External review of Swiss Rescue

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Acknowledgements

In the course of this assignment we have had the pleasure of interacting with a range of Swiss Agency for Development and Cooperation Humanitarian Aid (SDC/HA) staff as well as representatives of domestic and international partners. The interviewees who have consented to speak to us have been generous with their time and openness.

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This report is the product of its authors, and responsibility for the accuracy of data included in this report rests with the authors.

For the review team,

Täby, May 2020

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Acronyms and abbreviations

ACAPS	Assessment Capacities Project
AHA	The ASEAN Coordinating Centre for Humanitarian Assistance on disaster management (AHA Centre)
ALNAP	Active Learning Network for Accountability and Performance
BASARNAS	The National Search and Rescue Agency (Indonesia)
CDEMA	The Caribbean Disaster Emergency Management Agency
DRM	Disaster Risk Management
DRR	Disaster Risk Reduction
EG	Expert Group within the SHA standby roster
FDFA	Federal Department of Foreign Affairs
GBV	Gender Based Violence
GDP	Gross Domestic Product
GFDRR	Global Facility for Disaster Reduction and Recovery
IEC	INSARAG External Classification
IFRC	International Federation of Red Cross and Red Crescent Societies
INSARAG	International Search and Rescue Advisory Group (hosted by OCHA)
JIPS	Joint IDP Profiling Service
MENA	Middle East North Africa
MSB	Swedish Civil Contingencies Agency
NDMA	National Disaster Management Agency
NGO	Non-Government Organisation
OCHA	United Nations Office for the Coordination of Humanitarian Affairs
PUC	Disaster Preparedness and USAR Capacity Building
PMI	Indonesian Red Cross Society (Palang Merah Indonesia)
RRT	Rapid Response Team
SDC	Swiss Agency for Development and Cooperation
SDC/HA	Humanitarian Aid, one of the four departments of the SDC
SHA	Swiss Humanitarian Aid Unit
SR	Swiss Rescue
SRK	Swiss Red Cross (at times referred to as SRC)
ToC	Theory of Change
UNDAC	United Nations Disaster Assessment and Coordination
UN DESA	United Nations Department of Economic and Social Affairs
USAR	Urban Search and Rescue
V-OSOCC	Virtual On-Site Operations Coordination Centre
WASH	Water, Sanitation and Hygiene

Executive Summary

The Review, purpose and objectives

The purpose of this review is mainly prospective and formative. Considering the evolving global environment, the main objective of the review is to determine the relevance and added-value of Swiss Rescue's contribution to:

(i) The core mandate of Swiss Agency for Development and Cooperation / Humanitarian Aid (SDC/HA) which is saving lives and alleviating suffering;
(ii) Switzerland's engagement in Urban Search and Rescue (USAR) capacity building and;
(iii) Switzerland's multilateral engagement at the International Search and Rescue Advisory Group (INSARAG).

The review draws conclusions and formulates recommendations on how to position Swiss Rescue in light of the future orientation of Switzerland's international cooperation and therefore considers:

(i) the global environment and humanitarian needs, considering other USAR actors,
(ii) the Swiss added-value as well as
(iii) the Swiss interests in maintaining her Humanitarian tradition

The review analyses implications for Switzerland's position and approach to USAR in general, including response to disasters, engagement in USAR Capacity building and Switzerland's role within INSARAG.

The Context

The first chapter, Introduction and Background, presents the purpose of the review, gives a summary of global contextual changes that have affected the relevance and appropriateness of Heavy USAR capacity as a humanitarian intervention instrument, summarises relevant Swiss Humanitarian policy over time and describes Swiss Rescue structure history.

The contextual changes highlighted include demographic changes, rapid urbanisation, increasingly complex patterns of vulnerabilities commonly aggravated by the consequences of climate change. It notes that the pattern of emerging needs is characterised by complex disaster processes leading to recurrent disaster events necessitating longer term humanitarian interventions. Indications of this include that 80% of global humanitarian funding is absorbed by longer term interventions and that the average humanitarian intervention now extends over several years.

It further notes increased national and regional capacity, with consequences for host government preferences regarding what international response capacity is to be given access to post earthquake disaster zones.

The contextual description further refers to the Nexus, a term used to summarise a range of lessons learned and adaptation initiatives seeking to exploit the potential for synergy between humanitarian interventions and long-term development processes.

The changes described increase the need for humanitarian interventions to be adaptable, well contextualised, long term and multisectoral.

The description of Swiss policy notes its stability over time, its commitment to developing the legal framework for international humanitarian interventions and to acting in line with international policy development for example through active involvement in following up the Grand Bargain.

The summary of the structure and history of Swiss Rescue follows in section 1.4. This gives a description of how Swiss Rescue fits into the Swiss Agency for Development and Cooperation followed by highlights of Swiss Rescue's contributions, conceptually and operationally, primarily during the 1980s and 90s. In this period Swiss Rescue was repeatedly deployed successfully and was instrumental in founding the International Search and   Rescue Advisory Group (INSARAG), an institution which has successfully hosted a process of developing and standardising global USAR response capacities.

The findings

Following sections on approach and methodology, the report presents a summary of high impact earthquakes, international responses and the development of USAR capacity and humanitarian access over the past 15 years. The section highlights the expansion of national and regional USAR capacities and an apparent lack of results from multiple international USAR deployments.

Sections 3.2 through 3.5 describe Swiss Rescue in terms of organisation, human and material resources, cost profile and deployment history. The section highlights good leadership- and technical competencies, but also a decline in relevant experience as the instrument has not been deployed since 2009. It further notes a mismatch between emerging humanitarian requirements for flexibility and agility and the standardised, large-scale and highly specialised character of a heavy USAR capacity. The lack of deployments, in part caused by increasing selectivity regarding humanitarian access on the part of host governments, has led to a lack of results which is contrasted with the high cost of maintaining the instrument. Meanwhile, SDC has successfully deployed Rapid Response Teams with specialists who have skills for deployments of Swiss Rescue.

Section 3.6 addresses Swiss Rescue's capacity building activities noting that these are more flexible and better contextualised than the USAR instrument itself. Capacity building programming is long-term in nature, adapted to needs and highly appreciated. A gap in terms of systematic documentation of results makes triangulation of the clearly positive interview material difficult.

Section 3.7 describes INSARAG over time as well as Swiss Rescue's involvement in that institution. The section notes that INSARAG has achieved a high degree of institutional stability, based members states commitments and a string of successes ranging from establishing a quality assurance system for USAR based on a classification process to practical coordination tools such as a virtual information sharing platform for response coordination.

Conclusions

Chapter 4 presents conclusions framed by the specific questions of the terms of reference. The overall conclusions of the review are in summary:

- That maintaining the Swiss Rescue classified heavy USAR capacity has not contributed significantly to the core mandate of SDC/HA in the past two decades. The review team further concludes that this capacity is unlikely to save lives or reduce suffering in the future. It is thus not relevant and does not add value.

- That specialised modules or staff deployed in the frame of multisectoral Rapid Response Teams i.e. smaller teams of specialists such as coordination specialist and structural engineers have been successfully deployed in other interventions. Search teams have also been deployed independently but with mixed results. While they have not saved lives directly such deployments have improved response coordination, lowered risk for affected populations and contributed to alleviating suffering by allowing families to recover the remains of lost relatives. Such deployments have been relevant and added value in relation to the core mandate.

- That Swiss Rescue's contribution to USAR capacity building is relevant and does add value to emergency management structures in host countries. Swiss investments in USAR capacity building have contributed to the massive increase in global USAR capacity that has taken place.

- That over time Switzerland's commitment to the USAR instrument has been instrumental in its conceptualisation, its global acceptance and its institutionalisation through INSARAG.

- The establishment of INSARAG has been instrumental in establishing a multilateral Humanitarian instrument classification system. This has provided a platform for the standardisation and improved response coordination that has emerged in its niche. It has also contributed to the establishment of better contextualised regional responses through the exchange of experience, joint trainings and networking.

Recommendations

5.1   SDC/HA should no longer maintain a classified USAR capacity. In consequence the reclassification of Swiss Rescue, "INSIEME", planned for 2020, now postponed until Nov 2021, should be cancelled.

5.2   SDC/HA should, given the role that USAR deployments have played historically, invest in informing the public and political stakeholders about why USAR is being phased out in favour of other effective, needs-based, humanitarian response.

5.3   SDC/HA should use the resources freed up by ceasing to maintain a heavy USAR capacity to systematically build more flexibility and adaptiveness into its response capacities. An orderly adaptation of SDC/HA strategies, external relationships, capacities and staffing pattern should be undertaken. The ToR mention that a separate evaluation of the other rapid response instruments is underway. This should, if feasible, suggest alternative use of such resources.

5.5   SDC/HA should systematically invest in developing pre-disaster relationships with regional and national emergency response mechanisms, in order to improve the likelihood that SHA rapid response instruments actually do get deployed.

5.6   SDC/HA should maintain and expand its investment in capacity building of partner country emergency management authorities with a focus on DRR and disaster response management rather than USAR. Prior to the expansion a multiyear strategy - building on host country needs and Swiss comparative advantage - should be developed. This work should be done close collaboration with other SDC departments and the embassies of the Confederation abroad.

5.7   Without a classified USAR capacity Switzerland can no longer be actively involved in the development of INSARAG and should, in consequence step down from the role of global chair and phase out its support for the institution over an agreed time period allowing for an orderly exit.

1   Introduction and background

1.1   The review

This external review was commissioned by the Head of Humanitarian Aid Department (SDC/HA) and Head of the Swiss Humanitarian Aid Unit (SHA) of the Swiss Agency for Development and Cooperation (SDC) and implemented by Ternstrom Consulting AB, with a team combining an experienced evaluation team leader with specialists in human resource management, humanitarian policy and USAR operations. The data collection was undertaken from October 2019 - April 2020.

The Terms of Reference (ToR)[1] identify the purpose of this review as mainly prospective and formative. Considering the evolving global environment, the main objective of the review is to determine the relevance and added-value of Swiss Rescue's contribution to:

- The core mandate of SDC/HA which is saving lives and alleviating suffering;
- Switzerland's engagement in Urban Search and Rescue (USAR) capacity building and;
- Switzerland's multilateral engagement at the International Search and Rescue Advisory Group (INSARAG).

Based on the review findings, the report shall draw conclusions and formulate recommendations on how to position Swiss Rescue in light of the future orientation of Switzerland's international cooperation as foreseen in the federal dispatch 2021-24. Accordingly, the review considers:

- the global environment and humanitarian needs, considering other USAR actors,
- the Swiss added-value as well as
- the Swiss interests in maintaining her Humanitarian tradition

The scope is limited to Swiss Rescue but conclusions and recommendations may have implications for Switzerland's position and approach to USAR in general, including response to disasters, engagement in USAR Capacity building (national and international) and Switzerland's role within INSARAG. The analysis of these implications shall form an integral part of the present review.

The remainder of the report is structured as follows: Below, contextual information about the humanitarian system, Swiss aid policy and Swiss Rescue is presented. Chapter 2 presents the approach, methodology and limitations for the study. In Chapter 3, we present findings related to the key evaluation objectives. Conclusions are presented in Chapter 4 and recommendations in Chapter 5.

1.2   Context: The global environment and humanitarian needs

In this section we seek to summarise some global changes influencing Swiss Rescue relevance and effectiveness.

Over the past two decades global socio-economic development has improved the lives of hundreds of millions of people as evident in increasing literacy rates, decreasing child mortality, growing GDP's per capita et cetera as documented in reporting on the Millennium Development Goals. Demographically, global populations are ageing with declining birth rates. The proportion of the global population living in extreme poverty has declined although, in absolute numbers the situation remains dire.[2]

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[1] The full Terms of Reference are presented in Annex 1.
[2] UN DESA (2015) summarises MDG progress.

