An Evaluation of Switzerland becoming a Participating State of the European Union Civil Protection Mechanism

Report

Author(s):
Eriksen, Christine (iD); Hauri, Andrin (iD); Thiel, Jan (iD); Scharte, Benjamin (iD)

RISK AND RESILIENCE REPORT

An Evaluation of Switzerland becoming a Participating State of the European Union Civil Protection Mechanism

CSS
ETH Zürich

ETH zürich

Contents

Glossary

ANCPA	Albanian National Civil Protection Agency
BBK	German Federal Office of Civil Protection and Disaster Assistance / *Deutsches Bundesamt für Bevölkerungsschutz und Katastrophenhilfe*
BSTB	Federal Civil Protection Crisis Management Board / *Bundesstab Bevölkerungsschutz*
CBRN	Chemical, Biological, Radiological, and Nuclear
CECIS	Common Emergency Communication and Information System
CMC	Crisis Management Center / *Krisenmanagement-Zentrum,* KMZ
CSS	Center for Security Studies at ETH Zürich
CTE	Coordination of Transport in the Event of Disasters and Emergencies / *Koordination des Verkehrswesens im Hinblick auf Ereignisfälle,* KOVE
DAC	Development Assistance Committee of the OECD
DACC	Damage Assessment Coordination Cell
DDPS	Swiss Federal Department of Defence, Civil Protection, and Sport / *Eidgenössisches Departement für Verteidigung, Bevölkerungsschutz, und Sport,* VBS
DG ECHO	Directorate-General for European Civil Protection and Humanitarian Aid Operations
EC	European Commission
ECPP / the Pool	European Civil Protection Pool
EEA	European Economic Area
EEAS	European External Action Service
EEVBS	DDPS Emergency Response Teams / *Einsatzequipen VBS*

EMC	European Medical Corps
EMT	Emergency Medical Team
ENP	European Neighborhood Policy
ERCC / the Center	Emergency Response Coordination Centre
ESI	Emergency Support Instrument
EUCPT	European Union Civil Protection Coordination Team
FDFA	Swiss Federal Department of Foreign Affairs / *Eidgenössisches Departement für auswärtige Angelegenheiten,* EDA
FOCP	Swiss Federal Office for Civil Protection / *Bundesamt für Bevölkerungsschutz,* BABS
GDP	Gross Domestic Product
GNI	Gross National Income
IAEA	International Atomic Energy Agency
ICRC	International Committee of the Red Cross
IFRC	International Federation of Red Cross and Red Crescent Societies
INSARAG	International Search and Rescue Advisory Group
LTDB	Federal Air Transport Service / *Lufttransportdienst des Bundes*
MUSAR	Medium Urban Search and Rescue
NBC	Nuclear, Biological, Chemical
NEOC	National Emergency Operations Centre / *Nationale Alarmzentrale,* NAZ
NextGenEU	Next Generation EU
NOCC	National Operation and Coordination Center / *Nationales Operations- und Koordinationszentrum*
OCHA	United Nations Office for the Coordination of Humanitarian Affairs
ODA	Official Development Assistance

OECD	Organization for Economic Co-operation and Development
OSOCC	(Virtual) On-Site Operations Coordination Center
PPE	Personal Protective Equipment
rescEU	A strategic reserve of emergency response assets purchased directly by the EU, which can support UCPM Member and Participating States in overwhelming crisis situations
ResMaB	Resources Management at Federal Level / *Ressourcenmanagement Bund*
RRT	Rapid Response Team
SAR	Search and Rescue
SDC	Swiss Agency for Development and Cooperation / *Direktion für Entwicklung und Zusammenarbeit,* DEZA
SDC HA	Department of Humanitarian Aid within SDC
SECO	Swiss State Secretariat for Economic Affairs / *Staatssekretariat für Wirtschaft,* SECO
SHA	Swiss Humanitarian Aid Unit / *Schweizerisches Korps für Humanitäre Hilfe,* SKH
SRC	Swiss Red Cross
UCPM / the Mechanism	Union Civil Protection Mechanism
UNDAC	United Nations Disaster Assessment and Coordination
UNEP	United Nations Environment Program
UNICEF	United Nations International Children's Emergency Fund
USAR	Urban Search and Rescue
WASH	Water, Sanitation, and Hygiene
WFP	World Food Program
WHO	World Health Organization

Executive Summary

Context

Disasters know no political and geographical borders. Extreme events – be they natural, social, or technological, often have transboundary effects and may overwhelm national response capacities. International assistance can therefore play a crucial role in saving lives, livelihoods, and assets in disasters. Tapping into transnational expertise and lessons learnt can also be key to improving national preparedness and resilience levels in the face of current and emerging hazards. In 2001, the EU created the Union Civil Protection Mechanism (UCPM) as part of the Directorate-General for European Civil Protection and Humanitarian Aid Operations (DG ECHO), with the aim of strengthening cross-border collaboration in disaster preparedness, risk assessment, and emergency response in Europe and beyond. Participation in the Mechanism is also possible for non-EU countries, who pay an annual fee in return for full access to its services. To date, six countries have become Participating States of the UCPM (Iceland, Montenegro, North Macedonia, Norway, Serbia, and Turkey).

Objective

This report provides an independent evaluation of the benefits, costs, opportunities, and risks for Switzerland in becoming a Participating State of the UCPM. Situated geographically in the heart of Europe, hazards, such as earthquakes, floods, wildfires, nuclear accidents, and pandemics, will affect Switzerland alongside other European countries. Emerging hazards related to, for example, climate change and socio-technical transformations, pose a growing challenge to all European countries. Swiss citizens living and travelling abroad, like fellow European citizens, are increasingly exposed to extreme weather events, biological hazards, and political instability worldwide. With this in mind, the Swiss Federal Office for Civil Protection (FOCP) commissioned the Risk & Resilience Team of the Center for Security Studies at ETH Zürich in 2020 to assess the advantages and disadvantages of Switzerland becoming a Participating State of the UCPM. The study was implemented in consultation with the Swiss Federal Department of Foreign Affairs (FDFA), the Swiss Agency for Development and Cooperation (SDC), and cantonal authorities in civil protection. Whereas cantonal and federal authorities in civil protection respond to disasters and emergencies nationally, the FDFA and SDC coordinate federal responses to disasters and emergencies abroad. Swiss participation in the UCPM could therefore have consequences for all services. The aim of this report is to provide a scientific evidence-base that can inform strategic decision-making on avenues for future collaboration between Switzerland and the UCPM. The report does not give a final recommendation on whether or not Switzerland should participate in the Mechanism.

Method

The empirical research underpinning this report was conducted in three phases between July 2020 and March 2021, using mixed methods, and involving participants at multiple government levels. First, surveys with cantonal and federal stakeholders on the operational and administrative levels in Switzerland examined the immediate costs and benefits, as well as the longer-term opportunities and risks of participating in the UCPM. Second, interviews conducted with administrative staff of other Member and Participating States (Germany and Norway) and with representatives of DG ECHO and the Mission of Switzerland to the EU identified potential promises and pitfalls. Third, surveys conducted with operational personnel from Switzerland and DG ECHO identified the strengths and weaknesses of existing collaborations between Switzerland and the Mechanism in three recent case studies: 1) the earthquake in Albania in 2019, 2) COVID-19 repatriations in 2020, and 3) the explosion in Beirut, Lebanon in 2020. These insights support situational assessments and highlight potential synergies for stronger future collaborations between Switzerland and the UCPM. A systematic review of published literature was used to triangulate findings from the empirical data. The research team is grateful for the generous time and support of all the research participants in this study.

Results

The report identifies many immediate benefits and long-term opportunities for Switzerland in becoming a Participating State. A closer collaboration with the UCPM could significantly increase the capacity of Swiss cantonal and federal authorities in civil protection to prepare for and respond to current and future hazards. If a major disaster impacts Switzerland, participation would provide cantonal and federal authorities with access to the pooled and certified response capacities of the current 27 Member States and 6 Participating States, as well as the rescEU strategic reserve. Tapping into the UCPM's transnational expertise, communication and data gathering systems, training program, and knowledge networks, could furthermore increase Switzerland's national capacity to prepare for and adapt to evolving and emerging hazards. Participation in the UCPM could also foster the collaboration of civil protection agencies at cantonal and federal levels, while providing Swiss personnel with more opportunities to gain operational experience with a smaller price tag. Switzerland's response to disasters and emergencies internationally could benefit from the UCPM's financial and

logistical support, including the coordinating services and satellite surveillance capacities of its Emergency Response Coordination Centre (ERCC). Closer collaboration between Switzerland and the Mechanism may therefore increase the efficiency and flexibility of Swiss Humanitarian Aid. While maintaining full sovereign control over national response assets, becoming a Participating State would lower operational costs through partial reimbursement from the Mechanism when resources are deployed. These advantages have to be weighted up against the substantial annual participation fee and potential challenges. The latter includes Participating States' lack of formal decision-making power. This limits their influence over future strategic developments of the Mechanism, such as its remit and financial envelope. Such changes could raise the cost of participation without Participating States benefiting proportionally from additional services. Weighing up these factors is an important strategic decision, as it will influence Switzerland's operational capacity to protect lives, livelihoods, and assets at home and abroad at present and in decades to come.

Kurzfassung

Kontext

Katastrophen kennen keine politischen oder geographischen Grenzen. Extremereignisse – ob natürlicher, sozialer oder technischer Natur – haben meist grenzüberschreitende Auswirkungen und können nationale Reaktionskapazitäten überfordern. Internationale Hilfe kann deshalb im Fall einer Katastrophe eine entscheidende Rolle bei der Rettung von Leben, Lebensgrundlagen und Vermögenswerten spielen. Die Nutzung von länderübergreifendem Fachwissen und Erfahrungswerten bietet sich als Schlüssel zur Verbesserung der nationalen Resilienz gegenüber aktuellen und neu auftretenden Gefahren an. Im Jahr 2001 schuf die EU das Unionsverfahren für den Katastrophenschutz (UCPM) – auch als EU-Katastrophenschutz-Mechanismus bezeichnet – als Teil der Generaldirektion Europäischer Katastrophenschutz und Humanitäre Hilfe (DG ECHO) mit dem Ziel, die grenzüberschreitende Zusammenarbeit bei der Katastrophenvorsorge, Risikobewertung und Notfallhilfe in Europa und darüber hinaus zu stärken. Die Teilnahme am Mechanismus ist auch für Nicht-EU-Länder möglich. Diese zahlen eine jährliche Gebühr und erhalten im Gegenzug vollen Zugang zu den Dienstleistungen des Mechanismus. Bis heute sind sechs Länder Teilnehmerstaaten des UCPM geworden (Island, Nordmazedonien, Norwegen, Montenegro, Serbien und die Türkei).

