

## Background Paper

### Nepal Earthquake – Lessons Learned and the Way Forward

The recent [2004] Mw=9 Sumatra/Andaman earthquake suggests that we would not be serving society well by viewing seismic risk too conservatively. This reasoning extended to other parts of the Himalaya, to the Myanmar eastern plate boundary, and to India's plate's western plate boundary through Pakistan, Afghanistan, and Baluchistan, reveals a dozen examples of regions that could experience a future Mw>8 earthquake. *Potentially the most dangerous of these is the so-called Central Himalayan Gap whose rupture in 1505 may have occurred as a 600-km-long rupture, similar to the tsunamigenic initial phase of the 2004 Sumatra earthquake. Its re-rupture would be catastrophic* (R. Bilham, 2005).

On 25<sup>th</sup> April 2015 a massive block of Earth's crust, roughly 75 miles long and 37 miles wide, lurched 10 feet to the south over the course of 30 seconds. Riding atop this block of the planet was the capital of Nepal — Kathmandu — and millions of Nepalese (R. Bilham, 2015).



National Geographic, 26 April 2015

Northern Nepal shifted up to 7 m southward and Kathmandu was raised by 1 m. The causal earthquake failed to fully rupture the main fault beneath the Himalaya and hence **a large earthquake appears to be inevitable in Nepal's future** (R. Bilham, 2015)<sup>i</sup>.

The information contained in this background paper has been obtained from assessments, meetings, telephone and email discussions. While the author has made all reasonable efforts to ensure the accuracy of the information contained herein, the author cannot be held responsible for inaccurate information as has been supplied by interviewees, secondary sources and/or individuals.

The opinions reflected in this background paper are those of the author and do not necessarily reflect the opinions of any particular organization or individual. Certain assumptions have been made due to the lack of sufficient information from responding USAR teams.

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## Foreword

This background paper is made as a supplement to the mini survey<sup>1</sup> conducted by OCHA, ESB, FCSS of the USAR response to the 7.8M<sup>2</sup> earthquake, which struck Nepal on 25<sup>th</sup> of April 2015. Though meant as a supplement, the background paper can also be read as a stand-alone report since it covers not only lessons learned from the Nepal response but also more generic topics of and recommendations to response to earthquakes in general.

## Abstract

The earthquake in Nepal was expected to happen. Nepal tops the list of the most earthquake prone countries in the world. Several initiatives have been made since 2011 to strengthen Nepal's ability to minimise damages and provide efficient response to the aftermath of an earthquake.

Studies prior to the earthquake show that reception of international assistance and air transportation to potentially stricken sites would be hampered by the limited capacity of Kathmandu airport and the infrastructure in Nepal in general. The Kathmandu international airport closed immediately following the earthquake, however it reopened shortly after and remained operational throughout the remainder of the response. In-bound air traffic rates slowed though and slot allocation was cut by 50 per cent to allow for arriving SAR and medical flights.

The low capacity of the airport and a massive influx of USAR teams caused late and not coherent arrival of UNDAC and technical support thus coordination mechanisms were not fully operational until 29<sup>th</sup> April 2015. The Reception Departure Centre and the USAR Coordination Cell were operational from 26<sup>th</sup> and 27<sup>th</sup> April 2015 respectively.

The Government of Nepal requested a stand-down of international USAR teams on the evening of the 27<sup>th</sup> of April 2015. However, 54 (12 classified) teams arrived after that and took up airport capacity at the expense of medical teams and supplies in general and added to the deterioration of the already worn, and only, runway of Tribhuvan, Kathmandu airport.

A revised version of the INSARAG Guidelines was endorsed by the INSARAG Steering Group in February 2015 and was formally launched at the INSARAG Global Meeting in October 2015. The Nepal earthquake was the first implementation of these revised Guidelines in a disaster setting.

Only 18 of the 76 responding international search and rescue teams were INSARAG classified and out of them not all deployed in their capacity of USAR teams.