Meanwhile, urbanisation has been rapid and continues. In 2018, 55 % of the world's population resided in urban areas, up from 30% in 1950 and by 2050, 68 % of the world's population is projected to be in urban or peri-urban environments.[3] The absolute numbers of people in urban areas, and their vulnerability, has significantly increased. The share of the urban population living in slums in the developing world declined from 39% in 2000 to 33% in 2010; yet in absolute terms, the number of residents of such areas in the developing world is growing, and will continue to grow in the near future.[4]

Urbanisation is associated with accelerated economic growth and socio-economic development and has, in many cases, interacted with the strengthening of local governance resources and human capacities. According to INSARAG and regional based interviewees concrete examples of such improvements are gradual adaptations of building codes to earthquake risks and a stricter implementation of such codes.[5]

However, urbanisation also destabilises traditional institutions and social structures creating new and complex socio-economic realities in cities. More people are being displaced by conflict. The number of forcibly displaced people rose from 59.5 million in 2014 to 68.5 million in 2017.[6] Such changes often overwhelm the capacity of urban authorities to provide every day services, including disaster preparedness and mitigation, with challenges aggravated by multiple stakeholders overlapping in a very restricted space.[7] This is precisely the space within which USAR and other humanitarian interventions need to take place in a post-disaster scenario.

Climate change has increased variability of weather events, lessening the ability of vulnerable people to assess risks and to absorb and address crises. Climate change is thereby accelerating urbanisation processes by driving people off climate stressed land. It is also increasing the variability of weather, thereby changing the risk profile facing urban populations and their governance. According to the UN, of the 1,146 cities with at least 500,000 inhabitants in 2018, 679 (59 per cent) were at high risk of exposure to at least one of six types of natural disaster, namely cyclones, floods, droughts, earthquakes, landslides and volcanic eruptions. Taken together, cities of 500,000 inhabitants or more facing high risk of exposure to at least one type of natural disaster were home to 1.4 billion people in 2018.[8]

The socio-economic changes described imply major changes in the pattern of vulnerabilities. This works both ways with some groups gaining access to markets and services previously not available and other groups losing the safety net implied in traditional institutions or societal roles.[9] Changes in vulnerability always have a gender dimension, mostly threatening women and girls more than men and boys, for example girls in conflict settings are 2.5 times more likely to be out of school than boys.[10] Furthermore, in areas with fragile states, high conflict prevalence and/or high crime rates, existing resources may be difficult to apply and geographical areas difficult to access for humanitarian purposes.

Historically, the humanitarian sector structure and processes were developed in a time period when humanitarian interventions were primarily rural-based and where each

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[3] UN DESA (2018).
[4] ACAPS (2015).
[5] See also for example Twigg, J (2015), pp211-214, 254, a more journalistic sketch of the challenges still faced may be found in at https://cnnphilippines.com/life/style/Design/2019/4/26/building-codes.html. An example of the impact of building codes over decades in Japan is illustrated in https://www.jica.go.jp/nepal/english/office/topics/c8h0vm00009v1jm5-att/160425_05.pdf , slide 18.
[6] OCHA (2019).
[7] See for example Sanderson, D (2019).
[8] UN DESA (2018b).
[9] For an overview of how urban contexts differ from rural and what this implies for humanitarian assessment in urban interventions see ACAPS (2015).
[10] OCHA (2019); for practical examples see e.g. CRS (2018).

intervention was comparatively short. Interventions then commonly aimed to support an affected population through a period of basic reconstruction or until the next harvest was possible to access. Today, humanitarian needs are increasingly driven by complex emergencies. The average humanitarian crisis now lasts more than nine years. Nearly three quarters of people targeted to receive assistance in 2018 were in countries affected by humanitarian crisis for seven years or more. This pattern of recurrent disasters necessitates much more long term humanitarian assistance. Large protracted crises command the majority of resources. Between 2014 and 2018, just four crises – Somalia, South Sudan, Sudan and Syria – accounted for 55 per cent of all funding requested and received.[11]

The international system in response to disasters "the Humanitarian Sector" has an increasing focus on good donorship and coordination of international responses, as formalised in agreements such as "the Grand Bargain" from the World Humanitarian Summit. [12] Significant changes include the increased specialisation of the humanitarian cluster system and adaption to a range of different contexts, as well as efforts to operationalise minimum standards.

The Core Humanitarian Standard on Quality and Accountability (CHS) are one example of such standards (now encompassing previous initiatives such as HAP[13] and Sphere[14]) as are the guidelines of the International Search and Rescue Advisory Group (INSARAG), the coordinating body for Urban Search and Rescue instruments such as Swiss Rescue.[15] In addition to the standardisation of aid provided there is a greater emphasis on accountability to affected populations. Past decades have also entailed a shift from purely humanitarian operations to multiple initiatives focused on Linking Relief, Rehabilitation and Development (LRRD).

Current best practice in the sector is increasingly focused around the challenges that led to the Nexus approach and discussion around the humanitarian-development and the humanitarian-development-peace nexus. Humanitarian planning horizons are seen as too short to effectively and efficiently address overall needs and their causes and recurrent/protracted crises are too complex for humanitarian responses in isolation. The need for partnerships between host country governance structures, multilateral and bilateral institutions is emphasized. In the ensuing debate it has been argued that in complex emergencies this also needs to include peace-building and possible civil-military relationships. Challenges to improved response often relate more to budget lines than to resistance from implementers as the needs and partnerships required are apparent at the operational level.[16]

The "Nexus" groups together a series of initiatives seeking to improve affected population welfare by realising latent synergies between humanitarian interventions and long-term

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[11] OCHA (2019).

[12] For details see https://interagencystandingcommittee.org/about-the-grand-bargain.

[13] The HAP Humanitarian Accountability and Quality Management Standard (2007) provided an industry standard for humanitarian accountability. It represented a broad consensus on what matters most when an agency responds to an emergency. https://reliefweb.int/report/world/guide-hap-standard-humanitarian-accountability-and-quality-management-0 downloaded 20200430.

[14] Sphere standards are a set of principles and minimum humanitarian standards in four technical areas of humanitarian response See https://spherestandards.org/humanitarian-standards/ downloaded 20200430.

[15] https://www.insarag.org/methodology/guidelines. Sanderson (2019) has a section on other international standards that should be applied in urban interventions.

[16] These challenges are recognised for example through the creation of work streams 7&8 of the Grand Bargain which deal with " Increase collaborative humanitarian multi-year planning and funding" and "Reduce the earmarking of donor contributions" respectively (See https://interagencystandingcommittee.org/Quality-funding). For a recent update on progress in this area see Development Initiatives, (March 2020).

development efforts.[17] Multiple initiatives are seeking to improve the effectiveness of aid structures and processes. Practical examples include joint humanitarian/development assessment and planning, improved frameworks for localisation and contextualisation et cetera.[18] The changes are driven by global initiatives, actions by significant state sector stakeholders (including SDC) and regional institutions as well as by multiple operational initiatives at community and organisational level in affected areas.[19] The operational adaptation required by the needs and vulnerabilities that are emerging is significant, involving adapted delivery systems, changes in institutional culture and, not least, funding mechanisms.[20]

In a nutshell: Rapid urbanisation is creating new capacities and vulnerabilities. More humanitarian crisis are chronic and complex, often linked to climate change. This has increased the need for humanitarian interventions to be well contextualised and adaptive. In response Humanitarian sector stakeholders are investing in improved coordination, quality control through standards and adaptive approaches emphasising collaborative programming with communities, host authorities and development actors.

1.3   Swiss Humanitarian aid policy over time

A document review of Confederation aid policy reveals that there has been no major shift in the fundamental premise and the basis on which SDC/HA, and its intervention instruments such as Swiss Rescue, operates over the past three decades. As embedded in the Swiss Constitution, it remains focused on providing direct, immediate and rapid post disaster assistance. This is confirmed by interviewees, both within SDC and among its domestic partners.[21]

Over time, successive dispatches[22] and regulations have strengthened reference to the international humanitarian framework and with international humanitarian policy development. This includes references made to the need for adherence to humanitarian principles in successive Federal dispatches which also emphasize the need to ensure gender sensitivity, non-discrimination and accountability to affected populations.

Following the World Humanitarian Summit in Istanbul there is a call for Swiss humanitarian aid operations to be more closely aligned with the objectives of the Grand Bargain. Switzerland is a signatory of the Grand Bargain and the co-convener of the Localization Workstream. Switzerland is also an active participant of Workstream three on the use and coordination of cash-based programming. These work streams are cited as two of the most active and successful in the 2019 Grand Bargain Independent Report.[23]

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[17] The ODI "Good Practice Review" summarises much of the conceptual development of recent years. See for example Twigg (2015) on DRR or Sanderson (2019) on Urban Response.

[18] A range of sources attest to this. See for example ACAPS (2015); Barbelet, V. (2019); ECHO (2017); HAG and Pujiono Centre (2019).

[19] For a mapping of Nexus issues in a Swiss context see Nordic Consulting Group (2020).

[20] For an interesting overview, including a set of practical examples, see Obrecht, A. (2019). A more critical field perspective, emphasising operational aspects, is presented in The New Humanitarian (2019).

[21] This section is based on interviews and Swiss Government documents including: Verordnung über das Schweizerische Korps für humanitäre Hilfe (1988), Verordnung über die Katastrophenhilfe im Ausland (2001), Botschaft für internationale Zusammenarbeit 2013-2016 (2012), Botschaft zur internationalen Zusammenarbeit 2017–2020 (2016), Erläuternder Bericht zur internationalen Zusammenarbeit 2021–2024 (DRAFT, 2019).

[22] Formal document of the Swiss Confederation directing federal administrative structures about their mandate and tasks.

[23] Metcalfe-Hough, V., Fenton, W., Poole, L. (2019). For further detail on the Grand Bargain see https://interagencystandingcommittee.org/about-the-grand-bargain.

The most recent Dispatch (2017-2020)[24] has a particular emphasis on protecting civil populations. The goal remains to save lives and alleviate suffering, through self-implemented programmes and by supporting partners. SDC/HA has two priorities; Emergency humanitarian assistance, focused on protection, and strengthening the legal framework for providing humanitarian aid. Thematic priorities are Protection, Disaster Risk Reduction (DRR), Water, Sanitation and Hygiene (WASH) and Gender Based Violence (GBV). In line with its mandate to focus on needs of the most vulnerable, the SDC has increased its level of funding to fragile and conflict-affected situations and under the 2017-2020 Dispatch on International Cooperation the aim is to allocate 50% of the bilateral budget to these contexts.[25]

While not expressed in the formal documentation reviewed, interviewees highlight a clear, both domestic and international, Swiss political interest in showing solidarity in action. Two aspects are described as important for this: i) a degree of operational visibility useful in public relations and ii) the wish to highlight areas with a unique Swiss identity where Swiss commitment to humanitarian principles and effectiveness in aid can be operationalised. Swiss interviewees state that political support for USAR activities has been there throughout the history of Swiss Rescue. This is evidenced by funding for the instrument, multiple deployments, a high multilateral profile and widespread public support. However, both Swiss and regional key informants note that the political risks of deploying in complex emergencies with significant security risks for staff deployed is more acute for the Swiss government than for some of the state actors that have built intervention capacity over the past decades; "We are unlikely to see Swiss USAR deployments in complex emergencies with conflict risks".[26]

In a nutshell: Swiss Humanitarian Aid policy has been stable and generous over time. Prioritising emergency assistance and the development of a humanitarian framework, Swiss humanitarian aid is well aligned with international humanitarian policy development, favours multilateral collaboration and currently gives thematic priority to Protection, Disaster Risk Reduction, Water, Sanitation and Hygiene, and Gender Based Violence.

1.4 Swiss Rescue; Structure and History

The SDC[27] is the agency for international cooperation of the Swiss Confederation, administered by the Federal Department of Foreign Affairs (FDFA). The SDC is responsible for the overall coordination with other federal authorities of Swiss development cooperation and humanitarian aid.