Ziel

Dieser Bericht liefert eine unabhängige Bewertung des Nutzens, der Kosten, der Chancen und der Risiken für die Schweiz, falls diese sich dazu entscheiden sollte, ein Teilnehmerstaat des UCPM zu werden. Geographisch im Herzen Europas gelegen, ist die Schweiz genauso wie andere europäische Ländern von Gefahren wie Erdbeben, Überschwemmungen, Waldbränden, nuklearen Unfällen und Pandemien bedroht. Neu auftretende Gefahren, zum Beispiel im Zusammenhang mit dem Klimawandel und sozio-technischen Veränderungen, stellen eine wachsende Herausforderung für alle europäischen Länder dar. Schweizer BürgerInnen, die im Ausland leben und reisen, sind wie alle europäischen BürgerInnen zunehmend extremen Wetterereignissen, biologischen Gefahren und politischer Instabilität weltweit ausgesetzt. Vor diesem Hintergrund hat das Schweizer Bundesamt für Bevölkerungsschutz (BABS) das Risk & Resilience Team des Center for Security Studies der ETH Zürich im Jahr 2020 damit beauftragt, die Vor- und Nachteile einer möglichen Teilnahme der Schweiz am UCPM zu analysieren. Die Studie wurde in Konsultation mit dem Eidgenössischen Departement für auswärtige Angelegenheiten

(EDA), der Direktion für Entwicklung und Zusammenarbeit (DEZA) und den kantonalen Behörden im Bevölkerungsschutz durchgeführt. Während die kantonalen und eidgenössischen Behörden des Bevölkerungsschutzes auf Katastrophen und Notfälle innerhalb der Schweiz reagieren, koordinieren das EDA und die DEZA die Reaktionen des Bundes auf Katastrophen und Notfälle im Ausland. Die Beteiligung der Schweiz am UCPM könnte daher Auswirkungen auf alle Dienste haben. Das Ziel dieses Berichts ist es, eine wissenschaftliche Evidenzbasis zu liefern, die als Grundlage für strategische Entscheidungen über Möglichkeiten einer zukünftigen Zusammenarbeit zwischen der Schweiz und dem UCPM dienen kann. Der Bericht gibt keine Empfehlung darüber ab, ob die Schweiz am Mechanismus teilnehmen sollte oder nicht.

Methode

Die empirische Forschung, die diesem Bericht zugrunde liegt, wurde in drei Phasen zwischen Juli 2020 und März 2021 mithilfe mehrerer Methoden und unter Einbeziehung von TeilnehmerInnen auf mehreren Regierungsebenen durchgeführt. Erstens wurden in Umfragen mit kantonalen und föderalen AkteurInnen auf der operativen und administrativen Ebene in der Schweiz die unmittelbaren Kosten und Vorteile sowie die längerfristigen Chancen und Risiken einer Teilnahme am UCPM untersucht. Zweitens wurden in Interviews mit VerwaltungsmitarbeiterInnen anderer Mitglieds- und Teilnehmerstaaten (Deutschland und Norwegen) sowie mit VertreterInnen der Generaldirektion ECHO und der Mission der Schweiz bei der EU weitere relevante Aspekte und mögliche Problemstellungen ermittelt. Drittens wurden durch Befragungen von operativem Personal der Schweiz und von DG ECHO die Stärken und Schwächen der bestehenden Zusammenarbeit zwischen der Schweiz und dem Mechanismus in drei aktuellen Fallstudien eruiert: 1) das Erdbeben in Albanien im Jahr 2019, 2) COVID-19-Rückführungsflüge im Jahr 2020 und 3) die Explosion in Beirut, Libanon, im Jahr 2020. Die daraus gewonnenen Erkenntnisse unterstützen die folgende Kosten-Nutzen-Analyse und zeigen mögliche Synergien für eine stärkere zukünftige Zusammenarbeit zwischen der Schweiz und dem UCPM auf. Eine systematische Überprüfung der veröffentlichten wissenschaftlichen Literatur wurde genutzt, um die Erkenntnisse aus den empirischen Daten zu triangulieren. Das Forschungsteam bedankt sich für die Beteiligung und Unterstützung aller InterviewpartnerInnen und weiterer ExpertInnen an dieser Studie.

Ergebnisse

Der Bericht identifiziert viele unmittelbare Vorteile und langfristige Chancen für die Schweiz, sollte diese sich dazu entschliessen, ein Teilnehmerstaat des UCPM zu

werden. Eine engere Zusammenarbeit mit dem UCPM könnte die Kapazitäten der kantonalen und eidgenössischen Behörden der Schweiz im Bereich des Bevölkerungsschutzes zur Vorbereitung und Reaktion auf aktuelle und zukünftige Gefahren erheblich steigern. Sollte die Schweiz von einer grösseren Katastrophe betroffen sein, würde die Teilnahme den kantonalen und eidgenössischen Behörden Zugang zu den gepoolten und zertifizierten Reaktionskapazitäten der gegenwärtig 27 Mitgliedsstaaten und der 6 Teilnehmerstaaten sowie zur strategischen Reserve rescEU bieten. Die Nutzung des länderübergreifenden Fachwissens, der Kommunikations- und Datenbeschaffungssysteme, des Trainingsprogramms und der Wissensnetzwerke des UCPM könnte darüber hinaus die nationalen Kapazitäten der Schweiz zur Vorbereitung auf und Anpassung an sich entwickelnde und neu auftretende Gefahren erhöhen. Die Teilnahme am UCPM könnte auch die Zusammenarbeit der Bevölkerungsschutzbehörden auf kantonaler und eidgenössischer Ebene fördern und gleichzeitig dem Schweizer Personal mehr Möglichkeiten bieten, zu einem geringeren Preis Einsatzerfahrung zu sammeln. Die Reaktion der Schweiz auf Katastrophen und Notfälle auf internationaler Ebene könnte von der finanziellen und logistischen Unterstützung durch das UCPM profitieren, einschliesslich der Koordinationsdienste und Satellitenüberwachungskapazitäten ihres Zentrums für die Koordination von Notfallmassnahmen (ERCC). Eine engere Zusammenarbeit zwischen der Schweiz und dem Mechanismus könnte daher die Effizienz und Flexibilität der Humanitären Hilfe der Schweiz erhöhen. Unter Beibehaltung der vollen souveränen Kontrolle über die nationalen Einsatzmittel würde der Status als Teilnehmerstaat unter gewissen Umständen die operativen Kosten durch die teilweise Rückerstattung von Ressourcen durch den Mechanismus senken. Diese Vorteile müssen gegen die beträchtliche jährliche Teilnahmegebühr und mögliche Herausforderungen abgewogen werden. Zu letzteren gehört, dass Teilnehmerstaaten keine formalen Entscheidungsbefugnisse haben. Dies schränkt ihren Einfluss auf zukünftige strategische Entwicklungen des Mechanismus ein, wie z.B. dessen Aufgabenbereich und Finanzrahmen. Solche Änderungen könnten die Kosten für die Teilnahme erhöhen, ohne dass die Teilnehmerstaaten proportional von zusätzlichen Leistungen profitieren. Die Abwägung dieser Faktoren ist eine wichtige strategische Entscheidung, da sie die Einsatzfähigkeit der Schweiz zum Schutz von Leben, Lebensgrundlagen und Vermögenswerten im In- und Ausland heute und in den kommenden Jahrzehnten entscheidend beeinflussen wird.

Résumé

Contexte

Les catastrophes ignorent les frontières politiques et géographiques. Les événements extrêmes, qu'ils soient naturels, sociétaux ou techniques, ont souvent des effets transfrontaliers et peuvent dépasser les capacités de réaction nationales. L'aide internationale peut donc jouer un rôle crucial pour sauver des vies, des moyens de subsistance et des biens lors de catastrophes. L'exploitation de l'expertise transnationale et des enseignements tirés peut également être essentielle pour améliorer les niveaux de préparation et de résilience des pays face aux risques actuels et émergents. En 2001, l'UE a créé le Mécanisme de protection civile de l'Union (UCPM) au sein de la Direction générale de la protection civile européenne et des opérations d'aide humanitaire (DG ECHO), dans le but de renforcer la collaboration transfrontalière en matière de préparation aux catastrophes, d'évaluation des risques et d'intervention d'urgence en Europe et au-delà. La participation au mécanisme est également possible pour les pays non membres de l'UE, qui paient une cotisation annuelle en échange d'un accès complet à ses services. À ce jour, six pays sont devenus des États participants à l'UCPM (Islande, Macédoine du Nord, Norvège, Monténégro, Serbie et Turquie).

Objectif

Ce rapport fournit une évaluation indépendante des avantages, des coûts, des opportunités et des risques pour la Suisse de devenir un État participant à l'UCPM. Située géographiquement au cœur de l'Europe, la Suisse peut être affectée comme les autres pays du continent par des événements extrêmes tels que tremblements de terre, inondations, incendies de forêt, accidents nucléaires et pandémies. Les risques émergents liés, par exemple, au changement climatique et à l'évolution technologique et sociétale, constituent un défi croissant pour tous les pays européens. Les citoyens suisses qui vivent et voyagent à l'étranger, comme tous les citoyens européens, sont de plus en plus exposés aux événements climatiques extrêmes, aux risques biologiques et à l'instabilité politique dans le monde. Dans cette optique, l'Office fédéral de la protection de la population (OFPP) a chargé en 2020 l'équipe Risk & Resilience du Center for Security Studies de l'EPF de Zurich d'évaluer les avantages et les inconvénients pour la Suisse de devenir un État participant à l'UCPM. L'étude a été mise en œuvre en concertation avec le Département fédéral des affaires étrangères (DFAE), la Direction du développement et de la coopération (DDC) et les autorités cantonales de la protection de la population. Alors que les autorités cantonales et fédérales de

protection de la population gèrent les catastrophes et situations d'urgence au niveau national, le DFAE et la DDC coordonnent les interventions de la Confédération à l'étranger. La participation de la Suisse à l'UCPM pourrait donc avoir des conséquences pour tous les services. L'objectif de ce rapport est de fournir une base scientifique pouvant éclairer la prise de décision stratégique sur les pistes de collaboration future entre la Suisse et l'UCPM. Le rapport ne donne pas de recommandation finale sur la participation ou non de la Suisse au mécanisme.

Méthode

La recherche empirique qui sous-tend ce rapport a été menée en trois phases entre juillet 2020 et mars 2021, en utilisant des méthodes mixtes et en impliquant des participants à plusieurs niveaux des collectivités publiques. Premièrement, des enquêtes menées auprès d'acteurs cantonaux et fédéraux au niveau opérationnel et administratif en Suisse ont permis d'examiner les coûts et avantages immédiats, ainsi que les opportunités et risques à plus long terme de la participation à l'UCPM. Deuxièmement, des entretiens menés avec le personnel administratif d'autres États membres et participants (Allemagne et Norvège) et avec des représentants de la DG ECHO et de la Mission de la Suisse auprès de l'UE ont permis d'identifier les promesses et les pièges potentiels. Troisièmement, des enquêtes menées auprès du personnel opérationnel de la Suisse et de la DG ECHO ont permis d'identifier les forces et les faiblesses des collaborations existantes entre la Suisse et le mécanisme dans trois études de cas récentes : 1) le tremblement de terre en Albanie en 2019, 2) les rapatriements COVID-19 en 2020, et 3) l'explosion à Beyrouth, au Liban, en 2020. Ces aperçus soutiennent les évaluations situationnelles et soulignent les synergies potentielles pour des collaborations futures plus fortes entre la Suisse et l'UCPM. Une revue systématique de la littérature publiée a été utilisée pour trianguler les conclusions des données empiriques. L'équipe de recherche est reconnaissante pour le temps et le soutien généreux de tous les participants à cette étude.