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<sup>1</sup> [http://www.insarag.org/images/stories/Nepal\\_Earthquake\\_INSARAG\\_Mini-Survey.pdf](http://www.insarag.org/images/stories/Nepal_Earthquake_INSARAG_Mini-Survey.pdf)

<sup>2</sup> "M7.8 – 34 km ESE of Lamjung, Nepal". United States Geological Survey. 25 April 2015

National mandates or political interests were in some cases overruling the INSARAG mandate, which caused quite some confusion and misunderstandings.

Further to this not all teams worked according to the Guidelines mainly due to the unfamiliarity with especially the technical specifics – sectorisation, marking system, ASR levels and forms – which lead to inconsistent application in the field.

Language barriers and insufficient staffing also caused misunderstandings and inconsistency in setting up and running coordination facilities.

Of the non-classified teams some 60 - 80% participated in common coordination activities in the USAR Coordination Cell, which was set up next to the USAR Base of Operations at a Nepalese military compound. While generally agreed that coordination is an absolute necessity there were some dissatisfaction with the way coordination was conducted since most responders were used to work in a command and control environment rather than the “soft” way of coordination. Coordination was also hampered due to lack of Internet connectivity and thereby hindering updates on the Virtual OSOCC and the use of electronic forms and templates.

“Beyond the rubble” such as specialised assessments, extrication of dead victims and medical services continues to be a topic of discussion. E.g. some teams accepted to extricate dead victims and others did not.

Only a small part of the responding teams have shared their post-mission reports and lessons learned making a systematic, empiric valid analysis difficult.

## Scope of the Background Paper

The background paper is limited to cover only USAR or USAR-related issues based on the response to Nepal. There are issues of general character taken into consideration since there are similar lessons learned from responses to other earthquakes.

The political situation in Nepal prior to, during or after the earthquake is not part of this background paper though it might have affected the implementation of capacity building initiatives and thereby the response and coordination.

## Constraints

Only a small number of the total INSARAG members deployed to the earthquake and not all in their capacity of Urban Search and Rescue teams. This fact and the fact that only a limited number of post-mission reports have been submitted, hence a too little foundation for a statistically significance, does not allow for conclusions per se.

Some of the information obtained during interviews is confidential in agreement with and in consideration of the provider meaning that there cannot be direct quoting or reference to individuals, internal reports or interviews without their consent.

Attempts to include the perspectives of the Nepalese authorities at various levels as well as the UN in Nepal were not successful.

Technical search and rescue is not part of the review.

## Methodology

The findings are based on a desk review of existing mission reports and lessons learned prepared by the participating USAR teams and OCHA, and consultations with relevant stakeholders through meetings and Skype/phone interviews.

This more qualitative research approach was found to be of better use given the limited amount of post-mission reports and the nature of the review, since the lessons learned and the general experiences from the response cannot be considered or perceived as a single reality that can be measured and generalized but more like multiple realities that are continually changing with individual interpretation.

## INSARAG Guiding Documents

The INSARAG network has developed and semi-institutionalized itself through its mandate derived from a number of non-binding documents and a mandate as follows:

UN GA Resolution 57/150<sup>3</sup>

INSARAG Guidelines 2015<sup>4</sup>

INSARAG Hyogo Declaration 2010<sup>5</sup>

INSARAG Strategy 2014 - 2017<sup>6</sup>

## Discussion

### The earthquake was expected

Though it is generally acknowledged and agreed that earthquakes cannot be precisely predicted in time and magnitude, there are some scientific indications of areas where earthquakes are more likely to happen than others. Nepal was one of these.