Humanitarian Aid (SDC/HA) is one of the four departments of the SDC. It is involved in protecting the interests of vulnerable population groups prior to, during and after periods of conflict, crises or natural disasters. It funds partner organisations, delivers relief supplies, advocates in favour of humanitarian principles and maintains and deploys the experts of the Swiss Humanitarian Aid Unit (SHA).

The SHA is a standby team with around 700 members, subdivided into eleven specialist categories (expert groups), who are on stand-by to be deployed in support of humanitarian interventions worldwide. Individual members of SHA may be deployed in several expert group constellations according to need and competence.

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[24] See https://www.eda.admin.ch/deza/en/home/sdc/strategy/legal-bases/message-international-cooperation-2017-2020/humanitarian-aid.html downloaded 20200429.

[25] As cited in Nordic Consulting Group (2020).

[26] Based on comments from Swiss interviewees at in positions throughout the system regarding regional interventions.

[27] This section is based on https://www.eda.admin.ch/deza/en/home/sdc/portrait/text-portrait.html and sub-pages, downloaded 2020-01-02.

Swiss Rescue is one of SDCs rapid response instruments. It is organised as an INSARAG classified heavy Urban Search and Rescue (USAR) unit with 78 different roles or positions recruited from different expert groups, such as rescue, medicine, logistics etc. Swiss Rescue is a cooperative system drawing on the capacities of various domestic partners to maintain the preparedness necessary to deploy the full heavy USAR capacity. SDC/HA staff manage Swiss Rescue and the collaboration with its partners, which are:

- The Rescue Corps of the Swiss army, which provides 12 rescuers for the USAR team. Remaining rescuers are former Rescue Corps members, now contracted by SHA. In consequence, the Swiss Armed Forces provide know-how, infrastructure, transportation as well as USAR and Disaster Coordination Capacity Building;
- The Swiss Search and Rescue Dog Association (REDOG), which maintains a preparedness to supply search dogs and the trainers that accompany them;
- The Swiss Seismological Service which provides up-to-date information on seismological events;
- The Swiss Red Cross which brings humanitarian experience and access to its international network through the International Federation of Red Cross and Red Crescent Societies (IFRC);
- Zurich airport which provides some of the logistics and assists in the mobilisation process;
- Swiss air-ambulance (REGA) which provides information on airport accessibility and transport capacity for the USAR team, as does;
- Swiss International Air Lines.[28]

The SDC/HA and its partner organisations are sometimes referred to as the Swiss Rescue Chain.[29] The history of Swiss Rescue Chain started in the 1960's. Following the Valais disaster in 1965,[30] the concept of a cooperative arrangement involving the predecessor organisation of today's Swiss army rescue troops (BALST), private sector and non-government organisations developed. This was formalised by the Swiss Parliament in 1972 with the creation of the stand-by team the Swiss Disaster Relief Corps, fore-runner of the Swiss Humanitarian Aid Unit. The Swiss Disaster Relief Corps was used for the first time in the Sahel zone in 1974. Swiss Rescue staff, the section within SDC/HA that manages the Swiss Rescue, was founded in 1981 and is today a relatively small part of the Swiss Humanitarian Aid Unit.

In the course of multiple deployments,[31] experience was gained which formed the basis for preparedness training, differentiation of tasks among the stakeholders and formalisation of the mandate. An initially fairly loose arrangement was structured into separate specialisations drawing on the multiple capacities of Swiss Society as a whole. The cooperative arrangement that emerged, based more on mutual trust and joint training than formal agreements, is today the Swiss Rescue.

The Swiss Rescue was not alone among international responders to earthquake events. During the 80s the need for improved coordination of responses and standardisation of preparedness was identified and acted upon by a group of German-speaking states[32] who

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[28] https://www.eda.admin.ch/deza/en/home/activities-projects/activities/humanitarian-aid/operational-resources/swiss-rescue.html.

[29] The summary of the Swiss Rescue Chain (i.e. Swiss Rescue and the domestic partners that contribute to its capacities) history is based on Zeiter.T (2013) and Geschichte der Rettungskette Schweiz, pdf supplied by SHA (2019), triangulated with interviews.

[30] On August 30, 1965, two million cubic metres of ice and debris broke off the Allalin glacier in canton Valais, engulfing the Mattmark dam construction site. Eighty-eight people lost their lives. Source: https://www.swissinfo.ch/eng/50th-anniversary_the-mattmark-disaster--a-dramatic-page-in-swiss-history/41627972, downloaded 2020-04-30.

[31] Annex 7 contains a lists of the deployments over time.

[32] Austria, Germany and Switzerland; later joined by Luxembourg to create the DACHL group coordinating in support of INSARAG.

took the initiative to create the International Search and Rescue Advisory Group (INSARAG). With significant Swiss influence, INSARAG led a process of establishing Urban Search and Rescue (USAR) as a standardised response instrument for interested governments. This process of standardisation and classification has resulted in three levels of capacity denoted International Light, Medium and Heavy USAR teams. There is an adapted classification system for National capacities.

Swiss Rescue is a rapid response instrument for SDC/HA. It is designed to deploy an autonomous team of experts along with necessary materials to find and rescue people trapped in survivable spaces under large metal or concrete structures that have collapsed following earthquakes or similar events. The unit can rapidly deploy globally, to locate and rescue people under such circumstances. The unit is standardised according to international guidelines and thus comparatively easy to coordinate with other international response capacities. Swiss Rescue was classified as a Heavy USAR team in 2008, reclassified in 2014 and is due for reclassification again in 2020.[33]

In addition to maintaining the Swiss Rescue USAR instrument SDC/HA supports international partners with USAR related capacity building by accompanying classification processes and strengthening the Disaster Risk Reduction (DRR) programming of emergency response authorities and vulnerable communities.

Since its inception, the Head of SDC-HA has chaired INSARAG and SDC has supported the institution's development.

In a nutshell: Swiss Rescue is a USAR response instrument developed over 30 years. It is internationally classified as a Heavy USAR team. SDC/HA has also been instrumental in establishing and developing INSARAG which has led a massive expansion of global USAR capacity. SDC/HA has also supported a number of INSARAG member/aspiring member states in developing national USAR/emergency response capacities.

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[33] Postponed to 2021 due to Covid-19.

2   Approach and Methodology

2.1   Approach

The purpose of the review is prospective and formative and the approach combines elements of Developmental evaluation[34] with Theory-based evaluation by using the existing Theory of Change (ToC)[35] as a point of reference for the analysis. A tentative, incomplete, ToC for Swiss Rescue was shared with the review team. The team has used this in iterative discussions (individual and group) with Swiss Rescue staff during data collection.

2.2   Data collection and analysis

A mixed methods approach has been used for data collection, combining document review with key informant interviews, individual and group. We have been provided with various documentation by SDC/HA staff, including statistics on deployments, mission reports, organograms, financial data, policy documents (including Federal dispatches)[36] etc. These were the basis for our document review. Such documentation has been complemented with a broader document review focused on global disaster trends and the consequences for, primarily urban, humanitarian interventions. A list of the documents reviewed is found in Annex 2.

Key informants that were approached for semi-structured, individual or group, interviews include representatives of: SDC/HA staff at different levels (including current and former staff), Swiss Rescue domestic partner institution representatives, INSARAG staff, INSARAG members' representatives with regional and host government perspectives as well as experience of capacity building activities and of similar USAR capacity along with selected non-USAR humanitarian stakeholders. The interviews were conducted by phone or face-to-face in Switzerland, Mexico, Malaysia and Sweden. A total of 49 persons were interviewed, 37 male and 12 female. They are listed in Annex 2.

The data collected was documented in an evaluation questions matrix. This summarises, for internal team use, documentation and interviewee responses. The matrix was then used as basis for team analysis of the ToR review questions. The matrix is presented in Annex 4.

The review has been an iterative process. In the course of planned meetings with the advisory group for the review, data collected has been shared and discussed for validation and nuancing. In addition to a presentation of preliminary review findings to the Management group in mid-November, progress has regularly been discussed with SDC/HA staff contact persons - allowing adaptation of targeting of data sources, reconfiguring specialist input according to need and timing throughout the review process.

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[34] Only selected elements of developmental evaluation have been applied such as a utilisation focus, an iterative approach combining stakeholder involvement with dialogue around interpretation of collected data. Developmental evaluation would normally be an internal function and require significantly longer time period than available to this review. For comparison between traditional approaches and developmental evaluation see Patton, M.Q. (2006).

[35] Generally, a theory of change includes: a logic model/results chain; the assumptions, risks and, in some cases, the mechanisms associated with each link in the logic model/results chain; the external factors that may influence the expected results; and any empirical evidence supporting the assumptions, risks and external factors. https://www.canada.ca/en/treasury-board-secretariat/services/audit-evaluation/centre-excellence-evaluation/theory-based-approaches-evaluation-concepts-practices.html#toc3 , section 3, downloaded 2020-01-03. The ToC shared is attached, in Annex 7, with comments on the assumptions made.

[36] A Federal Dispatch is a formal document of the Swiss Confederation directing federal administrative structures about their mandate and tasks.

2.3   Limitations

Interviewed stakeholders sometimes refer to the Swiss Rescue Chain (SRC), which does not exist formally and is used by different people in different ways. Many respondents have never worked with Swiss Rescue and do not always differentiate between SDC/HA (the Humanitarian Aid department of SDC), SHA (the 700 member human resource pool managed by SDC/HA) and Swiss Rescue, the heavy USAR instrument staffed with experts from SHA and managed by SDC-SHA.[37] Some definitions are therefore necessary:

- When this report mentions *staff* it refers to internal SDC/HA personnel.
- When this report mentions *SHA members*, it refers to the experts in the standby-pool of the SHA. These are categorised into eleven Expert Groups (logistics, medical etc.). An individual can be a member of more than one expert group and can be deployed accordingly.
- When this report mentions **Swiss Rescue** it refers to the INSARAG classified heavy USAR instrument. We use the term including the staff maintaining the preparedness (i.e. relevant SDC/HA personnel).

Documentation regarding Swiss Rescue interventions has been provided by SHA but is limited in detail and highly focused on deployed resources and the technical and organisational aspects of the interventions.

The review team's efforts to find published data on outcomes and actual impact of USAR interventions have not been successful. This includes documentation on USAR interventions undertaken by other stakeholders and interveners. The review has been able to trace only basic data with almost no information on outcomes (i.e. what the *activities* such as deploying the instrument and *output* such as people rescued have resulted in such as health effects, livelihoods restored, primary education resumed etc.).

There was limited data on the human resources direct cost of maintaining the Swiss Rescue instrument prior to the review. This included limited awareness of the number of people directly involved in the management and maintenance of Swiss Rescue. Data presented in the report are estimates made by the SDC/HA Finance section and SDC/HA staff during the review process, not data systematically compiled over time.

Not all intended respondents were available for interviews. However, given the consistency of data received from those respondents reached, (be they from SDC, domestic partner, regional of global institution) the review team does not believe this has compromised conclusions materially.

In line with the development evaluation approach taken, there have been a number of adjustments in the review process over time. For example, the original ambition to develop rubrics for assessing Swiss Rescue's achievements was dropped as only question a) easily lends itself to rubric use.

In a nutshell: This report is based on data collected by going through existing documents and interviewing people involved in urban emergency response, specifically search and rescue interventions following earthquakes. Sources reflect the perspectives of stakeholders based in Switzerland, in Global and Regional response/coordination organisations as well as Host Country National and local authorities. Data collection and analysis has involved iterative contacts with SDC/HA to check terminology, facts and to discuss emerging analysis.

Conclusions and recommendations are those of the evaluation team and may not reflect SDC/HA views.

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[37] Applies to a majority of the external (non-SHA) respondents.

3   Findings

In this chapter, we first look at the development over time of earthquake responses, to identify intervention patterns, known results and start understanding what preconditions are necessary for a USAR instrument to be relevant. We then present information about Swiss Rescue, its resources, costs and accomplishments as a USAR unit. Finally, we discuss the other activities supported by Swiss Rescue resources; USAR capacity building and the multi-lateral support to INSARAG.