Résultats

Le rapport identifie de nombreux avantages immédiats et des opportunités à long terme pour la Suisse si elle devient un État participant. Une collaboration plus étroite avec l'UCPM pourrait accroître considérablement la capacité des autorités cantonales et fédérales suisses en matière de protection civile à se préparer et à réagir aux dangers actuels et futurs. Si la Suisse est touchée par une catastrophe majeure, sa participation permettrait aux autorités cantonales et fédérales d'avoir accès aux capacités de réaction mises en commun et certifiées des 27 États membres actuels et des 6 États participants, ainsi

qu'à la réserve stratégique du rescEU. L'exploitation de l'expertise transnationale, des systèmes de communication et de collecte de données, du programme de formation et des réseaux de connaissances de l'UCPM pourrait en outre accroître la capacité nationale de la Suisse à se préparer et à s'adapter aux risques évolutifs et émergents. La participation au programme UCPM pourrait également favoriser la collaboration entre les organismes de protection civile aux niveaux cantonal et fédéral, tout en offrant au personnel suisse davantage de possibilités d'acquérir une expérience opérationnelle à moindre coût. La réponse de la Suisse aux catastrophes et aux situations d'urgence internationales pourrait bénéficier du soutien financier et logistique de l'UCPM, notamment des services de coordination et des capacités de surveillance par satellite de son Centre de coordination des interventions d'urgence (ERCC). Une collaboration plus étroite entre la Suisse et le mécanisme pourrait donc accroître l'efficacité et la flexibilité de l'aide humanitaire suisse. Tout en conservant un contrôle souverain total sur les moyens d'intervention nationaux, le fait de devenir un État participant permettrait de réduire les coûts opérationnels grâce à un remboursement partiel du mécanisme lorsque des ressources sont déployées. Ces avantages doivent être mis en balance avec les frais de participation annuels substantiels et les défis potentiels. Ces derniers comprennent l'absence de pouvoir décisionnel formel des États participants. Cela limite leur influence sur les développements stratégiques futurs du mécanisme, tels que ses attributions et son enveloppe financière. De tels changements pourraient augmenter le coût de la participation sans que les États participants ne bénéficient proportionnellement de services supplémentaires. La prise en compte de ces facteurs est une décision stratégique importante, car elle influencera la capacité opérationnelle de la Suisse à protéger des vies, des moyens de subsistance et des biens dans le pays et à l'étranger, aujourd'hui et dans les décennies à venir.

Riepilogo

Contesto

Le catastrofi non conoscono confini politici e geografici. Gli eventi estremi, siano essi naturali, sociali o tecnologici, hanno spesso effetti transfrontalieri e possono superare le capacità di risposta nazionali. In caso di catastrofe, l'assistenza internazionale può quindi giocare un ruolo cruciale nel salvare vite, basi vitali e beni materiali. Sfruttare le competenze transnazionali e gli insegnamenti tratti dal passato può essere utile anche per migliorare la preparazione e la resilienza nazionali per far fronte ai pericoli attuali e futuri. Nel 2001, l'UE ha creato il Meccanismo di protezione civile dell'Unione Europea (EU Civil Protection Mechanism) come parte della Direzione generale della protezione civile europea e delle operazioni di aiuto umanitario (DG ECHO), con l'obiettivo di rafforzare la collaborazione transfrontaliera nella preparazione alle catastrofi, nella valutazione dei rischi e nella risposta alle emergenze in Europa e nel Mondo. Al meccanismo possono partecipare anche Paesi non UE, che pagano una quota annuale per il pieno accesso ai suoi servizi. Ad oggi, sei Paesi extracomunitari sono diventati Stati partecipanti del Meccanismo (Islanda, Macedonia del Nord, Norvegia, Montenegro, Serbia e Turchia).

Obiettivo

Il presente rapporto fornisce una valutazione indipendente dei benefici, dei costi, delle opportunità e dei rischi di un'eventuale partecipazione della Svizzera al Meccanismo. Situata geograficamente nel cuore dell'Europa, la Svizzera è minacciata da pericoli estremi come terremoti, inondazioni, incendi, incidenti nucleari e pandemie tanto quanto gli Stati circostanti. I pericoli emergenti associati per esempio al cambiamento climatico e alle evoluzioni tecnologiche e sociali, rappresentano una sfida crescente per tutti i Paesi europei. I cittadini svizzeri che vivono o viaggiano all'estero, come tutti i cittadini europei, sono sempre più esposti a eventi meteorologici estremi, a rischi biologici e all'instabilità politica a livello mondiale. In quest'ottica, nel 2020 l'Ufficio federale della protezione della popolazione (UFPP) ha incaricato il Risk & Resilience Team del Center for Security Studies del Politecnico federale di Zurigo di valutare i vantaggi e gli svantaggi di una partecipazione della Svizzera al Meccanismo. Lo studio è stato realizzato in collaborazione con il Dipartimento federale degli affari esteri (DFAE), la Direzione dello sviluppo e della cooperazione (DSC) e le autorità cantonali preposte alla protezione civile. Mentre le autorità cantonali e federali responsabili della protezione civile fanno fronte alle catastrofi e alle emergenze a livello nazionale, il DFAE e la DSC coordinano le risposte federali alle catastrofi e alle emergenze all'estero. La partecipazione della Svizzera

al Meccanismo potrebbe quindi avere conseguenze per tutte queste prestazioni. Lo scopo del presente rapporto è quello di fornire una base scientifica a supporto della decisione strategica sull'eventualità di una futura collaborazione tra la Svizzera e il Meccanismo europeo. Il rapporto ha un carattere puramente informativo e non fornisce alcuna raccomandazione finale sulla partecipazione o meno della Svizzera al Meccanismo.

Metodo

La ricerca empirica alla base di questo rapporto è stata condotta in tre fasi tra luglio 2020 e marzo 2021, applicando metodi misti e coinvolgendo partecipanti a più livelli governativi. In primo luogo, le indagini condotte presso gli attori cantonali e federali a livello operativo e amministrativo in Svizzera hanno esaminato i costi e i benefici immediati, nonché le opportunità e i rischi a lungo termine di un'eventuale partecipazione al Meccanismo. In secondo luogo, le interviste al personale amministrativo di altri Stati membri e partecipanti (Germania e Norvegia) e ai rappresentanti della DG ECHO e della Missione della Svizzera presso l'UE, hanno identificato potenziali vantaggi e svantaggi. In terzo luogo, le indagini condotte presso il personale operativo della Svizzera e della DG ECHO hanno individuato i punti di forza e i punti deboli delle collaborazioni esistenti tra la Svizzera e il Meccanismo in tre recenti casi esaminati: 1) il terremoto del 2019 in Albania, 2) i rimpatri COVID-19 nel 2020 e 3) l'esplosione del 2020 a Beirut in Libano. Questi approfondimenti avvalorano le valutazioni della situazione ed evidenziano potenziali sinergie per una futura collaborazione più intensa tra la Svizzera e il Meccanismo. Un'analisi sistematica della letteratura pubblicata ha permesso di inquadrare i risultati dei dati empirici. Il team di ricerca è grato per il tempo dedicato e il prezioso sostegno di tutti coloro che hanno partecipato a questo studio.

Risultati

Il rapporto identifica molti benefici immediati e opportunità a lungo termine di un'eventuale partecipazione della Svizzera al Meccanismo. Una più stretta collaborazione con il Meccanismo potrebbe incrementare notevolmente la capacità delle autorità cantonali e federali svizzere responsabili della protezione civile di prepararsi e far fronte ai pericoli attuali e futuri. Se una grave catastrofe dovesse colpire la Svizzera, la partecipazione consentirebbe alle autorità cantonali e federali di accedere alle risorse certificate e messe a disposizione dagli attuali 27 Stati membri e dai 6 Stati partecipanti, nonché alla riserva strategica rescEU. Approfittare delle competenze transnazionali del Meccanismo, dei sistemi di comunicazione e di raccolta dei dati, del programma di formazione e delle reti di conoscenze potrebbe inoltre aumentare la capacità della Sviz-

zera di prepararsi e adattarsi ai pericoli crescenti ed emergenti. La partecipazione al Meccanismo potrebbe inoltre agevolare la collaborazione delle organizzazioni di protezione civile a livello cantonale e federale, offrendo al personale svizzero maggiori opportunità di acquisire esperienza operativa con un notevole risparmio di costi. La risposta della Svizzera alle catastrofi e alle emergenze a livello internazionale potrebbe beneficiare del sostegno finanziario e logistico del Meccanismo, compresi i servizi di coordinamento e le capacità di sorveglianza satellitare del suo Emergency Response Coordination Centre (ERCC). Una più stretta collaborazione tra la Svizzera e il Meccanismo potrebbe quindi aumentare l'efficienza e la flessibilità dell'aiuto umanitario svizzero. Pur mantenendo il pieno controllo sovrano sui mezzi d'intervento nazionali, la partecipazione ridurrebbe i costi operativi grazie al parziale rimborso da parte del Meccanismo in caso di impiego di risorse. Questi vantaggi devono essere soppesati in relazione alla quota di partecipazione annuale e alle potenziali sfide, a cominciare dalla mancanza di potere decisionale formale degli Stati partecipanti che limita la loro influenza sui futuri sviluppi strategici del Meccanismo, come il suo mandato e la sua dotazione finanziaria. Tali cambiamenti potrebbero aumentare il costo della partecipazione senza che gli Stati partecipanti beneficino proporzionalmente di servizi aggiuntivi. La ponderazione di tutti questi fattori è una decisione strategica importante, poiché influenzerà la capacità operativa della Svizzera di proteggere vite umane, basi vitali e beni materiali in patria e all'estero, oggi e nei decenni a venire.

1 Introduction

1.1 Background and Motivation

Disasters do not respect political and geographical borders and often require international collaboration. The severity of natural hazards, such as floods, earthquakes, and wildfires, may overwhelm national response capacities and necessitate emergency support from abroad even if the impact of the hazards does not cross borders. Air currents and water ways will almost always distribute the effects of major socio-technical emergencies, such as chemical or nuclear accidents, across countries and possibly continents, requiring a coordinated response. In addition to mitigating the direct impacts, effective cross-border responses to disasters also alleviate broader socio-economic ripple-effects on an international scale. This is particularly useful for Europe given the high level of social and economic integration of countries. International collaboration can also be key to national preparedness. The unpredictability of disasters can pose a challenge to national preparedness by resulting in emergency management professionals lacking operational experience, and political decision-makers having limited parameters at their disposal for strategic planning purposes. These factors can undermine the readiness of nations for rare but extreme events, whether natural, social, or technological. Benefiting from the experience of other countries and tapping into transnational expertise can therefore be crucial for protecting people, assets, infrastructures, cultural heritage, and natural environments.

Against this background, Member States of the EU created a new mechanism in 2001 to increase cross-border collaboration in preparing for and coping with disasters. The Union Civil Protection Mechanism (UCPM, also referred to as "the Mechanism") is part of the Directorate-General for European Civil Protection and Humanitarian Aid Operations (DG ECHO) (detailed in Chapter 2). In addition to EU Member States, the Mechanism is open to participation for countries outside of the EU as so-called "Participating States". The Mechanism is activated when a disaster overwhelms a country's response capacity and the country makes a request for assistance through the Emergency Response Coordination Centre (ERCC, also referred to as "the Centre"). The Centre then coordinates the deployment of expertise and delivery of assistance offered by Member and Participating States with resources committed (since 2013) to the European Civil Protection Pool (ECPP, henceforth "the Pool"). At the request of Member and Participating States, the Mechanism can also support European responses internationally. Following a strategic review in 2017 of EU-wide capacity gaps,[1] EU Member States decided in 2019 to build up a reserve of resources named "rescEU", which DG ECHO acquires directly to complement the response capacities already committed to the Pool. At the request of Member and Participating States, rescEU also supports European deployments internationally. In addition to emergency responses during acute disasters, the Mechanism also aims to increase disaster preparedness and prevention activities internationally by facilitating the exchange of knowledge and best practices, and by strengthening cooperation on training.