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<sup>3</sup> [http://www.insarag.org/images/stories/GA\\_Res\\_57-150\\_English.pdf](http://www.insarag.org/images/stories/GA_Res_57-150_English.pdf)

<sup>4</sup> <http://www.insarag.org/en/methodology/guidelines.html>

<sup>5</sup> [http://www.insarag.org/images/stories/Documents/Global\\_Meeting/Hyogo-Declaration-English.pdf](http://www.insarag.org/images/stories/Documents/Global_Meeting/Hyogo-Declaration-English.pdf)

<sup>6</sup> Insert link



In the Global Earthquake Safety Initiative (GESI) from 2001 it is concluded that:  
*"Kathmandu, Nepal ranked first in the 2001 study, followed by Istanbul, Turkey; Delhi, India; Quito, Ecuador; Manila, Philippines; and Islamabad/Rawalpindi, Pakistan—all of which could expect fatalities in the tens of thousands if disaster struck."* [GeoHazards, 2001].

This was further followed up in an article in "Annals of Geophysics" where it is stated that:  
*"Damage from large Himalayan earthquakes recorded in Tibet and in Northern India suggests that earthquakes may attain  $M = 8.2$ . Seismic gaps along two-thirds of the Himalaya that have developed in the past five centuries, when combined with geodetic convergence rates of approximately 1.8 m/cy, suggests that one or more  $M = 8$  earthquakes may be overdue"*  
(R. Bilham, 2004)<sup>ii</sup>.

Though not very precise in predicting the actual time for an earthquake it is never the less considered as precise as possible and very precise in the terms and time calculation of geology and seismic activities.

Further to this "prediction" an idea of the building construction and materials were described in a research done comparing urbanisation and earthquake risk:

*"The replacement of single-story bamboo homes with multistory, poorly constructed concrete-frame structures, often on steep slopes, makes this region perhaps a worse case, but more typical settings (e.g., Kathmandu, Nepal) also indicate a significant worsening of construction practice and urban planning in recent years in cities of developing countries"* (B. E. Tucker, 2004)<sup>iii</sup>

This was further supported by studies done by the UNCDR in Japan in 2008<sup>iv</sup>, which together with the above mentioned would give an idea of the potential size and types of damage and thereby the potential type of and need for assistance.

## Readiness in Nepal

Nepal established, in cooperation with humanitarian and financial organisations, the National Risk Reduction Consortium (NRRC) in 2009. Based on the Hyogo Framework and Nepal's National Strategy for Disaster Risk Management, the NRRC identified 5 flagship priorities for sustainable disaster risk management. The progress was reviewed in 2013. In May 2011 a scope study was conducted in Nepal. The study was part of the INSARAG emergency response capacity building. The results from the scope study and the Flagship programme – especially Flagship 2, Emergency Preparedness and Response Capacity – were both meant to enhance the Government of Nepal's response capabilities at the national, regional, and district levels. The Flagship 2 also included an initiative about Nepal receiving international assistance.

Most notably, Ministry of Home Affairs (MoHA) and Government of Nepal (GoN) have led the process of developing "The Guideline on Disaster Preparedness and Response Planning 2011" with the support of humanitarian partners as well as the "National Strategic Action Plan On Search And Rescue 2013." According to these plans, in small- and medium-scale disasters, the national SAR teams were to be managed and deployed by the respective District Disaster Relief Committees (DDRCs) in coordination with the concerned security forces. Whereas, incoming international USAR capacity during a large-scale disaster should become an inherent element of the response coordination tripod – the Central Natural Disaster Relief Committee (CNDRC), the National Emergency Operations Centre (NEOC) and the Multinational Military

and Coordination Center (MNMCC) - as stipulated in the National Disaster Response Framework (NDRF) and would naturally fall under the MNMCC.

A working group was established in 2014, including all major stakeholders in Nepal (Ministry of Home Affairs, Ministry of Defense, Ministry of Federal Affairs and Local Development, Nepal Army, Nepal Police, Armed Police Force, Nepal Red Cross and Kathmandu Fire Brigade), who worked together with the assistance of an international technical expert on developing a realistic plan for development SAR capacity in Nepal. The report was finalized only days before the earthquake happened, and therefore not yet officially approved nor implemented by the GoN.