3.1   High impact earthquakes, international responses and access trends

As illustrated in the Chapter 1, potential Swiss Rescue USAR deployments take place in a rapidly changing humanitarian context. The changes described increase the need for humanitarian interventions to be adaptable, well contextualised, long term and multisectoral. In this section, we present high impact earthquake events and USAR responses to them over time.

The number and physical strength of earthquakes today does not differ from historical patterns according to the Swiss Seismological Society. The figure below illustrates the number and location of earthquakes with more than 500 casualties between 1982 and 2018; during that period, the American continent has registered nine earthquakes, Asia 41 and Africa three.

Figure one: The stars represent the location of earthquake events and the numbers in the stars, the number of events with more than 500 dead during the period 1982 – 2018. Indonesia stands out with seven events. The circles illustrate the location of USAR teams. The majority of USAR teams' home bases do not geographically match recent major earthquakes. This is also true of Swiss Rescue (red circle).[38] A full page version of this map is available in Annex 12.

During the same period, the global capacity to respond has changed with an increasing number of USAR teams available and deployed. Although the Asian continent has had more large earthquakes, half the world's classified USAR teams are based in Europe.[39] After Europe, Asia (37%) has the largest USAR capacity with the rest scattered across the Americas, Australia and Africa. Meanwhile, High impact earthquakes are more likely to

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[38] Based on data from https://www.ngdc.noaa.gov/nndc/struts/form?t=101650&s=1&d=1.
[39] http://www.insarag.org/iec.

occur along the most important subduction zones reaching across the Americas, Middle East/North Africa (MENA) and Asia/Pacific. To identify trends in USAR response over time the review team has analysed data on international responses to earthquakes with more than 1000 casualties[40] during the 15 year-period 2003 - 2018.

Earthquake	Number of deaths	Number of INSARAG registered teams deployed	Average size of team, at full capacity	Average percent of full capacity actually deployed	Avg number days deployed	Results documented on INSARAG website
Indonesia 2018	4439	1	67	59.7%	30	Water purification, no data on results
Nepal 2015	8200	18	39	51.6%	12	5 live rescues, 2000+ injured assisted, various relief, health and coordination support
Japan 2011	24384*	16	40	54.2%	12	18 bodies recovered, various DRR training, Nuclear detection
Haiti 2010	316000	29	34	58.4%	14	23 live rescues, 91 bodies recovered, 2000+ injured assisted
Indonesia 2009	1117	8	43	63.7%	9	3 bodies recovered, 3000+ injured assisted, some DRR
China 2008	87652	6	40	44.4%	8	42 bodies recovered, 1500+ injured assisted, various health and relief
Indonesia 2006	5749	4	32	36.9%	12	"Several" bodies recovered. Some health and transport activities
Indonesia 2005	1303	3	53	38.4%	15	Field hospital, no data on results
Pakistan 2005	76213	25	38	45.1%	14	10 live rescues, 6500+ injured assisted, various WASH, relief and infrastructure activities
Indonesia 2004	1001					No data
Algeria 2003	2266	22	31	40.1%	6	5 live rescues, 27 bodies recovered, 160 injured assisted
Iran 2003	31000	22	36	40.2%	10	24 live rescues, 241 bodies recovered, 350+ injured assisted
Totals	**559324**	**154**			**11**	**Live rescues/no. of teams = 67/154 = One life saved per two team deployments**

* Number for 2011 includes people reported missing.

Table one: *USAR deployment in high impact earthquakes 2003-2018, as per INSARAG documentation in published V-OSOCC/UNDAC reports.[41] Please note that a number of*

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[40] 1000 rather than 500 casualties chosen to limit the sample, given resource constraints.
[41] Virtual On-Site Operations Coordination Centre (V-OSOCC) / United Nations Disaster Assessment and Coordination (UNDAC). For further detail see compilation in Annex 5.

other teams may have been documented; in the response to the earthquake in Ecuador in 2016, for example, only 2 of 17 responding USAR teams were classified by INSARAG.

During this period there were twelve such high impact earthquakes.[42] The table above summarises data about the international USAR teams deployed. The table indicates that full USAR teams are seldom deployed This is in line with interviewees experience that host governments opt for specific expertise rather than a full team (refer column 5 which presents the average percent of full team capacity deployed, ranging from 37-60%).

Finding 1: International USAR deployments are often made with partial teams (medical or WASH teams for example).

Given its purpose, the USAR instrument is particularly sensitive to timeliness. Delays in access to people with this particular need make the instrument useless, even if the delay is only measured in days. Reinoso E., Jaimes M. A. & Esteva L. (2017) for example have analysed entrapped people's survivability following an earthquake and state that "emergency plans should be designed for immediate response (few hours); it is also evident why international support, which usually takes days to reach the site where help is needed, is relatively inefficient to rescue people alive".[43] All interviewees that referred to timeliness confirm this and state that a team must arrive within 72 hours to be effective. The data presented in the results column confirms that lives saved are very few.

Finding 2: International USAR deployments either do not save lives or do not document that they do (154 international USAR deployments over 15 years documented 67 people rescued, as shown in Table 1).

For nine of the twelve events, the team has been able to review V-OSOCC/UNDAC mission reports made available through United Nations Office for the Coordination of Humanitarian Affairs (OCHA)/INSARAG. USAR teams are described as a useful and valuable support during the high impact earthquakes of 2003 and 2005. The majority of USAR teams were able to operate self-sufficiently and complement national responses which at times were considered 'too light' in terms of both material and personnel.[44]

The geographic proximity from European USAR teams to the earthquakes in Algeria and Iran in 2003 is likely to have contributed to a rapid deployment that generated a timely response to the rescue process as they arrived within 24 hours.[45] At the time, UNDAC's role as coordinator of USAR teams was developing. UNDAC facilitated meetings with USAR teams and enabled cooperation with national agencies. They intended to carry out assessments but constraints due to lack of manpower weakened this effort. However the reports recommend specific liaison persons to be used for coordination purposes in order for UNDAC to be relieved from the tasks mentioned above.[46]

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[42] Based on a compilation by SDC/HA staff made from https://www.ngdc.noaa.gov/nndc/struts/form?t=101650&s=1&d=1. Please note that the Indian Ocean earthquake of 2004 that caused the Tsunami of that year is not included as it statistically is categorised as a tsunami event rather than as an earthquake.

[43] Reinoso E., Jaimes M. A. & Esteva L. (2017), p7. Figure 2 in the same document provides summaries of survival time for different building types.

[44] OCHA, UNDAC (2006) "UNDAC Mission to Pakistan for South Asia Earthquake consolidated report", 24/1/2006, p.2.

[45] OCHA, UNDAC (2003b) Mission following the Bam Earthquake of 26 December 2003 Mission Report", p.3 and OCHA, "United Nations Disaster Assessment Coordination (UNDAC) Mission following the Algerian Earthquake of 21 May 2003 Mission Report" p. 2. In comments to the draft SHC/HA notes that this refers to search capacity only. This was complemented with rescue capacity arriving after 48 hours.. Therefore Swiss value added was was support to UNDAC (coordination) and the swift change to RRT (Goods from Switzerland, WASH, Medical).

[46] OCHA, UNDAC (2003a) "Mission following the Algerian Earthquake of 21 May 2003 Mission Report"

Difficulties in coordination and logistics are exemplified in the mission report by the Japan Disaster relief team to the earthquake in Indonesia in 2009. Despite a speedy deployment, search operations did not recover any survivors. Three days after the deployment, the USAR phase was declared concluded by the Indonesian government. The report states that "[m]ost foreign USAR teams had severe difficulties in transportation of equipment. Too much equipment arrived with USAR teams at the same time and not only paralyzed logistics of USAR teams but also gave too much burden on the affected country."[47]

In the three latest interventions, the involvement of local and national governments and agencies is more important and seen as effective. The UNDAC deployment for the Japan 2011 earthquake consisted of advising the Japanese Ministry of Foreign affairs on how to control an influx of international teams and organisations of limited usefulness. The mission report expresses concern over the fact that "USAR teams are becoming a political tool" to show solidarity even when it is "fairly obvious that the chances of actually saving lives are minimal."[48] It is clear that seismological events will continue to occur[49] and, given urbanisation trends described above, will result in situations where surviving individuals are in need of rescue from survivable spaces underneath major metal or concrete constructions that have collapsed. However, the vast majority of affected people in a post-earthquake context do not have such needs: An earthquake commonly results in thousands or even tens of thousands losing their homes while individuals saved from being trapped seldom exceed double digit numbers, for example, the number of earthquake affected people targeted by the Red Cross for assistance in 1998-2017 was in excess of 5,8 million.[50] International USAR team deployment is thus not automatically considered beneficial by the host government.

Another issue raised is compliance with requests. There are examples of governments wanting to limit the amount of international USAR teams. In the Nepal case, the influx remained high even though the government had requested USAR teams to stay at home.[51] This led to an uncoordinated response where the teams were not used for search and rescue. The report from the Indonesia earthquake in 2018 stipulates that the primacy of local and national actors should be seen as 'the new normal'. Any offers of foreign search and rescue were stood down in favour of activities led by local and national actors.[52]

Nevertheless, international foreign assistance to high impact earthquakes is reported as useful and successful in other areas. USAR teams can assist with confirming casualties and data collection which can benefit other efforts.[53] In Indonesia 2018, despite the rejection of offers of medical services and USAR teams, the majority of offers made were ultimately accepted. Foreign assistance was used in areas such as water, sanitation, logistics, transportation and technical expertise. Foreign military air assistance was considered a critical component of the foreign assistance in the aftermath of this earthquake.[54]

The UNDAC-perceived success of the 2018 Indonesia mission is in part ascribed to regional involvement. Using local mechanisms as coordinators allowed flexibility and ability to adapt to the environment. The UNDAC team, for example, was from the region and thus familiar with its context and response mechanisms. The investment in interoperability ensured that the response was consistent and coherent with the government response.[55] This approach

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47 JDR Search and Research team (2009) " INSARAG Post Mission Report (JDR mission to Padang Earthquake in 2009)", December, 2009, p.8.
48 UNDAC (2011) "Mission Report Japan Tohoku Earthquake 13 - 23 March 2011", 10 June 2011, p.6.
49 Interview with Swiss Seismological Society confirms that no seismological change is likely.
50 IFRC (2018) table A.2, p 226.
51 OCHA, UNDAC (2015) "Mission Report Nepal Earthquake", p. 12.
52 UNDAC, (2019) "End of Mission Report Central Sulawesi Tsunami and Earthquake Indonesia", p.16.
53 OCHA, UNDAC (2015) "Mission Report Nepal Earthquake", p.12.
54 UNDAC, (2019) "End of Mission Report Central Sulawesi Tsunami and Earthquake Indonesia", p. 11
55 UNDAC, (2019) "End of Mission Report Central Sulawesi Tsunami and Earthquake Indonesia", 16-17.

is described as making the 2018 Indonesia mission unique. By comparison, most other earthquake responses in Asia involved foreign assistance from other continents, primarily from Europe and North America.

There must also be the political will on the part of host governments to give the instrument access to affected populations. According to some interviewees[56], the political dimensions of gaining access to affected populations in post earthquake contexts are increasingly complex. With increases in regional and national capacity for USAR response, host governments prioritise giving access to such response capacities. This trend is described as true for multiple types of interventions, not only USAR.

In the Americas this is described in terms of contextual/cultural effectiveness, in Asia also in terms of sovereignty (refer Indonesia Case study in Annex 6). Indonesia is described as frustrated with aspects of global response structures, preferring regional ASEAN coordination through The ASEAN Coordinating Centre for Humanitarian Assistance on Disaster Management (AHA).

Finding 3: Regional and national capacities are growing. Host governments such as Indonesia are increasingly frustrated with uncoordinated or uncontextualised international responses.