In 2017, Switzerland and DG ECHO signed an Administrative Arrangement, signaling closer future collaboration in disaster preparedness, crisis management, and humanitarian aid. Switzerland's location in the heart of Europe means extreme events will affect Switzerland alongside other European countries. In addition, Swiss citizens living and traveling abroad face the same kinds of hazards as other European citizens. It is for these reasons that the Swiss Federal Office for Civil Protection (FOCP, *Bundesamt für Bevölkerungsschutz,* BABS) and the Swiss Federal Department of Foreign Affairs (FDFA, *Eidgenössisches Departement für auswärtige Angelegenheiten,* EDA) jointly entered into the 2017 Administrative Arrangement with DG ECHO.[2] The joint approach is due to the structural set-up in Switzerland where cantonal and federal (FOCP) authorities in civil protection respond to disasters and emergencies within its national borders, while FDFA (Swiss Humanitarian Aid) provides emergency relief in situations of crises, conflicts, and disasters abroad. Both sides of this structural set-up are therefore relevant to the purposes of the Mechanism.

While the Administrative Arrangement provides a framework for dialogue and coordination at a technical level (see Chapters 3 and 4), it does not enable Switzerland to benefit from the core operational, coordination, communication, training, and network services of the Mechanism. To benefit from the UCPM's services, including access to the Pool and rescEU, Switzerland has to become a Participating State. The Mechanism is available to non-EU countries as Participating States who pay an annual fee in return for full access to its services (see Chapter 2). To date, six countries have become Participating States (Iceland, Montenegro, North Macedonia, Norway, Serbia, and Turkey). This report evaluates the benefits, costs, opportunities, and risks of Switzerland becoming a Participating State of the UCPM.

1.2 Study Aim, Objectives, and Limitations

In 2020, the FOCP commissioned the Risk & Resilience Team of the Center for Security Studies (CSS) at ETH Zürich to provide an independent assessment of the costs and benefits for Switzerland becoming a Participating State of the UCPM. The aim of the following report is to provide a scientific evidence-base that can inform strategic decision-making on avenues for future collaboration between Switzerland and the UCPM. The report will not give a final recommendation on whether or not Switzerland should become a Participating State.

Some caveats apply to the scope of the study. The empirical research was conducted at a time of significant change for the Mechanism with the creation of rescEU and a proposed expansion of the UCPM's financial envelope (see Chapter 2). These changes have resulted in the annual fee for Participating States increasing by a factor of four. The following report accounts for the implications of this substantial reform process from a Swiss perspective. A residual uncertainty about the concrete implementation of the recent reforms nevertheless remains, as they will be implemented during the new 2021−2027 budgetary cycle.

1.3 Methodology and Data Analysis

The analytical approach of this study is informed by the BOCR-framework, which focuses on four dimensions: Benefits, Opportunities, Costs, and Risks. In policy analysis and management studies, the BOCR-framework is increasingly used for disaggregating complex decision problems.[3] The advantage of the BOCR-approach over conventional cost-benefit analyses is the addition of two strategic dimensions: opportunities and risks. Opportunities in the BOCR-framework cover mid- and long-term developments that would positively affect cost-benefit ratios, while risks include mid- and long-term developments that negatively affect cost-benefit ratios. This makes the framework well-suited to guide the assessment of complex decisions with mid- to long-term implications, such as Switzerland potentially becoming a Participating State of the UCPM. The four dimensions of the BOCR-framework informed the study's data collection (Figure 1) and serve as a reporting structure for the study results presented in Chapter 5.[4]

The empirical research for this study was conducted in three phases, using mixed methods, and including participants at multiple governance levels. Figure 2 illustrates the data sources and collection process.

	Positive	Negative
Short Term	**Benefits** Direct benefits for Switzerland in becoming a Participating State.	**Costs** Immediate costs for Switzerland in becoming a Participating State.
Long Term	**Opportunities** Future positive externalities and indirect benefits for Switzerland in being a Participating State.	**Risks** Future developments that may increase the costs or reduce the benefits for Switzerland in being a Participating State.

Figure 1. Study implementation of the BOCR-framework in evaluating Switzerland's potential participation in the UCPM.

Figure 2. Data sources and research methods.

The first phase involved a scoping review using standardized survey methods with cantonal and federal stakeholders on the operational and administrative levels in Switzerland. At the cantonal level, the aim of the survey was to assess the strengths and weaknesses of civil protection capacities, contemporary levels of international cooperation, as well as the cantons' views on advantages and disadvantages of Switzerland becoming a Participating State of the Mechanism. From the 26 Swiss cantons invited, 5 agreed to take part in the study: Bern (BE), Fribourg (FR), Grison (GR), Nidwalden (NW), and Ticino (TI). The diversity of these five cantons in terms of population and geographical size, languages spoken, budgets, location in Switzerland (border regions or central), and topography, make them a comprehensive sample of the heterogeneity that characterizes Switzerland as a whole. At the federal level, the survey inquired about the strategic outlook of Swiss Civil Protection and Swiss Humanitarian Aid, contemporary levels of international cooperation in both domains, as well as their views on advantages and disadvantages of Switzerland becoming a Participating State of the Mechanism. Six representatives from FOCP and five representatives from FDFA, including the Mission of Switzerland to the EU, participated in the study.

The second phase focused on the international level using a semi-structured interview method. The aim of the four interviews, which lasted 100 minutes on average, was to learn more about potential advantages and disadvantages of the UCPM from administrative staff of other Member and Participating States as well as representatives of the Mechanism itself. A Member State (Germany) and a Participating State (Norway) with similarities to Switzerland were selected as comparative country case studies. Germany is an insightful comparison for two reasons. First, Germany and Switzerland are both federalized countries and thus require vertical collaboration in both civil protection and humanitarian aid. Second, civil protection and humanitarian aid both in Germany and Switzerland are administered by different federal departments and thus require horizontal collaboration. Germany therefore provides an excellent case study of the potential logistical, operational, and political implications of Switzerland becoming a Participating State. The research team conducted an interview in November 2020 with Germany's focal point for the Mechanism from the Federal Office of Civil Protection and Disaster Assistance (*Bundesamt für Bevölkerungsschutz und Katastrophenhilfe,* BBK). Norway, as a non-EU country but a member of the European Economic Area (EEA), has been a Participating State of the Mechanism since 2007 and was, at the time of writing, negotiating a third seven-year agreement with the UCPM. Although Norway's participation is regulated by the Agreement on the EEA, this second country case study offers valuable insights for Switzerland to learn more about the advantages and disadvantages of

potential participation, as well as the negotiation process happening amidst the UCPM's broader structural changes. The research team conducted an interview in January 2021 with two representatives from the Norwegian Directorate for Civil Protection (*Direktoratet for samfunnssikkerhet og beredskap,* DSB). In addition to these two country case studies, the research team conducted a focus group interview in December 2020 with seven representatives from multiple DG ECHO departments associated with the Mechanism. The aim of this interview was to identify and assess potential synergies for closer Swiss cooperation with the Mechanism, and to examine the implications of the ongoing reform process from a Swiss perspective. In a fourth and final interview in March 2021, the research team triangulated the findings from the three preceding interviews with a representative of the Mission of Switzerland to the EU.

The third and final phase of empirical research involved a comparative assessment of the strengths and weaknesses of current collaboration between Switzerland and the Mechanism at an operational level using a standardized survey-method. In order to assess the promises and pitfalls of the 2017 Administrative Arrangement in the context of Swiss-EU on-the-ground collaborations, the case selection centered on recent disasters where Swiss and EU missions were both active. The research team selected three case studies: (1) the earthquake in Northwestern Albania in November 2019, (2) the repatriation of citizens during the COVID-19 pandemic in spring 2020, and (3) the ammonium nitrate explosion at the port of the Lebanese capital Beirut in August 2020. Coordinators from both Switzerland and the UCPM deployed to the selected disasters agreed to take part in this study. A semi-structured survey sent to both sides increased the triangulation of data and minimized potential biases in the assessment of current levels of collaboration between Switzerland and the Mechanism on-the-ground.

The same research principles applied to all participants in this study. Prior consent notices granted all participants confidentiality. While the survey and interview data first and foremost served informational purposes, any quotes were conditional on the participants' explicit consent sought prior to publication. Transcripts of the data was kept confidential and stored on internal servers by ETH Zürich. The research team is grateful for the generous time and support of all the research participants in this study.

1.4　Study Outline

Building on the introductions provided in this chapter, Chapter 2 describes DG ECHO and the UCPM in more detail to give the reader a better understanding of their origins and functioning. Aspects such as resource capacities and deployment, quality assurance and financial support under the Mechanism, its training program, and the expansions of the Mechanism are discussed. In Chapter 3, the current organization and functioning of Swiss Civil Protection and Swiss Humanitarian Aid are presented in order to give the reader a better understanding of the structures and capacities that underpin the Swiss authorities' decision regarding potential participation in the UCPM. Topics such as actors and roles, leadership, budget, and international cooperation are discussed. In Chapter 4, the current levels of collaboration between Switzerland and the UCPM during three recent disasters are discussed. Chapter 5, using the BOCR-framework, presents the overall assessment of the benefits, costs, opportunities, and risks of Switzerland becoming a Participant State of the UCPM. It also incorporates references to published scientific literature with findings relevant to this study. Finally, Chapter 6 concludes by highlighting the main findings and implications of this study.

This evaluation is of interest to both national and international stakeholders. Following the principle of subsidiarity, civil protection in Switzerland brings together three levels of government: municipal, cantonal, and federal. Responsible executives, operational staff, and volunteers working in the Swiss civil protection system at all three levels of government may be interested in a deeper understanding of the resource capacities and operational capabilities of the UCPM described in Chapters 2 and 4, as well as the benefits, costs, opportunities, and risks of Switzerland becoming a Participating State of the UCPM described in Chapter 5. Whereas Swiss Civil Protection responds to disasters and emergencies nationally, Swiss Humanitarian Aid provides emergency relief in situations of crises, conflicts, and disasters abroad, in line with universal humanitarian principles. Therefore, executives and personnel working for and with Swiss Humanitarian Aid may also be interested in gaining a better understanding of the promises and challenges resulting from potential Swiss participation in the UCPM. International readers may also benefit from the comprehensive analysis provided in Chapter 3 of how Swiss Civil Protection and Swiss Humanitarian Aid operate today, and the comprehensive overview of the evolution and functioning of the UCPM provided in Chapter 2.

2 DG ECHO and UCPM

This chapter first provides a brief overview of the organization of DG ECHO, and where the UCPM is positioned within this organizational structure. It then provides a detailed introduction to the UCPM and its structure, legislative background, resource capabilities, networks, and stakeholders, as well as the different phases of past and proposed future developments. It explains the ERCC, the ECPP, rescEU, and other aspects relevant to the activation and functioning of, as well as participation in, the Mechanism. The chapter concludes by outlining significant recent legislative changes, which aim to strengthen the UCPM through an expansion of its financial envelope and resources.