Before the submission of that report and until the current date however, apart from the USAID funded PEER program that includes a Collapsed Structure Search and Rescue module<sup>7</sup>, there has not been a well-supported, funded and integrated SAR capacity development initiative that addresses the development of a system, rather than just supply of ad hoc training and various caches of equipment.

The preparedness work did not include the reception of international USAR teams to Nepal after a major disaster. GoN officials and security forces members have participated in a range of regional INSARAG events, where the preparation of incoming USAR teams has not been part of the discussions.

The GoN has signed the Customs Model Agreement, which should allow international responders easier access to enter the country with personnel, goods and equipment. In this agreement there is a list of required documents for entering Nepal for a simplified entry.

In 2010 a joint DHL “Get Airports Ready for Disaster” (GARD) programme with local Nepalese authorities and the United Nations Development Programme was conducted at five airports in Nepal – Tribhuvan, Kathmandu included. The programme was intended to train and build logistics expertise in coordinating the incoming supplies in case of disasters. Further to this the United States Army Corps of Engineers conducted a study on the technical specifications, physical status and structural vulnerability of Tribhuvan airport<sup>v</sup> in 2011. It was concluded that the airfield pavement could withstand 100,000+ passes (dependent upon aircraft type) if engineering and maintenance recommendations were performed. If engineering and maintenance recommendations were not performed; the number of passes would be reduced to 100 – 1,000.

## Response and coordination

Despite the fact that Nepal is one of the most well studied countries in the world for earthquake risks, preparedness and development in general, very little information from these studies was shared or provided immediately after the earthquake.

Responding teams’ home organisations use a broad variety of sources for gathering information to support their decision-making on whether to respond to an earthquake or not, and

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<sup>7</sup> <https://www.usaid.gov/sites/default/files/documents/1861/DRR%20-PEER%20III%20-%20Apr%2029.14.pdf>



in which capacity. While some organisations decided not to respond, downgrade their response or respond in a different capacity than USAR, it is obvious that others responded due to more political reasons and/or media pressure rather than actual solid information on the needs, travel time, access, building and construction types and the possibility of in-country transportation to work areas outside Kathmandu.

This was further emphasised by the continuous attempts to travel to Nepal though prolonged stopovers in transit airports due to limited capacity at Tribhuvan airport, meaning that 54 of the total 76 responding teams did not arrive within 48 hours of the earthquake happening. Of those, some 15 search and rescue teams arrived *after* a stand-down was requested by the Nepalese government.

According to the INSARAG Guidelines 2015 it is the responsibility of an international USAR team to *“Ensure departure within ten hours after the request for assistance”*. While a rapid response is obviously important it might make more sense to focus on when a team is actually ready to conduct search and rescue on site rather than how fast it can deploy. Physiologically it is a fact that, with rare exceptions, 72 hours is the maximum length of time human beings can survive without water making the 48 hours requirement even more sensible. As for the response to Nepal, 11 of the total of 16 live victims rescued were rescued by teams that started their operations within 48 hours.

Even before the earthquake, Tribhuvan airport had a limited capacity having only one runway and ground handling capacity of up to five heavy airplanes at the time. The airport was not designed to receive a large number of relief planes but the airport personnel had been trained in receiving larger amounts of relief items through GARD training by DHL. A training, which proved to be very useful also because it made it easier for DHL volunteers to assist early after the earthquake.

In addition to this, agreements on smooth customs clearance had been made between OCHA and the Government of Nepal based on advice from the World Customs Organisation (WCO). The agreement and the actual requirements for documentation were posted on the Virtual OSOCC immediately after the request for international assistance.