Finding 4: Classification and standardisation of USAR instruments improves preparedness, coordination and response *for the specific USAR niche.* However overall humanitarian needs are not well addressed by such a standardised response mechanism.

Interviewees at global and regional levels also noted that the non-emergency structures in place for capacity building and regional preparedness coordination have allowed national emergency management agencies to develop regional relationships. In the relative chaos after an earthquake event, emergency managers are described as reluctant to invite unknown entities in both Latin America and Asia. This includes INSARAG classified units and illustrates the limits of standardisation.

Furthermore, some interviewees stated that the USAR instrument is seen as a signal in domestic and International politics. In the choice between inviting Swiss Rescue or building relations with neighbouring countries and regional powers. Multiple interviewees emphasised that an invitation to be deployed is heavily influenced by pre-disaster relationships. The formalisation of relations with the Indonesian government currently being undertaken, while welcome, is not seen as sufficient in terms of relationship building and contextualising response alternatives.

Initial responses to high impact earthquakes have generally been national and focused on strengthening and coordinating the local efforts. The reports cited above are supported by interviewees who note that international assistance is sought only when local capacity is overwhelmed (in terms of volume or specific technical skills). With expanding regional and national capacities, the content of such requested international assistance is increasingly specialised, targeting gaps in existing domestic capacity.

When considering whether to request international support, host governments have many options. There are presently 56 INSARAG External Classification (IEC) classified USAR teams, most of which are not located in the most earth-quake prone areas. Regional respondents in both Asia and Latin America, note that government approaches increasingly focus on mobilising national capacity with less international operations. This is in line with INSARAG strategies but some interviewees[57] are concerned that governments lack the resources or the will to prioritise maintaining quality in the expanding capacities. Particularly

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[56] Including respondents who were Swiss, multilateral, regional and representing specific host countries.

[57] Based at Swiss, global and regional levels.

in Asia, access of international response teams is further limited by the growing role of military capacities in national disaster response planning.[58]

Interviewees from national emergency management agencies, regional disaster response institutions and INSARAG, emphasised that the teams that are best known by a particular host government, because of joint training, internship opportunities or their participation in deployments, are those that are invited or accepted to be a partner in a response. Swiss interviewees emphasized joint training as basis for post-event access while regional interviewees highlighted regional contextual knowledge, relevant language skills as well as non-humanitarian political relationships are also cited as important to host government selectivity. In ASEAN such selectivity is formalised in international agreements, at times also in national legal frameworks. The situation in SE Asia is discussed in greater detail in the Indonesia Case study in Annex 6.

Interviewees note the importance of timeliness to the likelihood of saving lives. The Indonesia case study, interviews in Latin America and respondents at INSARAG all emphasise that timeliness is not only related to geography and logistics but also to host government decision making processes and political preferences. In general, the deployment of a humanitarian instrument must be preceded by a request from relevant authorities. If such a request is not made, or delayed, there are severe limitations on the relevance and appropriateness of the instrument.

Finding 5: Host government decisions to invite international USAR capacities are increasingly selective. Responding authorities want interventions to be better contextualised and often reject full classified teams in favour of smaller groups of specialists to target particular challenges.

Finding 6: Political considerations are playing a greater role in humanitarian response in general, favouring responders that invest in pre-disaster relationship building.

An important prerequisite for relevance and appropriateness is capacity to respond to the needs. In the next section we describe the instrument Swiss Rescue.

3.2   Swiss Rescue - Organisation

The Swiss Humanitarian Aid Unit (SHA), is a standby roster of approximately 700 experts, categorised into the following 11 expert groups: Rescue, Construction, Disaster Risk Reduction/Environment, Logistics/Support, Water and sanitation, Technology/Communication, Coordination/Administration, Information, Protection, Security and Medical. [59]

Some members of the SHA Unit are also staff of SDC/HA, some work for the Swiss army, some in civilian health services etc. If qualified, SHA members may be deployed in more than one expert group.

Swiss Rescue is an INSARAG classified heavy USAR team i.e. an intervention instrument managed by the SDC/HA. Swiss Rescue can be deployed as heavy or medium USAR team in accordance with the INSARAG guidelines. Its standard team organogram (Heavy USAR team, see Annex 9) has 78 positions. When deployed it is staffed with experts mainly but not exclusively from the SHA. Of the 700 SHA members, 226 have a designated function in Swiss Rescue.

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[58] An indication of the strength of this trend is that the IFRC is investing heavily in capacity building of military emergency response institutions, aiming to augment their understanding and operational application of Humanitarian Principles, Source: Interview from Asia. Similar military roles in response are reported from the Americas.

[59] Unless otherwise specified section 3.2 through 3.6 are based on interviews with Swiss Rescue staff and documentation received from SHA.

The Swiss Rescue is managed by SDC/HA staff based in Berne. Based on the interviews and a review of job descriptions, Swiss Rescue is managed by a full time "Program Officer Swiss Rescue" who also acts as the Head of expert group "Rescue".[60] The position reports directly to Head of Rapid Response Section who is also the operational focal point of INSARAG.

The review team's review of job descriptions and interviews with human resources staff suggest that there are 2 full time positions that are absorbed by USAR preparedness (mainly responsible for orientation and training of Swiss Rescue). The rest of the human resources team have differing percentages of their work related to Swiss Rescue. Staff member time used can range from 5-10%, time which is not costed directly under USAR.

The training team within human resources spends more time on Swiss Rescue as compared to the team that is responsible for recruitment, orientation, etc. The annual Swiss Rescue training budget is approximately CHF 250,000. Trainings are carried out regularly, usually short term, aiming to bring all Swiss Rescue members together at least once a year. The type of training may be categorised as for example soft skills training, scenario based exercises for the full team; joint training for cross functional training; SIMEX training for management simulation; specific technical trainings like telecommunication, etc.

3.3   Swiss Rescue – Human resources

The humanitarian experience in the Swiss Rescue expert pool varies: Almost 30% of the expert pool have no operational USAR experience considering there has not been a full deployment in the last decade. Almost 45% have less than 2 years of humanitarian experience while only 6.6% have more than 5 years of humanitarian experience.

Less than 20% of the members in the Swiss Rescue standby pool are female. The age distribution of the members suggest that the largest age group is between 40 – 49 years old (31%), followed by 30 – 39 and 50 - 59 (both at 26%). The 60+ age group makes up for 10% of the total.[61] Although, all age groups have some members with no humanitarian experience, the correlation between age and humanitarian experience suggests that the humanitarian experience is higher among the members above 40 years old. As the older age bracket group members are getting older (specifically 60+), the humanitarian experience within Swiss Rescue will decrease further.

The SHA members with leadership, management or coordination functions in Swiss Rescue have the most humanitarian experience followed by logistics, medicine, etc. This correlates to some extent with the age distribution.

The least humanitarian experience is found among the rescuers. Rescuers are current or former army personnel (Rescue Corps) and make up about 40% of the Swiss Rescue team, they are specialized on USAR and less likely to be deployed for multi-sectoral rapid response missions (teams which do not engage in USAR). They also have more limited language skills and generally lack experience with contextualisation.

Finding 7: Swiss rescue has a balanced age profile and an unbalanced gender profile. Technical skills are solid while humanitarian experience is limited and declining.

Dual-function members are identified as those with transferable skills, i.e. an ability to be used in different expert groups and different SDC/HA instruments such as Rapid Response Team (RRT/SET). Approximately 60% of the Swiss Rescue members have transferable skills, most of the rescuers do not. Swiss Rescue support and management team members (coordination, logistics, DRR/Environment, WASH) commonly hold dual functions and are

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[60] This position is currently seconded from the army for four years (contract scheduled to end in 2020).

[61] Source: personnel statistics from SHA.

able to be deployed under the RRT. The management team of USAR is mainly from HQ and trained to deploy with RRT as well. Members of different specialist groups have also been deployed independently of the full team. Examples include structural engineers in Mexico, search dogs in Japan and onsite advisors in Albania.

Competencies may be categorised as *technical*, *leadership* and *core* competencies. In recent years, numerous attempts have been made within the humanitarian sector to identify core competencies for use in stand-by pools to ensure effective humanitarian response.[62] In the case of Swiss Rescue, core competencies required to respond effectively include knowledge of Swiss Humanitarian Aid, Swiss Development Cooperation, coordination, cross cultural management, understanding local operating contexts including the key players on the ground, the preferred local and regional structure and network to coordinate disasters etc. This is consistent with the core competencies identified in the sector. There is no evidence of a Swiss Rescue competency framework that is reviewed and revised periodically to ensure that the competencies of the Swiss Rescue membership are relevant to existing and emerging humanitarian contexts. This is also true for SHA as a whole.

The trainings offered to Swiss Rescue members currently have an emphasis on leadership and technical competencies and less on core

> **What are Core Competencies?**
>
> CHCF identifies the following as key indicators of the core competencies required of a standby roster member:
>
> -Understands operating contexts, key stakeholders and practices affecting current and future humanitarian interventions;
>
> -Actively participates in disaster coordination and interagency cooperation based on a clear understanding of the organisation's perspective and approach;
>
> -Promotes and ensures compliance of humanitarian standards and principles that govern behaviour of staff;
>
> -Demonstrates understanding of coordination mechanisms;
>
> -Takes into account the needs, skills, capacities and experience of crisis-affected people and applies these in the response;
>
> -Applies understanding of the political and cultural context and underlying causes of the humanitarian crisis.

competencies. Unlike other USAR teams in Asia and Pacific for example, 35% of Swiss Rescue members' capacity and competencies are strictly limited to 'urban search and rescue' and are not flexible to be used in other emergencies such as air plane crashes, typhoon, floods.

Motivation is key to maintaining competency. Interviews with key informants from Human Resources department suggest that it is a challenge to maintain the motivation and spirit of some of the Swiss Rescue members (especially those who have not experienced deployment) given that there have been no deployments in the past 10 years. Members are expected to be ready and prepared to be deployed within hours and this includes having a packed bag in their car/home. This act of 'readiness' and 'preparedness' with no likelihood of being deployed is the main de-motivation for some of the members (as expressed to the HR staff). However there is an absence of formal data on the percentage of members who feel this way.

Finding 8: Approximately 35% of the heavy USAR team members are USAR specialists that lack core competencies necessary for more flexible deployments. There is little emphasis on capacity building of core competencies of these Swiss Rescue members.

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[62] One such attempt is undertaken by the CHS Alliance using the Core Humanitarian Competencies Framework (CHCF). See Fact Box overleaf.

3.4   Swiss Rescue - Costs

Swiss Rescue related resources had not been directly costed to Swiss Rescue prior to this review. Hence there was no clear picture of the cost of running and managing Swiss Rescue.

Physical resources allocated for the Swiss Rescue consist of the warehouse infrastructure, logistics and equipment. Annual warehouse infrastructure (also used for training) cost is about CHF 200 000. In addition, annual new equipment and logistics costs for expendable material and maintenance is CHF500,000. The logistics team is another department that is directly implicated by decisions of USAR.

In total, the Human Resources cost for managing and maintaining Swiss Rescue is CHF1,134,000. This cost excludes the cost of other staff who have indirect or lesser role to play in Swiss Rescue. [63]

Cost items	Average per year, CHF
Swiss Rescue: Exercises, staff/SHA member trainings and courses, warehouse infrastructure, equipment and logistics, HQ staff	2 028 000
Networking: INSARAG, DACHL, HQ staff	134 000
USAR capacity building of partners: USAR CB Projects, SIMEX, INSARAG IEC / IER Mentorships, HQ staff	1 087 000
Total per year	3 249 000

Table two: *Average annual costs for Swiss Rescue, USAR capacity building and INSARAG, based on estimated costs for 2013-2018. For further detail see Annex 7.*

Estimating the cost of humanitarian intervention in order to allow an assessment of value for money is difficult. *The cost of doing nothing*, an IFRC report from 2019 states that, based on IFRC data, it costs between 18 US dollars and 61 US dollars in 2018 prices [*for the red cross*] to help each affected person, depending on the income level of the affected country. The same study estimates that the per-capita amount spent by the UN and other agencies that work under the Consolidated Appeal process [*...is...*] closer to 112 US dollars.[64]

Finding 9: The annual cost of maintaining the Swiss Rescue Heavy USAR instrument is approximately two million CHF. When contextualised by comparing with the number of lives saved by the instrument (see section 3.5 below), this is extremely expensive.[65]

3.5   Swiss Rescue - Deployments and results

In the first two decades of its existence the Swiss Rescue was repeatedly deployed. Since the formal inception, the 'high point' for SR deployment was in 1999. This involved deployment to four field locations, twice to Turkey, then Greece and Taiwan. Since the intervention in India in 2001 the full heavy USAR team has been deployed only twice and has not saved a single life.