2.1 DG ECHO: An Overview

DG ECHO is a department of the European Commission (EC),[5] which since 1992 has provided assistance to people impacted by disasters and humanitarian emergencies.[6] DG ECHO embodies the principle of solidarity, as laid down in the Treaty of Lisbon.[7] It enables the EU to uphold the commitments of the Treaty through the provision of assistance, relief, and protection of people impacted by disasters and humanitarian emergencies, and it encourages the cooperation to achieve this aim by supporting and coordinating the civil protection systems of its Member States.[8]

DG ECHO is divided into two thematic sections: Civil Protection and Humanitarian Aid (see Appendix A). The focus of the Civil Protection section is to build capacity within the EU to prepare for and respond to the acute stages (days, weeks, months) of disasters (and complex emergencies in exceptional circumstances) inside and outside Europe.[9] It does so by cooperating with the governments of impacted countries. The focus of the Humanitarian Aid section is to fund, coordinate, and develop programs and policy in order for "humanitarian partners" (UN agencies, international organizations, NGOs) to respond to complex emergencies (and disasters in exceptional circumstances) in countries outside the EU in the acute and chronic stages (days, weeks, months, years).[10, 11, 12]

The two sections are linked by a joint Director General and are organized into five directorates with five directors (Figure 3). Each section has two directorates, with the fifth directorate shared by both sections for general, legal, and budgetary matters. While the two sections at times share resources in response to exceptional circumstances, and are encouraged to cooperate,[13] their budgets are separate, and the two sections function autonomously financially. The UCPM is specifically a part of DG ECHO's Civil Protection remit, and it is separate from DG ECHO's Humanitarian Aid operations and budget.[14]

This chapter specifically analyses the aspects of DG ECHO, which are central to the management and operations of the UCPM, in an effort to analyze the benefits, costs, opportunities, and risks of Switzerland becoming a
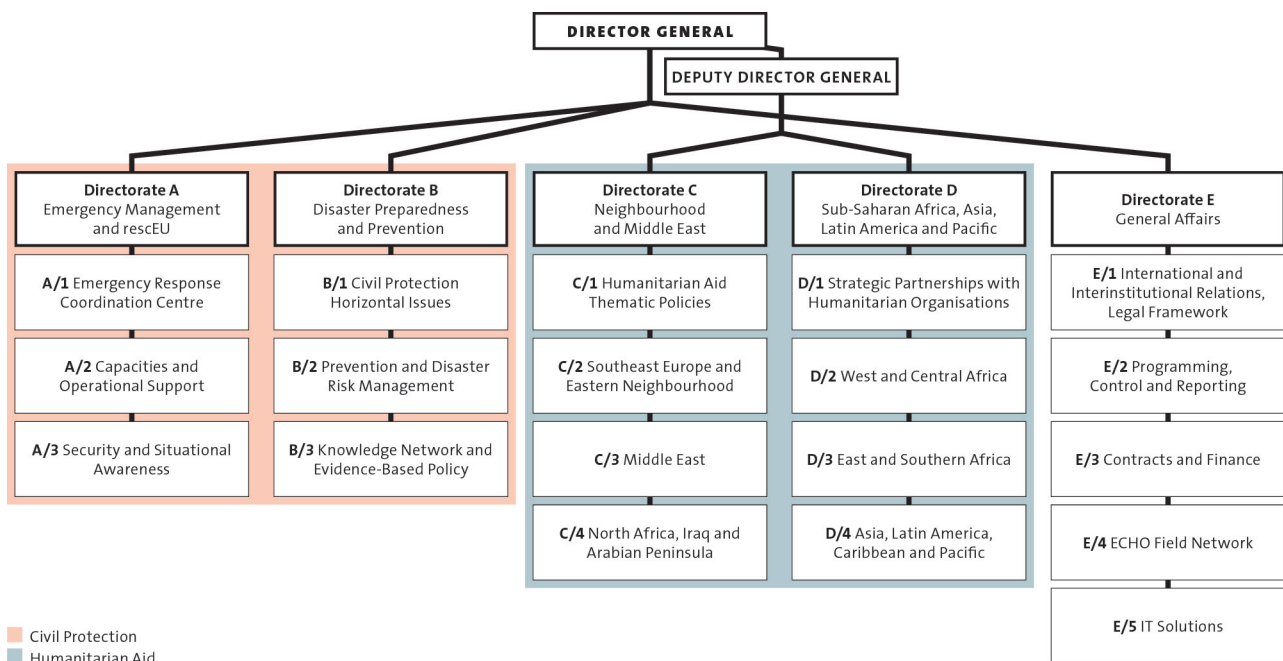

Figure 3. DG ECHO organizational chart, 2021.[16]

Participating State of the UCPM. Aspects of DG ECHO's Humanitarian Aid operations are only discussed when it is relevant to the management and deployment of UCPM resources and associated initiatives. This analytical approach recognizes the continued cooperation between the EU and Switzerland on international issues, and their effort to coordinate their positions on issues of mutual interest in multilateral fora, including climate change mitigation, environmental protection, and compliance with international humanitarian law.[15]
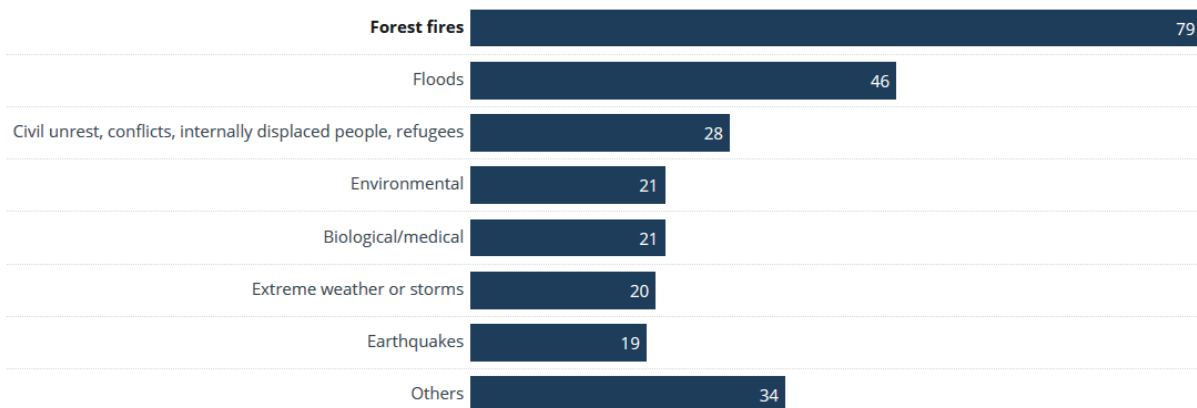
2.2 Union Civil Protection Mechanism

2.2.1 The Foundation of the UCPM

If DG ECHO is perceived to embody the principle of solidarity, as laid down in the Treaty of Lisbon, the UCPM is considered to be "the most tangible instrument of European solidarity".[17] The UCPM was established in 2001 together with the ERCC[18] with the overall objective to strengthen cooperation in the field of civil protection in Europe, and to improve overall disaster prevention, preparedness, and response capacity.[19] Aspects of the UCPM's foundation have been modified on a regular basis – both before and after the implementation of Decision No 1313/2013/EU in 2014,[20] which currently governs the UCPM in accordance with the Treaty of Lisbon's principles of common responsibility and solidarity. The UCPM is specifically linked to Articles 196 and 222 of the Treaty of the Functioning of the EU.[21, 22] Article 196 delimits the legal framework for the EU to support and coordinate civil pro-

tection systems. Article 222 introduces the Solidarity Clause into the European primary law, stipulating that EU Member States must act jointly and assist each other when a Member State experiences a disaster, emergency, crisis, or terrorist attack.

The UCPM is, in part, a response to the growing economic costs of weather and climate-related extremes, which exceeded 453 billion EUR between 1980 and 2017 in the EEA.[23, 24] This estimate does not include the intangible costs to everyday functionality, physical and mental health, and damaged or destroyed cultural heritage and ecosystems.[25] Costs are increasing as more people become exposed to hazards, as a result of climate change, unsustainable land and water management practices, and with population growth and urban development in at-risk areas. For example, 30 per cent of all requests for assistance through the UCPM between 2007 and 2019 were in response to forest fires (Figure 4)[26] – a trend that reflects both the extensive land area covered by forests in Europe (43 per cent / 182 million hectares) and the increasing frequency and intensity of wildfires internationally.[27] In January 2020, the European Environment Agency predicted more severe fire weather, longer fire seasons, and a substantial expansion of the fire-prone area in most regions of Europe (see also the textbox on Europe's fiery future).[28]

Mechanism activations by hazard type 2007-2018

Hazard type	Activations
Forest fires	79
Floods	46
Civil unrest, conflicts, internally displaced people, refugees	28
Environmental	21
Biological/medical	21
Extreme weather or storms	20
Earthquakes	19
Others	34

Source: **European Commission**

Figure 4. UCPM activations by hazard type 2007–2018.[29]

Europe's fiery future: Recent years have seen a sharp increase in the frequency and intensity of forest fires (also known as 'wildfires') in southern, central, and northern Europe alike. In fact, as recent catastrophic wildfires in Portugal (2017), Greece (2018), Spain (2019), and the unprecedented forest fires in Sweden (2014, 2018) show, many parts of Europe are becoming fire-prone landscapes in tandem with record drought and heatwaves. In 2020, EUSALP – the EU Strategy for the Alpine Region comprising seven countries, including Liechtenstein and Switzerland – published a white paper on the state of knowledge, future challenges, and options for integrated wildfire management in the European Alps.[30] It highlighted two main challenges: the changing socio-economic conditions, such as rural abandonment and intensified recreational activities, and the changing environment – especially climate change. In Switzerland, the current 31 per cent of the country that is forested (circa 1.2 million hectares) is growing, as abandoned mountain farms transition to forested land. This creates more fuel for wildfires in a drying climate.[31]

The EC maintains an overview of the European risk landscape through analysis of the main elements of each Member and Participating States' National Risk Assessments. These risk assessments consider the diverse landscapes and geographies across Europe, the different risk management governance structures and methods at national or sub-national levels, and responses at national and international levels. In 2017, the EC's overview highlighted 11 main disaster risks: flooding, extreme weather, forest fires (drought), earthquakes (landslides and volcanic eruptions), pandemics, epizootic and animal plant diseases, industrial accidents, critical infrastructure disruptions, nuclear and radiological accidents, terrorism, and cybersecurity.[32]

Responding to such natural, social, technological, and biological hazards has traditionally been the task of local, regional, or national authorities depending on the type, scale, and intensity of the hazard, and the characteristics of the people and assets at risk. However, an increasing number of transboundary crises (flooding, forest fires, pandemics, etc.) have challenged the effectiveness of unilateral emergency responses. The 21st century has experienced a growing number of disasters that indiscriminately cross geographical borders and policy do-

mains, affect multiple populations, industries, and critical infrastructures, and require transboundary response coordination and management cooperation. As a consequence, a core focus of the UCPM since its establishment has been to strengthen the civil protection capacities of Member and Participating States. The EC has also proactively adjusted to the dynamic requirements of disaster management and the unfolding climate crisis by upgrading the UCPM's structures, resources, capabilities, and budget in response to identified operational needs and growing demands on resources. Specifically, as outlined below, the UCPM was strengthened through the establishment of the Pool in 2013 and rescEU in 2019, and with significant budget increases in 2020.

2.2.2 Participation in the UCPM

At the time of writing, the UCPM consists of all EU Member States (27) and six Participating States (Iceland, Montenegro, North Macedonia, Norway, Serbia, and Turkey). The United Kingdom ceased its participation with the enforcement of Brexit at midnight on 31 December 2020.

As stipulated in EU Decision 1313/2013/EU, Article 28(1), participation is open to non-EU countries, specifically:

- European Free Trade Association (EFTA) countries who are members of the EEA, in accordance with the conditions laid down in the EEA Agreement, and other European countries when agreements and procedures so provide;
- Acceding countries, candidate countries, and potential candidates of the EU, in accordance with the general principles and general terms and conditions for the participation of those countries in Union programs established in the respective Framework Agreements and Association Council Decisions, or similar agreements.

