Population Size	Confidence = 95%				Confidence = 99%			
	Margin of Error				Margin of Error			
	5.0%	3.5%	2.5%	1.0%	5.0%	3.5%	2.5%	1.0%
10	10	10	10	10	10	10	10	10
20	19	20	20	20	19	20	20	20
30	28	29	29	30	29	29	30	30
50	44	47	48	50	47	48	49	50
75	63	69	72	74	67	71	73	75
100	80	89	94	99	87	93	96	99
150	108	126	137	148	122	135	142	149
200	132	160	177	196	154	174	186	198
250	152	190	215	244	182	211	229	246
300	169	217	251	291	207	246	270	295
400	196	265	318	384	250	309	348	391
500	217	306	377	475	285	365	421	485
600	234	340	432	565	315	416	490	579
700	248	370	481	653	341	462	554	672
800	260	396	526	739	363	503	615	763
1,000	278	440	606	906	399	575	727	943
1,200	291	474	674	1067	427	636	827	1119
1,500	306	515	759	1297	460	712	959	1376
2,000	322	563	869	1655	498	808	1141	1785
2,500	333	597	952	1984	524	879	1288	2173
3,500	346	641	1068	2565	558	977	1510	2890
5,000	357	678	1176	3288	586	1066	1734	3842
7,500	365	710	1275	4211	610	1147	1960	5165
10,000	370	727	1332	4899	622	1193	2098	6239
25,000	378	760	1448	6939	646	1285	2399	9972
50,000	381	772	1491	8056	655	1318	2520	12455
75,000	382	776	1506	8514	658	1330	2563	13583
100,000	383	778	1513	8762	659	1336	2585	14227
250,000	384	782	1527	9248	662	1347	2626	15555
500,000	384	783	1532	9423	663	1350	2640	16055
1,000,000	384	783	1534	9512	663	1352	2647	16317
2,500,000	384	784	1536	9567	663	1353	2651	16478
10,000,000	384	784	1536	9594	663	1354	2653	16560
100,000,000	384	784	1537	9603	663	1354	2654	16584
300,000,000	384	784	1537	9603	663	1354	2654	16586

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(Sources : <http://research-advisors.com/tools/SampleSize-Old.htm>)

**Appendix E**

(Refers to Para 3.16 of Research Report)

**LIST OF IRS MODULES**

<b>S. No.</b>	<b>IRS Module</b>
1.	Basic & Intermediate
2.	Planning Section Chief
3.	Logistics Section Chief
4.	Incident Commander
5.	Operation Section Chief
6.	Liaison Officer
7.	Information & Media Officer
8.	Safety Officer
9.	Simulation Exercise
10.	Advanced IRS
11.	Area Command

**Incident Commander - Course Contents****Unit 1–Mobilization**

Lesson A–Incident Commander Roles, Responsibilities and Team Administration.

Lesson B–Communication, Information and Intelligence Processing.

Lesson C–Kit, Aids, and Guides.

**Unit 2–Incident Management**

Lesson A–Responsible Official and Incident Commander Responsibilities.

Lesson B–Transfer of Command.

Lesson C—Objectives, Strategy, and Tactics.

Lesson D—Planning and Meetings.

Lesson E—Staffing

Lesson F—Command Structures.

Lesson G—Special Situations.

**Unit 3—Administration**

Lesson A—Cost Management.

Lesson B—Agreements/Rate Contracts/Pre-Contracts

Lesson C—Personal Documentation.

**Unit 4—Demobilization.**

**Unit 5—Lessons Learned.**