Decade	Deployments	Full team deployments	People	Dogs	Lives saved
1980s	8	5	255	106	41

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[63] The presentation of costs is based on approximations of costs 2013-2018, made by finance staff at the request of the review team. The annual figures represent an average of estimated costs and should be regarded as an approximation. More detailed data is available in Annex 8.
[64] IFRC (2019) *The Cost of Doing Nothing*.
[65] Meanwhile, estimating the cost of lives saved is difficult Puett C. (2019) gives and overview of attempts made and relevant methodological challenges.

1990s	11	6	468	101	34
2000s	5	3	291	40	8 *
2010s	2	–	29	9	–
Totals	26	14	1043	256	83

Table three: *Summary of Swiss Rescue deployments over time. A more detailed table is available in Annex 7. The definition of "full team" has changed over time; 1980s: 40-55 people, 1990s: 57-98 people, 2000s and onwards: 52-115 people. *(India, 2001)* [66]

In the initial decades (80s and 90s) full scale Swiss Rescue heavy USAR teams were deployed eleven times and in the 00's three times. In the past decade the full team has not been deployed.[67]

Meanwhile, individuals from Swiss Rescue have been included in smaller rapid response teams, which have repeatedly been successfully deployed by the Swiss Humanitarian Aid Unit.[68] SHA deployment examples, where less than the full Heavy USAR team was deployed, include the deployment of Swiss structural engineers to do specialized assessments in Mexico (2017)[69] and coordination support in Albania (2019). Search teams have also been deployed independently but with mixed results.

The purpose of Swiss Rescue is to contribute to saving lives *and alleviating suffering*. In order to assess results of Swiss Rescue deployments the review team has therefore attempted to collect data about outcomes (i.e. what the *inputs* mobilised, such as teams deployed, *activities* such as rescue, coordination, structural assessments and *output* such as people rescued have resulted in which is likely to have alleviated suffering - for example health effects, livelihoods restored, primary education resumed etc.). However, the review team notes the lack of systematic data collection regarding outcomes (not specific to Swiss Rescue, appears true of most international USAR interventions, see section 3.1). Repeated literature searches have failed to produce data on results. Existing mission reports sometimes mention the number of lives saved, bodies recovered or injured treated but do not report on results, spin-off effects etc. The existing reports deal more with organisational issues related to resources mobilised, team structure, geographical specifics of activities undertaken and formal issues related to relations with host government/local authorities. Existing humanitarian sector documentation on the other hand tends to focus on overall earthquake responses not on the specific effects of deploying USAR teams.[70]

Finding 10: Swiss Rescue has not saved lives since 2001. As there is no data on outcomes the review cannot assess to what extent suffering has been alleviated.

3.6 Swiss Rescue - Capacity Building

The SDC/HA unit for Disaster Preparedness and USAR Capacity Building (PUC) deals with rapid-onset natural disasters, specifically with the management of disaster risks emanating from sudden earthquakes in urban areas. PUC aims at minimizing the effects of disasters by improving capacities at various levels (international, regional, national and local). Europe, Asia and the Americas are predicted to remain the most relevant for Capacity

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[66] Source; Geschichte der Rettungskette Schweiz, pdf supplied by SHA (2019).
[67] A summary of Swiss Rescue deployments is presented in section 3.5, a full list is available in Annex 7.
[68] See details concerning "transferable skills" members in section3.3.
[69] https://www.swissinfo.ch/eng/rehabilitation_swiss-engineers-to-assist-mexico-s-post-quake-efforts/43536868.
[70] See for example ACAPS (2015); Barbelet, V. (2019); ECHO (2017); HAG and Pujiono Centre (2019).

building support in the future work of PUC.[71] Specific groups targeted for capacity building activities included National Disaster Management Agencies, NGOs, Civil Defence Authorities, Police authorities, Municipalities, etc.

Data available for USAR capacity building support since 2001 shows a mix of short-, medium- and long-term support. However, the average time period for Swiss Rescue support programmes provided is around four years, illustrating that this is commonly a long term commitment focused on DRR, not a humanitarian intervention. The support is based on established processes, procedures, experience and know-how. It includes soft- and hard-ware support and is seen to add value to the recipient countries. Interviewees note very high levels of appreciation and motivation among targeted participants, especially among professional responders with a technical focus. However, the review team notes that there is no data compiled on outcomes or impact, which indicates a systemic gap in terms of follow-up and monitoring.

Maintaining a Heavy USAR capacity is seen by some as crucial to capacity building credibility. However, much of capacity building is institution building in a more general sense thus lessening the importance of USAR capacity for credibility.

While PUC organises and funds the various activities, they are not always implemented by Swiss staff. Partly this is a question of cost, partly an ambition to provide experts with good contextual knowledge. One interviewee based in Latin America reported having balked at the proposed proportion of the budget allocated to recruiting a Swiss expert and being pleasantly surprised that a regionally recruited replacement was accepted, thus freeing up financial resources for other purposes within the programme.

The reports that are available on capacity building initiatives supported by interviews with implementing staff and representatives of partner institutions suggest the following characteristics of Swiss USAR capacity building as currently operationalised:

- support is generally long term (average four years);
- contents are based on international standards;
- it is based on an established method and approach to capacity building;
- programme support includes the planning and designing of a training base for practical exercises;
- Swiss Rescue's role includes to bring "know-how", funding and networking with regional and global INSARAG structures;
- the support is resource intensive;
- the support is intended to include learning from the host countries, but this aspect is not always successful;
- network-building with partners is seen as useful for future interventions.

SDC has to date invested approximately 23 million CHF supporting countries and partners globally in strengthening the disaster response capacities of host governments, NGOs and civil societies. The funds have been invested as follows:

Type of Support	Benefitting Countries	Cost in CHF
International USAR Team / INSARAG IEC	China, Jordan, Morocco, India (partly)	6,179,000
Mentorship for IEC/IER	Jordan and Russia	27,000

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[71] This section is based on interviews with SDC/HA staff, and stakeholders involved with Swiss Rescue in capacity building at regional and national levels, complemented by an operational concept paper on Swiss USAR Capacity Building (2017 – 2020) Shared with the team by SDC/HA (Weiterbildungskonzept_SKH.pdf and 181031_PUC_Op_Concept_Overview_ANNEX_1_update01_TSI.xlsx) The document details strategic priorities and outlook of capacity building.

Local and national USAR capacities	Turkey, Peru, Pakistan, Tajikistan, Georgia, Armenia, India, Mongolia	4,897,000
First (Neighbourhood) Responders	Turkey, Armenia, Iran, Morocco	11,834,000
Consultancy-Coaching	Armenia, Central America	211,000
Simulation Exercise	Mongolia, Turkey, Indonesia, Brunei, Switzerland	810,000

Table four: Cost to date of capacity building support given. Figures above do not correspond with a multiple of average annual cost in Table two as that is based on fewer years. Source: Data provided by the Disaster Preparedness and USAR Capacity Building Unit (PUC)

Interviewees (Swiss, INSARAG and regional based) emphasised that if sustainability is to be achieved, ownership on the part of host governments has to increase, noting that commitment gaps make maintaining preparedness and quality standards a challenge. Experience of running activities for responders and responsible political leaders jointly or in parallel is reported to have improved commitment in some from Latin/Central American partner countries.
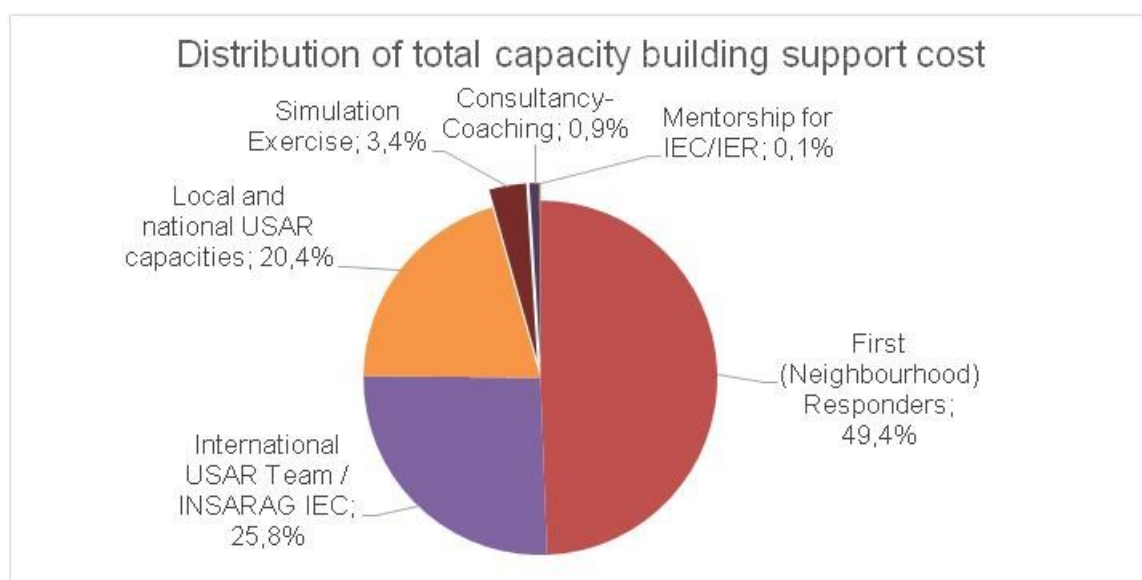

Figure two: Target level/type of PUC capacity building investments since 2001. The breakdown does not include structural costs such as SDC/HA staff salaries, etc. Source: Based on documentation provided by SDC/HA.

The type of capacity building support provided includes the areas of management, search, rescue, medical, logistic support, equipment, consultancy/coaching, establishing a training base, crisis management and accompanying INSARAG classification processes, including simulation exercises.

INSARAG guidelines, and a consensus among the interviewees, emphasize that timeliness is key to relevance when USAR is the instrument of intervention. Many countries have opted for community based preparedness approaches, examples cited by interviewees range from Tajikistan to Central America and Asia. These countries seek to improve the levels of training of their communities in the face of multiple risks, including seeking to ensure a rapid response for victims who are not trapped after an earthquake. Communities are trained to

identify and communicate needs of specialized teams and more complex rescue operations.[72]

The support given by PUC targets the following levels: First Responders, Local, National/Regional, International (See Figure two). It is widely recognised that the community and local authorities are crucial to first response.[73] As Figure two shows almost half the cost is dedicated to capacity building of community-based response systems targeting first responders. 20% of the cost is local and national level USAR capacity building while most of the rest is spent on INSARAG and USAR team activities, including classification processes.

When asked about spin-off effects of the capacity building activities, respondents at regional level mentioned:

- improved understanding of DRR concepts among politicians;

- improved inter-agency understanding and coordination among national and local emergency responders;

- some evidence of improved understanding of the value of standardisation for quality assurance and response coordination in other kinds of emergencies (floods, fires).

An aspect of contextual adaptation repeatedly mentioned was that many countries do not have or do not choose to prioritise the resources needed to go through the INSARAG classification process to its logical end; an international classification. When discussing capacity building interviewees involved in classification processes highlighted host governments preference for national classification processes built on similar principles. In several cases the classification process itself was seen to produce spin-off effects on national rescue/emergency response capacity.