Even so it was perceived as time consuming to clear customs and immigrations by some incoming teams. Insufficient or lack of proper paperwork may have played a role in causing a not so fast and efficient border crossing and entry as possible or wished for. It is every country's right to apply rules and regulations – even in time of disasters – to maintain control and in this case Nepal had decided to follow recommendations from WCO for exemptions and yet not give full access without a minimum of control of documents and of incoming goods and personnel.

The airport was congested early on by the incoming planes, which meant that planes already en route had to be redirected to airports in neighbouring countries or had to remain in stopover airports. Further to this, the wear of the already stressed pavement of the runway led to the decision that airplanes of a certain registered total weight would not be permitted to land unless negotiated in each case. Making use of other airports in Nepal was not feasible since Tribhuvan was/is the only airport with capacity to handle international flights with customs and immigrations included.

Had systematized and structured information as mentioned above been made available prior to the decision of deployment of international search and rescue teams and the request for

stand-down been respected when made public, it could have led to less, and not needed, deployed teams and thereby have caused less stress to the physical conditions of the airport and left space and capacity for more needed incoming relief items.

It is also recognized that media and politics play a major role in the early phases of a disaster - This might force the deployment of teams that are not actually needed. Also the very high costs of deploying a USAR team can make it difficult to stop the process once it has been started. It can, however, cause implications to the overall response as just described and it should be born in mind that the USAR phase of an operation is by far the shortest and also the one where the fewest lives are saved compared to the relief operation and that the decision *not* to deploy is just as valid as the decision to do so. INSARAG members have the operational skills and experience to advise in this regard.

Some of the larger teams made use of their diplomatic and/or military presence or proximity to assist with entry formalities as well as for information gathering prior to deployment. Whilst there is nothing wrong with using one's own channels for these purposes it might be worthwhile to share information that could be of common interest. There were also at least three cases where diplomatic relations were used to put pressure on the Nepalese government and the coordination structures to achieve landing permissions and other benefits not corresponding with the overall needs and aims.

18 of the total of 76 search and rescue teams, which deployed to Nepal, were INSARAG classified and out of those four Heavy teams downgraded to Medium and four Medium teams downgraded to Light - and others did not deploy in their capacity as USAR at all. Though deployed as INSARAG classified teams, not all teams lived up to the expectations to immediately establish reception and coordination structures or to voluntarily designate personnel to these.

The primary intention of the INSARAG External Classification (IEC) system is to provide a better understanding of the individual abilities of USAR teams making themselves available for international assistance. Having teams classified according to a standard would enable disaster affected countries to prioritise acceptance of international response support from USAR teams, which can add proven value to their national capacity and make coordination and planning easier and more predictable in ensuring that the appropriate resources are assigned to the appropriate sites as soon as possible.

The reception and coordination structures were not fully operational until two days after the earthquake when Heavy teams and technical support arrived. Until then there was no logistical support.

Nepal hosted the INSARAG Regional Exercise in 2009, and was the INSARAG Regional Chair 2012 (hosted the regional meeting). Especially, the experience hosting the INSARAG Exercise well contributed to the actual response for the national staff.

Amongst the responding teams it is generally agreed that cooperation with the local authorities went surprisingly well – especially the uniformed parts such as the Nepalese military and police. It took a longer time for the civilian part of the local coordination mechanisms to get an

understanding of the situation and the requirements and thereby to find its place in the coordination of the response.

There were two daily UCC meetings. Some frustration has been expressed regarding the format of these meetings. Most international teams are anchored in organisations where command and control in an Incident Command System is used far more than the more “soft coordination” which led to unclarity and lack of confidence in the meetings. Some teams have expressed that they preferred to work directly with the Nepalese military and police instead of through the coordination mechanism. Military units have expressed the same kind of frustration with “soft coordination” instead of command and control.

The lack of confidence was also expressed as for the information from the teams. An evaluation of the RDC and UCC resulted in rankings from very poor to very good. There seems to be a pattern showing that quality of the use of the RDC and UCC naturally varied from the very first days after the earthquake but also of who were actually staffing and/or leading the facilities. The UCC suffered from frequent replacement of liaison officers leading to inconsistency in the quality of services and information.