Each country joins on the basis of their specific agreement:

"Participation in the Union Mechanism shall include participation in its activities in accordance with the objectives, requirements, criteria, procedures, and deadlines provided for in this Decision, and shall be in accordance with the specific conditions laid down in the agreements between the Union and the Participating State".[33]

$$\text{Annual fee for a Participating State} \quad = \quad \text{UCPM annual budget} \quad \times \quad \frac{\text{GDP Participating State}}{\text{Combined GDP of all EU-Member States} + \text{GDP Participating State}}$$

Figure 5. Formula for calculating the annual fee for any given Participating State.

The cost of participation for non-EU Member States is calculated by a fixed formula (Figure 5), which places the individual country's Gross Domestic Product (GDP) in relation to the aggregate GDP of all EU Member States. This fee is paid as an annual fee to DG ECHO.

The decisions by the EU Member States in 2019, 2020, and 2021 to invest in strategic reserves of core capacities at the European level (see Sections 2.2.6 and 2.3) has increased the UCPM's multiannual budget significantly from 368 million EUR for the 2014−2020 period to 1.263 billion EUR for the 2021−2027 period.[34] Accordingly, the annual fee of all Participating States increased by a factor of four. Based on the EU's Multiannual Financial Framework 2021−2027[35] approved by the European Parliament and adopted by the European Council in December 2020, the annual participation fee for Switzerland would be between 8 and 11 million CHF, depending on the given year (see Section 5.2).

As a Participating State, countries gain access to all of the UCPM's services and resources, as outlined below, with the exception of voting rights for EU legislature and benefits, such as the Emergency Support Instrument (ESI, see Section 2.2.6), which pertain to Member States only. Participation fees are paid annually. Participating States can enter into an agreement with the UCPM at any point of the seven-year budgetary cycle. Vice versa, Participating States may decide to leave the Mechanism at any point during the budgetary cycle without incurring any further dues.

Assistance offered through the UCPM by Participating States to countries that are eligible for Official Development Assistance (ODA), as defined by the Organization for Economic Co-operation and Development (OECD) Development Assistance Committee (DAC), may count towards national ODA targets depending on whether the relevant DAC criteria are met.[36]

Cooperation in the UCPM's activities is also open to international or regional organizations of non-Member and non-Participating States, or countries that are part of the European Neighborhood Policy (ENP), "where relevant bilateral or multilateral agreements between those organizations or countries and the Union so allow".[37] In an effort to enhance disaster prevention, preparedness, and response capacities more broadly, financial assistance to implement preventative measures[38] may also be available to "candidate countries and potential candidates not participating in the Union Mechanism, as well as to countries that are part of the ENP, to the extent that that financial assistance complements funding available under a future Union legislative act relating to the establishment of the Instrument for Pre-Accession Assistance (IPA II) and a future Union legislative act relating to the establishment of a European Neighborhood Instrument".[39]

2.2.3   Activation of the UCPM

Since 2001, the UCPM has been activated more than 420 times (see Appendix B). It can be deployed inside and outside the EU. Any country in the world, as well as UN agencies and other relevant international organizations, can call on the UCPM for help.[40] The Mechanism is activated when a disaster overwhelms a country's response capacity and a request for assistance is made through the ERCC. The Centre then coordinates the deployment of expertise and delivery of assistance offered by Member and Participating States with resources committed, since 2013, to the Pool, and since 2019 from the rescEU reserve.

While the EC considers the Centre to be the operational "heart" of the UCPM, the Pool is seen as the Mechanism's "backbone".[41] When the Solidarity Clause is invoked, the Centre is the central point of contact for requests for assistance. The ERCC is located in the premises of DG ECHO in Brussels.[42] It has a fully staffed and trained duty system with circa 40 staff, which operates 24 hours a day 7 days a week to ensure real-time monitoring of events around the world.[43, 44] The Centre acts as a coordination hub between all Member and Participating States, the affected country, and civil protection and humanitarian aid experts. The Centre ensures rapid deployment of emergency support through direct links with national civil protection authorities and by drawing on the resources pre-committed by Member and Participating States to the Pool and rescEU. The Centre then coordinates the delivery of this assistance to countries in need.

The Pool (previously known as the European Emergency Response Capacity) was established in 2013 (and launched in October 2014) in acknowledgement of the need to shorten response time and strengthen reliability.[45] It advances the UCPM by bringing together resources volunteered by Member and Participating States, ready for deployment at short notice. This includes rescue and medical teams, experts, specialized equipment, and transportation. By registering national assets with the Centre, Member and Participating States commit to responding to EU operations following a request for assistance through the Centre. Response capacities made available by Member and Participating States remain available for national purposes at all times, and the ultimate decision on resource deployment is taken by the country who registered the response capacity:

"When domestic emergencies, force majeure or, in exceptional cases, serious reasons prevent a Member State from making [or keeping] those response capacities available in a specific disaster, that Member State shall inform the Commission as soon as possible by referring to this Article [11]."[46]

By September 2020, 25 Member and Participating States had offered 108 specialized response capacities, with 74 of these meeting the requirements to become Pool capacities (see Appendix C). Activation can consist of equipment delivered as in-kind assistance or the deployment of specialized teams and equipment, such as forest firefighting planes, search and rescue (SAR), and medical teams.

Since 2016, the Pool has been enhanced by medical response capacities committed by 11 Member and Participating States[47] to the European Medical Corps (EMC), which relies on 14 teams of medical and public health experts and their equipment (medical teams, mobile biosafety laboratories, medical evacuation capacities).[48, 49] The EMC's deployment is coordinated by the Centre to ensure an effective European response in health emergencies inside and outside the EU as part of the UCPM. It was established in response to: a) the acute shortage of trained medical teams during the 2014 Ebola crisis in West Africa, and b) the predicted increase in health emergencies, such as epidemics, with climate change and the ability of diseases to spread rapidly in an interconnected world.

In developing countries, and particularly in response to complex emergencies, the Mechanism usually collaborates with DG ECHO's Humanitarian Aid operations to ensure the most coherent analysis and response. The Centre improves coordination between civil protection and humanitarian aid operations by maintaining a direct link to civil protection and humanitarian aid authorities in Member and Participating States. This enables real-time exchange of information, and assists the deployment of coordination and assessment teams composed of humanitarian aid and civil protection experts conducting joint needs assessments.

The European Union Civil Protection Coordination Teams (EUCPT) support the UCPM's emergency response on the ground. While the ERCC monitors the situation from Brussels and coordinates the deployment of modules from the Pool, the main role of the EUCPT is to coordinate activities in the field by liaising between the UCPM modules and the local emergency management authorities of the affected country.

In promoting consistency in the response to disasters outside the EU, the UCPM can also contribute to an intervention led by an international organization. The UCPM is especially active regarding its partnership with the UN Environment Program (UNEP) / UN Office for the Coordination of Humanitarian Affairs (OCHA) Joint Unit in responding to environmental emergencies.[50, 51] Between 2006 and 2017, the UCPM was involved in nearly a quarter of all the UNEP/OCHA Joint Unit's response missions. In 2018 and 2019, its involvement increased to over half of all response missions.[52] According to Article 16(2) of Decision No. 1313/2013/EU,

"The Union coordination shall be fully integrated with the overall coordination provided by the United Nations Office for the Coordination of Humanitarian Affairs (OCHA), and shall respect its leading role. In the case of man-made disasters or complex emergencies, the Commission shall ensure consistency with the European Consensus on Humanitarian Aid, and respect for humanitarian principles."

Operationally, the Centre is also enhanced by its collaboration with the Copernicus Emergency Management Service, which provides geospatial information via satellite maps to assist the planning of disaster relief operations.[53] The UCPM can also be activated for marine pollution emergencies. In such cases, the Centre mobilizes oil recovery capacity and expertise from Participating States and the European Maritime Safety Agency.[54]

The Centre uses a range of monitoring and communication tools to monitor events and operationalize their response capacities.[55] These include the:

- Common Emergency Communication and Information System (CECIS) – a web-based alert and notification system that enables real-time information sharing between the ERCC and Member and Participating States. When resource capacities committed by Member and Participating States are accepted and certified by the Pool, it is registered via CECIS in a common database system.
- European Flood Alert System (EFAS) – monitors and forecasts floods across Europe, and in particular in the large transnational river basins. It provides complementary, added-value information (e.g., probabilistic, medium range flood forecasts, flash flood indicators, or impact forecasts) to relevant national and regional authorities, as well as the ERCC.[56]
- European Forest Fire Information System (EFFIS) – consists of a modular web geographic information system that provides near real-time and historical information on forest fires and forest fires regimes in the European, Middle Eastern, and North African regions. Monitoring in EFFIS comprises the full fire cycle, providing information on the pre-fire conditions and assessment of post-fire damage.[57]
- Global Disaster Alerts and Coordination System (GDACS) – a cooperation framework between the UN and the EC. It provides real-time access to web-based disaster information systems and related coordination tools worldwide, with the aim to address information and coordination gaps in the first phase of major disasters.[58]
- European Mediterranean Seismological Centre (EMSC) – a system for rapid determination of the European and Mediterranean earthquake epicentres. EMSC receives seismological data from more than 65 national seismological agencies, mostly in the Euro-Mediterranean region. The most relevant

earthquake parameters, such as the location and magnitude, are communicated within one hour from an earthquake's onset.[59]

2.2.4 Knowledge Sharing, Training and Peer Review

The UCPM aims to increase disaster preparedness and prevention activities internationally by facilitating the exchange of knowledge and best practices, and by strengthening cooperation on training. It does so through five different approaches to knowledge sharing, training, and peer review: a Knowledge Network, a training program, exercises ranging from full-scale to table-top, exchanges of experts, and a program that offers peer review of disaster risk management and civil protection systems.

In alignment with international commitments, such as the Sendai Framework for Disaster Risk Reduction 2015 – 2030, the UCPM committed to growing the Union Civil Protection Knowledge Network as part of the 2019 revisions.[60, 61, 62] In addition to supporting experts, practitioners, trainers, and volunteers, the Knowledge Network is intended to be a platform for relevant national structures, centers of excellence, researchers, universities, knowledge centers, international organizations, and third-party countries that are not a Member or Participating State of the UCPM.

By fostering an inclusive approach, the Knowledge Network hopes to address key concerns and needs of its participants. It also hopes to connect and strengthen cooperation with existing initiatives, such as the Disaster Risk Management Knowledge Centre – a part of the EC's Joint Research Centre, which supports the translation of independent scientific data into usable information and science-based advice for disaster risk management policies. Through the Knowledge Network, the UCPM runs a training program that offers experts from Europe a range of courses from basic training, technical expert, and security courses, to high-level sessions for future mission leaders.[63] Professional development opportunities are also provided as *ad hoc* trainings to address emerging needs, for example, for teams responding to mass burn casualty events or to support on-site integration of responder teams.

The EC through DG ECHO funds a number of civil protection exercises every year through a call for proposals for full-scale exercises and a call for tenders for module exercises – all of which aims to improve preparedness and enhance collaboration among European civil protection authorities and teams.[64] The Knowledge Network also introduces new types of exercises, such as plug-in exercises for international learning and experience, and host nation support exercises. Exercises range in scale and type, and can cover diverse topics, such as contingency planning, decision-making procedures, and provision of information to the public and the media. Full-scale exercises are organized by civil protection authorities in specific countries and co-financed by the EU.[65] Module exercises (EU MODEX) are organized with UCPM supervision and aim to test specific response capacities, and the self-sufficiency, interoperability, coordination, and procedures of response teams and equipment.[66] Table-top exercises are also organized under UCPM supervision and provide in-depth training of key personnel.