Finding 11: The mix of capacity building support given by Swiss rescue is commonly long-term, adapted to context and over half is focussed on local level capacities.

Finding 12: USAR capacity building has contributed to establishing other USAR teams.

3.7 Swiss Rescue - multilateral engagement with INSARAG

INSARAG was created in 1991 on the initiative of international USAR teams with experience in the Mexican earthquake of 1985 and Armenian earthquake of 1988.[74] Its activities were formally mandated in 2002 through the UN General Assembly Resolution 57/150 "Strengthening the Effectiveness and Coordination of International Urban Search and Rescue Assistance". Its mandate was elaborated and reaffirmed in the INSARAG Hyogo Declaration in 2010 and the INSARAG Abu Dhabi Declaration 2015.

INSARAG is mandated to:

- Render emergency preparedness and response activities more effective and thereby save more lives, reduce suffering and minimize adverse consequences.
- Improve efficiency in cooperation among international USAR teams working in collapsed structures at a disaster site.
- Promote activities designed to improve search-and-rescue preparedness in disaster-prone countries, thereby prioritizing developing countries.

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[72] This has also clearly influenced Swiss capacity building support programmes which are much more contextually adapted than the USAR instrument itself.
[73] See for example the UNDAC mission reports cited in section 3.1.
[74] Section based on interviews SDC/HA and INSARAG staff complemented with the organisation's website http://www.insarag.org/

- Develop internationally accepted procedures and systems for sustained cooperation between national USAR teams operating on the international scene.
- Develop USAR procedures, guidelines and best practices, and strengthen cooperation between interested organisations during the emergency relief phase.

INSARAG is directed by a Steering Group, with a Secretariat within UNOCHA in Geneva. The Secretariat organises INSARAG meetings, workshops, the INSARAG External Classification (IEC) process and training events in cooperation with host countries. Three Regional Groups are established; the Africa/Europe/Middle East Region, the Americas Region and the Asia/Pacific Region. Task specific Ad-hoc Working Groups complement the permanent structure and contribute technical expertise. The INSARAG Secretariat also convenes the annual USAR Team Leaders' Meeting, a forum for dissemination of lessons learned and joint development of response methodology.

INSARAG is responsible for the IEC system of classifying teams and also coordinates members capacity building and quality assurance for such preparedness. Over time this system has addressed international classification needs, standardising response capacities into light, medium and heavy USAR teams. The classification process is based on agreed standards[75] and is based on peer quality assurance. Once classified, each USAR capacity/team needs to undergo reclassification at regular intervals. INSARAG has a well-developed set of guidelines to address technical and organisational issues but does not address overall international response strategy or alternative resource use.[76]

INSARAG also supports member states' capacity building efforts. INSARAG activities focus on building national and regional USAR capacities by providing USAR team leaders with annual opportunities to exchange experience, by coordinating joint exercises (often regional) and by participating in the matching of experienced members with emerging capacities they are willing to "mentor" through the classification process. INSARAG engagement clearly requires a classified USAR capacity. The capacity building emphasis has been successful as evidenced by the 54[77] currently IEC classified USAR teams. In addition there are a number of USAR capacities that are have achieved National classification with technical support from peers in INSARAG member states, as well as multiple examples of improved capacity of local communities, always the first responders in sudden onset disasters.

The group contributed to the establishment of UNDRO (predecessor to OCHA) and was instrumental in the formation of the United Nations Disaster Assessment and Coordination (UNDAC) system, crucial for today's coordination in sudden-onset disaster responses. It also developed protocols and tools for information sharing and coordination such as Virtual On-Site Operations Coordination Centre (V-OSOCC system).

The focus of the 2017-2020 strategy has been on two goals. The first goal is continued national capacity building. To achieve the first, the strategy supports using bilateral intra-regional support mechanisms and strengthening community capacities to respond. As evidenced by INSARAG's history (but also by developments in many organisations responding internationally such as the IFRC) the humanitarian sector is seeing increasing regionalisation of institutions and responses as well as an increased capacity in some (not all!) vulnerable states. This process is highlighted by multiple key informants from both global (INSARAG) regional institutions themselves (AHA, CDEMA)[78] and national level (see for example the Indonesia case study in Annex 6).

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[75] https://www.insarag.org/12-en/methodology/13-insarag-guidelines
[76] https://www.insarag.org/methodology/guidelines
[77] Different sources say that there are 54, 56 or 57 IEC classified USAR teams.

[78] AHA: The ASEAN Coordinating Centre for Humanitarian Assistance on Disaster Management
CDEMA: The Caribbean Disaster Emergency Management Agency.

The second is improved international coordination framed as an evolutionary approach to improving the USAR response system based on lessons learned. The "Beyond the rubble" initiative, encouraging attention to needs after the immediate rescue phase, is highlighted as are prevention oriented activities (DRR) and improved collaboration with major responders such as WHO and the IFRC.

In 2016 the INSARAG Steering group endorsed "Beyond the Rubble".[79] The two page concept document emphasises that *"Beyond the Rubble" activities are voluntary and must be within the existing capabilities and capacities of the deployed USAR team* [italics added]. Furthermore *"Beyond the Rubble" must not determine in any case the structure of an USAR team, nor create duplication with already existing capabilities and must not be a part of the IEC/R process.* An IEC classified USAR instrument is standardised and its members are recruited for their specific technical skills. As "Beyond the Rubble" excludes adapting the USAR structure or its capabilities, the likelihood that it will be able to contribute significantly to addressing the emerging challenges of coherent and contextualised urban humanitarian response is low.

Interviewees, both at INSARAG, SDC/HA and at regional level in Asia and Latin America , emphasise that the traditional USAR concept needs to become much more flexible and agile. Without a significantly greater capacity to adapt and contextualise "the instrument will become completely irrelevant". Interviewees suggest there is a need for increased regionalisation, standardisation of USAR team sub-components (logistics, medical, coordination etc.) to allow modular deployment as well as a greater emphasis on DRR and improved interaction with partner states development priorities (for example by strengthening emergency services response capacity to all kinds of disaster events). Some of SDC/HA capacity building support is recognised as aligned with this agenda.

Switzerland, currently represented by the Head of SDC/HA and SHA, holds the global chair of INSARAG since its inception. As one of the founding members and in consequence of its long term commitment, Switzerland is credited with having had significant influence over the development of INSARAG. Meanwhile, three interviewees with disparate roles in the system, voiced the opinion that other stakeholders are ready to step forward and take a leadership role, should Switzerland feel that it is time to step down.

The classification system is repeatedly mentioned by respondents as important for quality assurance and international response coordination. Others have the opinion that the standardisation has gone too far and now limits the usefulness of the instrument by standing in the way of flexibility and contextualisation. The practice of sending partial teams or choosing not to classify your intervention instrument is common, as described in section 3.1.

Some interviewees state that the classification process/methodology has also positively influenced other specialised UN agencies - giving the example of World Health Organisation's "Minimum standards for Emergency Medical Teams" - a quality assurance system which is said to be inspired by INSARAG.[80]

Finding 13: Swiss Rescue has, as founding member and global chair, had a profound influence over INSARAG. This support has significantly contributed to the establishment of an institution that has successfully hosted the development of an internationally accepted classification system and the protocols and structures needed to implement responses based on that standardisation process. The institution contributed to the creation of OCHA's

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[79] OCHA (2016).
[80] The review team has not contacted WHO for confirmation. Never-the-less, this potential spin-off effect receives some triangulation support from the fact that both INSARAG and SDC are (among others) thanked for " support, assistance and technical advice" to the process of developing the classification system in Norton I, Von Schreeb J, Aitken P, Herard P, Lajolo C. (2013)

predecessor and was instrumental in the development of UNDAC and coordination tools such as V-OSOCC.

Finding 14: Stakeholders are divided regarding the degree to which standardisation, in the interest of improved coordination and quality assurance, should be applied to response activities. The classification system and the protocols and structures for intervention, although successfully developed, are commonly bypassed.

3.8   Swiss Rescue - domestic partners

As mentioned in section 1.4 Swiss Rescue is a cooperative system drawing on the capacities of various domestic partners to maintain the preparedness necessary to deploy the full heavy USAR capacity. The partners' involvement with Swiss Rescue when there is no deployment varies greatly. In consequence, likely effects of any reconfiguration of the instrument also differ. Below we summarise likely impact by partner, based on the interviews conducted:

The Rescue Corps of the Swiss army clearly state that there will be little impact of consequence. The Corps will maintain the same levels of preparedness and training for domestic preparedness purposes.

The Swiss Search and Rescue Dog Association (REDOG), has already concluded that they are unlikely to be deployed with Swiss Rescue and are establishing alternative international relationships, for example with an NGO in Turkey. They note that the productive life of a trained SAR dog is only a few years and without deployments trainer motivation rapidly sinks. Using the dogs for other emergency types (locating bodies after floods/mudslides for example) would require different training programmes and such capacity would take years to develop.

The Swiss Seismological Service would not be affected by a reconfiguration of Swiss Rescue. Should the instrument de discontinued they would regret no longer having the hope of one day being invited to accompany a deployment to document the event for research purposes.

The Swiss Red Cross would not be affected by a reconfiguration. It would expect continued close collaboration with SDC-HA in other endeavours that it prioritises higher as they reach more affected people, at lower cost.

Zurich airport has a good relationship with SDC-HA logistics, with recently revised protocols for collaboration, but notes that their involvement in recent years amounts to a few meetings to revise those protocols.

The review team did not interview Swiss air-ambulance (REGA) nor Swiss International Air Lines.

Finding 15: None of Swiss Rescue's domestic partners would be significantly impacted by a reconfiguration of the instrument, or even by its being phased out completely.

3.9   Swiss Rescue - other USAR capacity, Sweden's choice[81]

Sweden first participated in an international USAR operation in Armenia in 1988, with a team from the Swedish Rescue Services Agency. Over the years that followed Sweden invested in building USAR capacity, including dedicated national material preparedness. In 2008, the instrument was INSARAG classified as a heavy USAR team. In 2009, the Swedish

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[81] The TOR foresaw two examples of other states choices regarding USAR. This has not been possible within the time allocated.

Rescue Services Agency was merged with three other government agencies to form the Swedish Civil Contingencies Agency (MSB) and the new entity was tasked with maintaining the USAR preparedness.[82]

Following deployments made in Nepal, in 2015, re-establishing the previous Swedish INSARAG classified Heavy USAR capacity was regarded as too expensive and MSB commissioned an internal evaluation of its USAR capacity seeking a cheaper alternative.

The evaluation[83] contrasted restoring the heavy USAR capacity with two alternative new designs, based on domestic needs. If possible, the instrument was to be "generic" i.e. effective in response to multiple disaster types and founded on existing domestic rescue components rather than USAR specific techniques and materials.[84]

In 2016, Sweden decided to develop such a national capacity for search and rescue in collapsed buildings. A total staff of 100 (based in three municipal emergency services) with 3 material sets, an establishment cost of CHF 1,5 million and an estimated annual budget of approximately CHF 0,3 million was foreseen.

In consequence Sweden has withdrawn from its membership in INSARAG and can no longer affect international USAR responses, while MSB may contribute with other types of interventions. It is recognised that this might in the long term create difficulties for international cooperation in the event of a national request for USAR assistance.

MSB's international capacity building support has been reoriented towards DRR in general rather than being USAR specific. For further details, see Annex 11.

Finding 16: Sweden found that the value added of maintaining an IEC Heavy USAR instrument did not justify the cost. A national resource was established for domestic preparedness. Sweden has therefore left INSARAG but continues to respond to emergencies with expert groups and also continues to support DRR capacity building.

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[82] Bäckström, C-J; Christoffersson, (2006).

[83] Hamrén, A-K (2016).