A large part of the planning and decision-making foundation is based on the findings and reporting from the teams in the field. To ease this, a number of forms and templates have been created and are available on the Internet. Since Internet connection was a major problem, as was communication in general, these forms proved to be of very little value. Not very much written information was received in the UCC – especially not during the first days and the information, which was received came in a broad variety of formats. This made the automated capture of information almost impossible hence a more simple system was made ad hoc and adjusted according to the developing needs.

Coordination and planning methodology should be scalable, which includes the use and adaptation of forms and other tools. If these are only available on the Internet they are of very little use if there is no connection.

Coordination and cooperation also proved to be a challenge when it comes to the understanding and respect for other teams. In this regard there were examples of teams overbidding other teams in order to get transportation means. Other teams did not respect the designated sector in which they were to work and found more “profitable” sites themselves – profitable in the way that they were better exposed to the present media. Further to this there were examples of teams not respecting previous assessments or advice from the UCC and going to sites where USAR had already been deemed not needed.

The new Guidelines come with a new way of conducting assessment, search and rescue in phases – ASR. This proved to be a challenge for some teams, which can – to a degree – be excused with the unfamiliarity of the new Guidelines thus the lack of training. The same was said about the marking system.

Beyond the rubble is the term used for the supportive work in the transition phase between search and rescue and humanitarian relief operations in support of the latter. There are different opinions of this term and whether it applies to USAR or not. While there in some cases of response to an earthquake exist an operational gap where the search and rescue work is done and the humanitarian relief has not yet been fully implemented, it can, and should be,

discussed what options a USAR has to fill this if any. Examples of this kind of work are specialised assessments, extrication of dead victims and medical services.

The post-mission work of the response mission has not been given very much attention. Only ten post-mission reports have been submitted despite the fact that these should have been so within 45 days after end of mission. This makes lessons learned analysis almost impossible since there is not a sufficient basis of data for such. A simple template for a post-mission report is part of the INSARAG Guidelines but it does not cater for a systematised data gathering.

## Conclusions and Recommendations

Most earthquake-prone cities and countries in the world have been well studied for risk, vulnerability, potential damage, etc. and information about entry requirements, infrastructure, local response and coordination mechanisms is also available, so it is possible to prepare for responding well in advance of an actual earthquake.

*It is therefor suggested that a systematically gathered info package including plans for alternative points of entry and logistical support from neighbouring countries, private companies, national and foreign military, and the logistics cluster is made for at least those most vulnerable cities. This information package could then be posted immediately on the VOSOCC after an earthquake to create a common platform of information. This could be done by the INSARAG Regional Groups or centrally by the INSARAG Secretariat.*

The first arriving teams did not establish the RDC. In the first days only one member of the UNDAC team without logistical support staffed it.

(Currently the INSARAG Secretariat is planning to have RDC workshop for DHL staff next year so that the in country DHL staff can set up and support RDC before the arrival of UNDAC/USAR teams. Also, the Secretariat is planning to organise UCC course for USAR teams next year, where there will be focus on RDC/UCC management).

Not all of the classified teams responding followed the INSARAG Guidelines - intentionally or unintentionally –Also national mandates or political interests were in some cases overruling the INSARAG mandate, which caused some confusion and misunderstandings.

*Teams responding under the INSARAG auspices should follow the INSARAG Guidelines as for procedures and provision of adequately trained staff for establishing and running RDC, provisional OSOCC and UCC. If the mandate of a responding team is different from the INSARAG mandate, it should be made clear prior to arrival in order not to create confusion or expectations, which cannot be met. This should also include not wearing the insignia of INSARAG.*

The quality of information and services provided by the RDC and UCC varied during the operation. There was also an inconsistency in staffing with a number of replacements of liaison officers. This created a lack of confidence in these.