DG ECHO also funds the Exchange of Experts in Civil Protection program, which permits individuals or small groups of civil protection experts to be invited or apply to go on secondment from one UCPM Member or Participating State to another.[67] Experts from eligible third-party countries can also take part, extending the geographical reach of the program to 52 states. Through exchanges that range from a few days up to three months, participants can gain practical knowledge on topics like firefighting, communication, SAR, or new and emerging threats, while also experiencing the different approaches of national systems.

The Peer Review program facilitates the sharing of good practices in disaster risk management through an independent analysis carried out by a team of experts selected from different UCPM Member and Participating States.[68] The peer review assists a region or a country to assess its coping capacity, and to identify ways to strengthen its disaster prevention and preparedness system, usually by focusing on a specific aspect or sector of the disaster risk management system in review. The peer review may identify better approaches to policy and operations, facilitate mutual learning and exchange of good practice, raise awareness, or propose concrete recommendations.

2.2.5 Quality Assurance and Financial Support within the UCPM

There are two tangible benefits to Member and Participating States who contribute to the Pool: quality assurance and financial support. The EC has created a quality criteria, certification, and registration process to ensure that the capacities committed to the Pool meet "common high standards". Certification includes the participation of the capacities in disaster simulation exercises in order for peers and teams to train together in emergency response scenarios. This also improves the ability of European response capacities to operate efficiently during deployments. The certification process is usually carried out by the EC, with the support of experts nominated by Member and Participating States.

Similarly, the teams and equipment of the EMC must comply with the EC's medical certification and registration process to meet required standards that align with the World Health Organization's (WHO) internationally recognized standards.[69] Teams are trained to work

alongside colleagues from other countries and according to international guidelines. In return, they benefit from financial support from DG ECHO via grants for upgrading teams to improve availability, readiness, and quality.

The EC co-finances operational costs, including transportation, with the dual aim of enhancing the response capacities of the UCPM and motivating Member and Participating States to pre-commit their resources to the Pool. Once part of the Pool, DG ECHO covers up to 75 per cent of transportation costs for deployments inside and outside the EU, as well as up to 75 per cent of deployment and operational costs inside the EU. This enables the delivery of assistance within a few hours to countries who have requested help, with lower budgetary impact on those offering the assistance. The ERCC also boosts the efficiency of deployments by pooling shipments of resources.

To build up resources within Member and Participating States, financial support is also available for the upgrade or repair of response capacities committed to the Pool. Adaptation costs may cover 75 per cent of the eligible costs in the event of a repair or an upgrade, provided that amount does not exceed 50 per cent of the average cost of developing the capacity. In such cases, the response capacities become part of the Pool for a minimum period of time, which is linked to the received funding and ranges between 3 and 10 years starting from their effective availability, except where their economic lifespan is shorter.[70] EU co-financing in the form of "adaptation grants" can also be granted for existing capacities within Member and Participating States to ensure their readiness for deployment in international contexts. Individual experts can also be deployed to support communities to better prepare for disasters, for example, through the Peer Review Program discussed above.

2.2.6   rescEU

The ERCC also has the capacity to identify eventual gaps in European assistance, and to propose how these gaps can be covered through financial support from the EU. One such proposal led to a substantial upgrade of the UCPM in 2019, with the establishment of a new reserve of additional capacities named rescEU.[71, 72] The report delivered to the European Parliament and the European Council in 2017 identified the limits of the voluntary approach of the Pool after two years of long and devastating forest fire seasons and severe storms and floods in Europe, as well as hurricanes in the Caribbean.[1] The gaps in the UCPM's critical response capacities to these emergencies highlighted the need to strengthen the UCPM, and to move away from reactive and *ad hoc* coordination to a pre-planned, pre-arranged, and predictable system.[73]

DG ECHO responded by establishing a reserve of resources – the rescEU reserve – that the EU acquires directly. By acquiring and strategically positioning the rescEU reserve across the EU Member States, the additional resources both complement the response capacities already committed to the Pool and contributes to swifter and more flexible deployments when disaster strikes. rescEU is intended as a last resort when the national capacities of Member and Participating States, and the voluntary capacities committed to the Pool, are either spent or not enough to respond to a particular crisis.

Financial assistance to establish, manage, and maintain rescEU capacities covers at least 80 per cent, and no more than 90 per cent, of the total estimated costs necessary to ensure the rescEU capacities are available and deployable when needed. The remaining amount is covered by the Member or Participating States hosting the rescEU capacities.[74] rescEU capacities are hosted by the Member and Participating States that acquire, rent, or lease capacities. Operational contracts between individual States and the EC specify the terms and conditions of deployment of rescEU capacities, including participating personnel. In order to assist Member and Participating States to acquire, rent, or lease capacities, direct grants may be awarded by the EC without a call for proposals. Where the EC procures rescEU capacities on behalf of Member and Participating States, the joint procurement procedure applies and the rescEU capacities are hosted by the Member and Participating States on behalf of which they are procured.

As with the response capacities pre-committed to the Pool, the EC defines the quality requirements for the response capacities that form a part of rescEU in accordance with established international standards, where such standards already exist, and in consultation with the Member and Participating States.

The Member and Participating States that own, rent, or lease rescEU capacities are required to register the capacities in CECIS to ensure their availability and deployment through the ERCC when the UCPM is activated. CECIS keeps Member and Participating States informed of the operational status of rescEU capacities. rescEU capacities can only be used for national purposes when they are not needed for response operations under the UCPM. The decision to deploy and demobilize, and any decision in the event of conflicting requests, are taken by the EC in close coordination with the country requesting assistance and the Member or Participating State that owns, rents, or leases the capacity. This differs from the decision to deploy and demobilize response capacities in the Pool, which is taken by the Member or Participating State that registered the requested response capacity. However, in both cases the coordination of the different response capacities is facilitated by the ERCC.

The Member or Participating State where rescEU capacities are deployed to is responsible for facilitating operational coordination of both its own capacities

and rescEU activities during operations. In the event of deployments outside the EU, the Member and Participating States that host the rescEU capacities are responsible for ensuring that rescEU capacities are fully integrated into the overall response. Member and Participating States may refuse to deploy their own personnel outside the EU, in specific cases, in accordance with the implementing act and as defined in operational contracts.[75]

In 2019, the additional layer of protection provided by rescEU, taking into account the overall capacity gaps and emerging risks identified in the 2017 report, consisted of a reserve fleet of forest firefighting planes and helicopters, medical evacuation planes, and a stockpile of medical equipment and field hospitals hosted by several Member and Participating States to enable a quick response to health emergencies, and chemical, biological, radiological, and nuclear (CBRN) incidents. The first mobilization of the rescEU reserve happened in August 2019, when the UCPM was activated in response to a request from Greece for aerial firefighting assistance to contain the forest fires on the island of Evia. For the 2020 forest fire season, the EC co-financed the stand-by availability of a rescEU firefighting fleet consisting of 13 firefighting planes and 6 helicopters[76] at the disposal of Member and Participating States in case of an emergency in exchange for financial contribution of the stand-by costs of these capacities.

In 2020, in response to the COVID-19 pandemic, rescEU was again reinforced to better enable the UCPM to respond to the unfolding cross-border COVID-19 crisis with medical equipment, vaccines, and therapeutics, as well as medical evacuation planes and medical expertise (doctors, nurses, epidemiologists).[77] The EC decided to create a strategic rescEU stockpile of medical equipment, including intensive care medical equipment (e.g., ventilators), personal protective equipment (PPE; e.g., reusable masks, vaccines, therapeutics), and laboratory supplies.[78] The speed with which the reinforced rescEU measures entered into law during the COVID-19 pandemic, reflects the gravity of the disaster. It stretched the ability of Member and Participating States to help each other due to the simultaneous, yet differential, impact on all Member and Participating States. Since entering into law on 20 March 2020, Member and Participating States have been able to apply for a direct grant from the EC to cover 90 per cent of the costs of the stockpile, with the remaining 10 per cent of the costs covered by the Member or Participating State wishing to host rescEU stockpiles.[52] The hosting State is responsible for procuring the equipment but the ERCC manages the distribution of the equipment. The initial EU budget for the stockpile was 50 million EUR, of which 40 million EUR was subject to the approval of the budgetary authorities. In addition, under the Joint Procurement Agreement, Member and Participating States can purchase PPE, respiratory ventilators, and items necessary for COVID-19 testing as a coordinated approach, which can

provide a stronger position when negotiating with industry on the availability and price of medical products.[79]

If a disaster outside the EU significantly affects one or more Member and Participating States or their citizens, rescEU capacities can be deployed. This was the case in 2020 when EU citizens were repatriated through the UCPM in response to the COVID-19 pandemic (see Chapter 4). In such exceptional circumstances, DG ECHO can also support EU Member States through the ESI.[80] Because the ESI is managed directly by DG ECHO on behalf of the EU but is not assigned to the UCPM, the ESI only benefits EU Member States and not Participating States of the UCPM. The Instrument intends to both enhance existing EU programs and complement ongoing efforts at national level. However, it focuses on actions with a clear added value at the EU level. The ESI has only been activated twice: first in response to the refugee crisis in Europe in 2016, and then to address the COVID-19 crisis situation inside the EU. For the pandemic, 2.7 billion EUR were allocated to support EU Member States in their immediate acute response as well as the recovery phases longer term. A first release of 220 million EUR was allocated under the responsibility of DG ECHO, primarily focusing on transport of cargo, patients, and health workers, with the EU financing up to 100 per cent of the costs of these transport operations. Only EU Member State authorities are eligible to apply for this funding. An example of such a response was the delivery in June 2020 of seven tons of PPE to Bulgaria, with the equipment purchased by Bulgaria and transport costs covered by the EU.

2.3   A Revised UCPM in the Making

The need to further reinforce the UCPM became clear as the impact of the COVID-19 pandemic spread across the UCPM's Member and Participating States. In June 2020, the EC concluded:

> "[The] system of mutual European solidarity tends to falter if all, or most, Member States are impacted by the same emergency simultaneously and are therefore unable to offer each other assistance. In such cases of large-scale high impact emergencies, the Union is currently unable to step in sufficiently to fill these critical gaps. Ensuring an effective overall Union response to large-scale emergencies, the Union Mechanism requires more flexibility and autonomy to act at Union level, in situations when overwhelmed Member States cannot do so."[81]

Consequently, a proposal to amend Decision No 1313/2013/EU, which governs the UCPM, was put forward by the EC. This proposal was endorsed by the Euro-

pean Parliament in April 2021.[34] It introduces targeted changes to Decision No. 1313/2013/EU,[82] in parallel to the proposal also amending the UCPM, which was adopted by the EC in 2019.[62]

In concrete terms, the changes aim to achieve the following objectives:

a. Reinforce a cross-sectoral and societal preparedness approach to trans-boundary disaster risk management, including establishing a baseline and planning elements at a European level.
b. Ensure that the EC is able to directly procure an adequate safety net of rescEU capacities.
c. Provide the EC with the logistical capacity to provide multi-purpose air services in case of emergencies and to ensure timely transport and delivery of assistance.
d. Design a more flexible system for response to large-scale emergencies.
e. Enhance the ERCC's operational coordination and monitoring role in support of the EU's swift and effective response to a broad range of crises inside and outside the EU.
f. Enable stronger investment in preparedness at the EU level and further simplification of budget implementation.
g. Enable the implementation of recovery and resilience measures under the UCPM through financing from the European Union Recovery Instrument, constituting external assigned revenues according to Article 21(5) of the Financial Regulation.