[84] The analysis of domestic risks to be addressed focused on land/mudslides, terrorist attacks, dam failures and large scale transportation related accidents, for example tunnel accidents. Hamrén, A-K (2016) pp 16-18.

4 Conclusions

The TOR tasked the review included a series of evaluation questions. The conclusions section below first presents conclusions regarding these questions, then presents the overall conclusions responding to the main objective of the review (see section 1.1.).

Conclusions regarding relevance are base on the OECD-DAC (2019) definition of relevance which is: "The extent to which the intervention objectives and design respond to beneficiaries',[85] global, country, and partner/institution needs, policies, and priorities, and continue to do so if circumstances change".

4.1 Conclusions as framed by the evaluation questions

To what extent is Swiss Rescue relevant and appropriate to save lives and alleviate suffering after earthquakes in urban areas abroad?

The contextual changes described in section 1.1 imply that, in order to be effective in urban areas, humanitarian intervention instruments need to be agile and flexible, well contextualised and able to address vulnerability through an understanding of, and ability to address, underlying root causes. The inflexibility of the Heavy USAR instrument and the fact that it targets the needs of a very small proportion of affected people severely limits its relevance. Swiss Rescue heavy USAR deployments have in fact saved very few lives (section 3.5). This is true of international USAR deployments in general as shown in section 3.1.

The review concludes that the Swiss Rescue Heavy USAR instrument is not relevant or appropriate to save lives and alleviate suffering in urban areas abroad,

What are the preconditions necessary for Swiss Rescue to be relevant and appropriate?

Based on the information presented above, primarily in section 1.2, 1.3 and 3.1, the review team identifies the following preconditions for Swiss Rescue to be relevant and appropriate:

- instrument objective and design should **respond to needs**;
- instrument objective and design should **be in line with** Swiss, international humanitarian and host government **policies**;
- instrument objective and design should **address priorities** and
- instrument objective and design should **adapt to change**.

There is a high likelihood that the number of earthquakes will continue at a similar level as in the recent history and urbanisation is accelerating. Thus, there is a likely need for USAR activities. However, the evidence indicates that international deployments of USAR teams do not save lives and that SAR needs are low priority as many more people are affected in other ways. Global, country and partner institutions confront much greater needs among those affected in other ways than being trapped. The USAR instrument is in line with Swiss and international humanitarian policy but not with an increasing number of host governments. The standardised nature of the instrument makes it inflexible and slow to change.

The review concludes that the Heavy USAR instrument does not fulfil the preconditions for relevance and appropriateness identified.

What is the added value of Swiss Rescue when looking at the global developments

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[85] Beneficiaries is defined as, "the individuals, groups, or organisations, whether targeted or not, that benefit directly or indirectly, from the development intervention." Other terms, such as rights holders or affected people, may also be used. OECD-DAC (2019).

regarding USAR (type of disasters, other actors etc)?

Section 3.1 illustrates that international USAR deployments are not effective in saving lives and are likely of little use for alleviating suffering. In consequence, the operational utility of a heavy USAR instrument without contextualisation is questioned at national, regional and multilateral levels. In multiple cases this has led to restrictions on access. Interviews with regional institutions and host governments indicate that Swiss rescue heavy USAR capacity, as currently conceptualised, is unlikely to be deployed. It is relatively unknown, lacks contextualisation and does not bring the, sometimes substantial, political gains of prioritising existing long term partners or regional powers.

The review concludes the Swiss Rescue Heavy USAR instrument does not bring added value.

What would be options to maintain/increase the relevance and appropriateness of Swiss Rescue in future?

Contextual changes as described in section 1.2, Swiss humanitarian policy development (section 1.3) and uneven regional and host government capacity development (section 3.6) speak in favour of modularisation, prioritising dual capacities while investing in developing SHA members' core capacities (section 3.3). Such adaptations, linked with systematic pre-disaster relationship building (Indonesia Case study, Annex 6), would permit Swiss Rescue to offer host governments and regional emergency response structures with flexible, more contextually adaptive and better known capacities. If combined with continued investments in experience sharing and systematic documentation of results in terms of outcomes, this would likely lead to more deployment, enhanced learning and greater relevance.

To what extent is Swiss Rescue relevant and appropriate to support Switzerland's engagement in USAR capacity building?

The evidence indicates that the Swiss Rescue capacity building activities address needs that are locally and nationally prioritised and in line with stakeholders policies. These activities have shown themselves to be contextualised and adaptive to changing circumstances. The Swiss Rescue experience from deployments and exercises is especially relevant if the goal is INSARAG classification.

The review concludes that the capacity building activities of Swiss Rescue fulfil the preconditions for relevance and appropriateness.

To what extent is Swiss Rescue relevant and appropriate to support Switzerland's engagement on multilateral level (INSARAG)?

Swiss rescue was one of the main stakeholders contributing to the establishment of INSARAG. Swiss support for the institution has been sustained and influential. INSARAG is now an established institution hosted by UNOCHA that has succeeded in establishing global standardisation and quality assurance for USAR interventions. The INSARAG structure has allowed a regionalisation and contextualisation of USAR training, networking and ultimately responses (see section 3.7 and the Indonesia case study, Annex 6). The success is a crucial factor in the growing irrelevance of Swiss Rescue's heavy USAR capacity.

INSARAG exists in response to identified needs for improved capacity and coordination in its specialised field. It is instrumental in shaping policies and is prioritised by a number of current and aspiring member states. The increasing preference for national classification and regional structures, combined with the institution's gradual evolution in reaction to such demands, indicates an ability to adapt to change (whether fast enough remains to be seen).

The review concludes that Swiss Rescue's multilateral activities have been very successful over time and have fulfilled the preconditions for relevance and appropriateness. Meanwhile, in part thanks to Swiss support, the institution's membership has sufficient capacity to ensure its continued development should Swiss support be gradually withdrawn.

In how far is Swiss Rescue politically relevant on national and international level ?

The data indicates that the request for international USAR teams has decreased over time (section 1.4, 3.1, 3.5 and Annex 6). The decrease is interpreted as a consequence of national and local governments' preference for local and national agencies rather than foreign assistance. The Swedish decision to discontinue its Heavy USAR instrument was influenced by such changes (although the timing was strongly influenced by cost, section 3.9 and Annex 11). Some of the reports highlight compliancy issues from international USAR teams and describe this as an increasingly political issue.

To what extent is it possible to use Swiss Rescue capacities (search, rescue, medical, management and logistics) in other disasters than earthquakes?

Search capacity with dogs for other disaster types would take years to develop (section 3.8). Current rescuers are highly specialised, but lack sufficient language skills and core humanitarian competencies (section 3.3). Medical, management and logistics members of SHA are often qualified for broader use. This would be enhanced with investments in core humanitarian competencies.

The review team concludes that selected SHA member categories could, especially with some additional training, be useful in response to multiple disaster events.

How could Swiss Rescue capacities support other rapid response instruments such as the multi-sectoral Rapid Response Teams?

Same as previous.

To what extent a reconfiguration of Swiss rescue could affect our relations with other governmental entities, business community, academia and NGOs?

The review concludes that consequences of a reconfiguration on relations with Swiss Rescue domestic partners would be very limited. (See section 3.8).

Are the results achieved (directly and indirectly / operationally and politically) justifying the costs of the instruments?

The review concludes that the direct results achieved by the Heavy USAR instrument when deployed in no way justify the costs of the instrument. Indirect results are not documented or nonexistent.

The review concludes that the support for capacity building is appreciated. It is likely to have significant spin-off effects on selected national and regional capacities. Maintaining the USAR classification is likely to be a precondition for supporting partners with USAR specific capacity building. The review also concludes that more general DRR capacity building support would better address humanitarian needs (reach more affected people) yet would have similar effects on building the pre-disaster relationships necessary for humanitarian access of other response instruments. The review notes that capacity building effectiveness is likely to increase if supported by a long-term strategy accompanied by systematic follow-up and documentation of results.

The review concludes that maintaining the USAR instrument is a precondition for INSARAG membership. Such membership is necessary to be able to politically and operationally influence that specific mechanism in support of multilateral cooperation.

Would there be more cost-effective options/instruments/modular solutions?

AS shown by international responses to high impact earthquakes (section 3.1) and Swiss Rescue's own deployments of experts plucked from the USAR structure (structural engineers, search capacity, section 3.5), this is feasible and welcomed by host governments.

4.2 Overall conclusions

The relevance and added-value of Swiss Rescue's contribution to the core mandate of SDC/HA

The review team concludes that maintaining the Swiss Rescue classified heavy USAR capacity has not contributed significantly to the core mandate of SDC/HA in the past two decades. The review team further concludes that this capacity is unlikely to save lives or reduce suffering in the future. It is thus not relevant and does not add value.

The review team concludes that the cost of maintaining the Swiss Rescue heavy USAR instrument is in no way proportionate to the number of lives saved.

The review concludes that specialised modules in the form of smaller teams of specialists such as coordination specialist, structural engineers or search teams have been successfully deployed in other interventions. While they have not saved lives directly they have improved response coordination, lowered risk for affected populations and contributed to alleviating suffering by allowing families to recover the remains of lost relatives. Such deployments have been relevant and have added value in relation to the core mandate.

The relevance and added-value of Swiss Rescue's contribution to Switzerland's engagement in USAR capacity building

The review team concludes that Swiss Rescue's contribution to USAR capacity building is relevant and does add value by improving international (especially regional) response coordination and by strengthening emergency management structures in host countries.

The review team concludes that the Swiss Rescue experience from deployments and exercises is especially relevant for support to INSARAG classification. Swiss investments in USAR capacity building have contributed to the massive increase in global USAR capacity that has taken place.

The review team concludes that given the current absence of documentation regarding outcomes this conclusion needs to be triangulated through the introduction of outcome focused, systematic, follow-up of capacity building programming.

The relevance and added-value of Swiss Rescue's contribution to Switzerland's multilateral engagement at INSARAG.

The review concludes that over time Switzerland's commitment to the USAR instrument has been instrumental in its conceptualisation, its global acceptance and its institutionalisation through INSARAG.

The review concludes that the establishment of INSARAG has been instrumental in establishing a multilateral Humanitarian instrument classification system. This has provided a platform for the standardisation and improved response coordination that has emerged in its niche. It has also contributed to the establishment of better contextualised regional responses through the exchange of experience, joint trainings and networking.

The review also notes that Swiss engagement in INSARAG has been long and successful. In consequence, there are other stakeholders willing and able to take the lead, should SDC/HA choose to phase out (refer section 3.7).

5   Recommendations

5.1   SDC/HA should no longer maintain a classified USAR capacity. In consequence the reclassification of Swiss Rescue, "INSIEME", planned for 2020, now postponed until Nov 2021, should be cancelled.

5.2   SDC/HA should, given the role that USAR deployments have played historically, invest in informing the public and political stakeholders about why USAR is being phased out in favour of other effective, needs-based, humanitarian response.

5.3   SDC/HA should use the resources freed up by ceasing to maintain a heavy USAR capacity to systematically build more flexibility and adaptiveness into its response capacities. An orderly adaptation of SDC/HA strategies, external relationships, capacities and staffing pattern should be undertaken. The ToR mention that a separate evaluation of the other rapid response instruments is underway. This should, if feasible, suggest alternative use of such resources.

5.5   SDC/HA should systematically invest in developing pre-disaster relationships with regional and national emergency response mechanisms, in order to improve the likelihood that SHA rapid response instruments actually do get deployed.

5.6   SDC/HA should maintain and expand its investment in capacity building of partner country emergency management authorities with a focus on DRR and disaster response management rather than USAR. Prior to the expansion a multiyear strategy - building on host country needs and Swiss comparative advantage - should be developed. This work should be done close collaboration with other SDC departments and the embassies of the Confederation abroad.

5.7   Without a classified USAR capacity Switzerland can no longer be actively involved in the development of INSARAG and should, in consequence step down from the role of global chair and phase out its support for the institution over an agreed time period allowing for an orderly exit.