Classified teams should be staffed to dedicate liaison officers for the entire period of the operation.

*Alternatively it could be considered to train and dedicate personnel to these specialised positions e.g. at UNDAC, OSOCC and UCC training in the needs of incoming USAR teams.*

A new version of the INSARAG Guidelines was made public in February 2015 – less than three months prior to the earthquake. New methodology and technical specifics were naturally not familiar to or implemented by all responding teams.

*USAR teams need to train sectorisation, ASR, marking, and UCC work as per described in the new INSARAG Guidelines.*

The pre-deployment information provided centrally and the responding teams' information gathered was not shared sufficiently. This meant that arriving teams came with very different basis and understandings of the situation. During operation lack of Internet access hindered systematised information sharing.

*Better information sharing is a must in future operations. The Virtual OSOCC is one platform of doing so but will only work if all responding teams have access to the Internet. Alternatively standardised forms in hard copy to be handed out by the UCC should be used.*

Though stated in the INSARAG Guidelines as part of the post-mission work only few post-mission reports were submitted to the INSARAG Secretariat. The ones received came in many different formats making proper review and analysis difficult.

*Post-mission paperwork is to be gathered and submitted in a systematic way for analysis and lessons to be implemented purposes.*

The majority of the responding teams were not members of INSARAG and therefore did not work according to INSARAG methodology and Guidelines making coordination and cooperation more challenging than necessary.

*INSARAG Regional Groups should reach out to USAR teams in their respective regions to encourage a better understanding of the INSARAG system and tools to enhance future USAR operations.*

## Afterword

Over the years a lot of focus has been on having classified teams and until now 44 teams have classified as either medium or heavy teams. It is fair to claim that none of the other activities or priorities of INSARAG has been given this much attention (e.g. capacity building in earthquake prone countries such as training national capacity to INSARAG standards and the ability to receive and cooperate with international USAR teams). It is never the less commonly agreed that the most successful USAR resource is one that can be in position directly following an incident of structural collapse.

Understanding this, INSARAG has committed itself to capacity building projects in countries that would likely benefit from local USAR capacity. INSARAG has developed documents and courses available to countries wanting to develop local USAR capacity. It is also possible for INSARAG to arrange capacity assessment missions to countries needing review of existing systems or lack thereof. Until now only five such have been conducted.

This does not correspond with the INSARAG Mandate and Strategy in which it amongst other things says that assistance is:

- **Needs driven:** *Mobilization and deployment of international USAR teams is only supported when the affected country's capacities are overwhelmed by the impact of a collapsed structure emergency and they agree to accept international assistance. The types*

*of international assistance is, further, based on the **needs** of the affected country and not driven by the availability of resources, and that*

- **Coordination:** *INSARAG promotes internationally agreed coordination structures managed and advocated by OCHA, promotes coordination **of preparedness and capacity building activities**, and, throughout an operation, assists countries in coordinating the emergency response. Further that INSARAG*
- *Promotes activities designed to **improve search-and-rescue preparedness in disaster-prone countries**, thereby prioritizing developing countries and that*
- *Adherence to common standards and methodology: Members of the INSARAG network commit to **adhering to the INSARAG guidelines and methodology** as globally accepted minimum standards and procedures, based upon expert knowledge and long-time experience and finally that*  
*Professionalism: INSARAG promotes responsible, ethical and professional standards amongst USAR teams and all stakeholders.*

Focus should be given on capacity building and reception of international assistance in disaster-prone countries more than on classifying international USAR teams.

INSARAG has already developed the First Responder Programme<sup>8</sup>. The role of this programme is to support and guide the development and training of groups and organisations that will be capable of providing immediate help to communities in the critical hours following an earthquake or other sudden onset disaster.

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<sup>8</sup> <http://www.insarag.org/en/capacity-building/first-responder-training.html>



## Literature and interviewee List

### Interviews

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