Additionally, there will be several legislative revisions to the regulations concerning the criteria for the mobilization of investment and financial support. Specifically, the EC proposed significant budgetary increases for both the Civil Protection and Humanitarian Aid sectors of DG ECHO for the period 2021 to 2027.[83] These budget increases are in response both to the increase in humanitarian crises internationally, and the EU's stimulus package aiming to assist the socio-economic recovery of Europe from the COVID-19 pandemic, as part of Next Generation EU (NextGenEU).[84]

Initially, the budget assigned to the UCPM for the period 2014 to 2020 was 368 million EUR – an amount complemented by contributions from Participating States.[85] This budget was increased to 574 million EUR in 2019 with the creation of rescEU.[86] It is allocated to three distinct purposes: prevention (20 per cent +/- 8 percentage points), preparedness (50 per cent +/- 8 percentage points), and response (30 per cent +/- 8 percentage points), and covers equipment, maintenance and repair, insurance, training, warehousing, registration and certification, consumables, and personnel required to ensure that rescEU capacities are available and deployable.

With the adoption of the EU's multiannual budget for the 2021−2027 period by the European Parliament and the European Council in December 2020, the financial envelope for Civil Protection has increased to 1.263 billion EUR. In addition, up to 2.056 billion EUR of the NextGenEU recovery instrument is available to the UCPM until the end of 2023 to implement civil protection-related measures that address the impacts of the COVID-19 crisis. While Participating States will also benefit from all UCPM actions funded via the NextGenEU budget, they do not contribute financially to this budget, which is exclusively financed by EU Member States.

It is argued by the EU that these legislative changes will develop more efficient and effective civil protection capacities in Europe as well as improve the geographic coverage of the UCPM by: a) allowing the EC to directly procure more rescEU capacities and fully finance the development and operational cost of all rescEU capacities, b) use its budget more autonomously and flexibly to prepare more effectively and respond faster in times of exceptional needs, and c) dispose of the logistical capacity to provide timely, multi-purpose air services. This will supposedly alleviate the financial burden at the national level of Member and Participating States by also enhancing the funding to increase the availability of national capacities deployed under the Pool.[87,88]

3 Swiss Civil Protection and Swiss Humanitarian Aid

Evaluating the benefits, costs, opportunities, and risks of Switzerland becoming a Participating State of the UCPM is premised on a thorough understanding of how Swiss Civil Protection and Swiss Humanitarian Aid work today. Whereas Swiss Civil Protection responds to disasters and emergencies nationally, Swiss Humanitarian Aid coordinates federal responses to disasters and emergencies abroad. Therefore, Swiss participation in the UCPM could have consequences for both services.

The following chapter unfolds in three steps. The first part presents a broad overview of the Swiss civil protection system with a particular focus on cantonal and federal disaster and emergency management systems. The analysis furthermore reviews existing bilateral agreements with Switzerland's neighboring countries in the domain of civil protection, and assesses the strengths and weaknesses of existing forms of cross-border cooperation. The second part provides an overview of the Swiss humanitarian aid system. It outlines the mandate, federal structures, and operational capacities as well as key international partners, strategic priorities, and recent reform efforts. The third and final section focuses on the Administrative Arrangement signed in 2017 by FOCP, the Swiss Agency for Development and Cooperation (SDC, *Direktion für Entwicklung und Zusammenarbeit,* DEZA), and DG ECHO, and takes stock of the existing forms of collaboration and integration of Swiss Civil Protection and Swiss Humanitarian Aid at the European level.

3.1 Swiss Civil Protection

3.1.1 Mandate

The current mandate of civil protection on the federal level in Switzerland is "to protect the population and its livelihoods in the event of disasters and emergencies and in the event of armed conflicts and to contribute to the limitation and management of damaging events".[89] The civil protection system fulfils this mandate by informing the population about possible hazards and existing protective measures, alerting them in case of danger, and giving instruction on how to behave.[90] Furthermore, it coordinates the preparation and operations of partner organizations (see Section 3.1.2), leads in the event of a crisis (see Section 3.1.4) and ensures both its readiness as well as its ability to "build up" its capacities *(Aufwuchsfähigkeit).* Swiss Civil Protection has since the end of the Cold War been tasked primarily with the management of di-

sasters and emergencies rather than to support functions in armed conflicts. In view of the diverse spectrum of possible disasters and emergencies today, the Swiss model of integral risk management guides the focus of Swiss Civil Protection.[91] A central component is a national risk analysis that is updated regularly, which influences prevention (structural measures and resources, including command and control), crisis management (deployment and restoration), and adaptation (reconstruction) in order to adjust and strengthen the system.[92]

3.1.2 Actors and Resources

Civil protection in Switzerland is organized as an integrated system *(Verbundssystem),* bringing together five main partner organizations: police, fire service, healthcare, technical services and *Zivilschutz*.[93, 94] The 26 cantons are responsible for these organizations within their respective municipal, regional, and cantonal boundaries, and deploy them in the context of civil protection. The five partner organizations work together in responding to events, but each has its own area of responsibility. The composition of staff within the five partner organizations differs greatly, with professional staff, compulsory service personnel, and volunteers respectively making up all, some, or a combination of staff (see below). Each partner is responsible for ensuring its own operational readiness, including staffing, training, and logistics. However, in terms of support for command and control, the five partner organizations coordinate with each other. If several organizations deploy at the same time in the course of an emergency, either municipal, regional, and/or cantonal command and control bodies are called into action, which coordinate the measures to be taken and any requests for support (see also Section 3.1.4).

The resources of the partner organizations deploy in a modular way. The police, fire, and ambulance services manage everyday events in their municipality, region, or canton independently. In case of a major event, the technical services and the *Zivilschutz* of the same municipality, region, or canton can be called upon. If some or all partner organizations of a municipality, region, and one or multiple cantons are unable to cope with an event on their own, additional organizations and bodies, such as private companies, relevant associations, or the army, may be called upon to provide subsidiary support.

Below is a more detailed description of the five partner organizations' responsibilities within the Swiss civil protection system:

- Police:[95] The police is responsible for maintaining security and order. The cantonal and municipal police corps consist almost exclusively of professionals. Organization, training, equipment, etc. are regulated at the cantonal level. The police force can call on the *Zivilschutz* to support high demands for personnel.

- Fire service:[96] The fire service is responsible for rescue and general damage prevention, as well as nuclear and chemical protection. Municipalities are responsible for organizing their fire brigades, whereas overall organization, training, equipment, etc. are regulated at the cantonal level. Fire brigades mainly consist of compulsory service personnel and volunteers. In recent years, there has been a move towards regional mergers of local fire brigades for more cost-effective and better-equipped joint fire brigades *(Verbundsfeuerwehren)*. Some large cities maintain professional fire brigades, while certain big companies also have their own operating fire brigades. If an event is legally regulated on a cantonal level, the *Zivilschutz* can take over certain tasks (e.g., fire watch, traffic control) during longer operations in order to relieve the fire brigades.

- Healthcare (medical care without nursing):[97] Healthcare is responsible for the medical care of the population and the emergency services. People working in healthcare are predominantly professionals. However, the health sector also consists of some organizations that rely on volunteers, such as the Swiss Samaritan Association. Organization, training, equipment, etc. are regulated and financed at the regional (in particular ambulance services) or cantonal level (hospital services). Depending on cantonal regulations, members of the *Zivilschutz* may be called upon to perform tasks (care, administration, transport, etc.) in events involving a large number of casualties. In addition, the federal government maintains a coordination body (see description of The Coordinated Areas below) and additional resources for such situations.

- Technical services:[98] The technical services are responsible for ensuring infrastructures are safe and functioning in accordance with applicable legal regulations. They consist of both private and public companies and cover electricity, water and gas supply, waste management, transport and communications infrastructure. The staff of these companies consists almost exclusively of trained professionals. If necessary, the technical services can draw on the resources of all other partner organizations.

- *Zivilschutz*:[99] Originally focused on support functions in armed conflicts, the *Zivilschutz* is nowadays a civilian organization focused on disaster and emergency management. Within the civil protection system, it is mainly responsible for command support, assistance (e.g., to persons seeking protection), technical assistance, and logistics, but it can also provide specialized services, such as repair works or rescue from rubble. The *Zivilschutz* supports, strengthens, adds, and relieves the other partner organizations in order to ensure the sustainability of the integrated system. Most of the approximately 75,000 active

Zivilschutz personnel are drawn from compulsory service personnel via the militia system.[100] The cantons are responsible for the organization, training, deployment, etc. of their *Zivilschutz*. Cantons can tailor their *Zivilschutz* to the respective hazards as well as political and topographical conditions in their canton. The federal government sets certain legal requirements and assumes certain tasks for the cantons, for example, in the areas of training, warning, and communication systems. Depending on the size of the cantons, around 15 per cent of the *Zivilschutz* are organized at the cantonal level, 70 per cent at the regional level, and 15 per cent at municipal level.[100] The creation of inter-cantonal *Zivilschutz* bases has frequently been discussed in order to better coordinate the deployment and procurement of resources at the inter-cantonal level.[101] These would concentrate specialized capabilities and resources, such as protection against CBRN events, the acquisition of which is either not necessary or too costly for each individual canton.

In addition to these cantonal actors, the federal administration also plays an important role in the integrated system. Among other things, it is responsible for coordination at the federal level and between the different civil protection actors, supports the cantons with specialized resources, and regulates the warning and alerting of authorities and the population in the event of imminent danger.[102] In agreement with the cantons, it can also take over the coordination and leadership of events that affect several cantons simultaneously, the whole country, or neighboring countries (see Section 3.1.4). The most important actors in civil protection at the federal level are:

- FOCP:[103] As one of the six federal offices in the Swiss Federal Department of Defence, Civil Protection and Sport (DDPS, *Eidgenössisches Departement für Verteidigung, Bevölkerungsschutz und Sport*, VBS), FOCP is responsible for the development of the national strategy in civil protection as well as the coordination of civil protection activities with other federal agencies, the cantons, and partner organizations. In this function, it plans and coordinates protective, rescue, and support measures, coordinates research in the field of civil protection, and is in charge of training at the federal level in collaboration with the cantons and partner organizations. FOCP is also responsible for the protection of cultural property and critical infrastructures, as well as the periodic preparation of the national risk analysis. Furthermore, it alerts authorities and the public in the event of imminent danger, and instructs the population during an emergency. It operates the National Emergency Operations Centre (NEOC, *Nationale Alarmzentrale,*

NAZ, see Section 3.1.5) as well as Spiez Laboratory – the Swiss specialized institute for protection against CBRN threats. FOCP has around 330 employees.

- Federal Civil Protection Crisis Management Board (*Bundesstab Bevölkerungsschutz,* BSTB): Since 2018, the BSTB has been responsible for the management of all civil protection-related disasters and emergencies at the federal level, including long-lasting electricity shortages, nuclear accidents, and pandemics. The BSTB is an interdepartmental board with representatives from all relevant federal offices, the cantons, and selected operators of critical infrastructures. It aims to improve the cooperation between these agencies during disasters or emergencies relevant to civil protection on the national level. It is formally based within FOCP, but it is important to note that the BSTB is not the FOCP's crisis unit. Rather, it is the crisis unit of the entire federal government (see also Section 3.1.4).

- The Coordinated Areas *(Koordinierte Bereiche):*[104] The Federal Council has delegated preparation for how to manage disasters and emergencies of supra-regional or national proportions to special bodies (committees, commissions) in which all the relevant authorities are represented. Their task is to coordinate between the federal level and the cantons in specific areas relevant for civil protection. They do so by handling the interface between the preparation and deployment of resources, ensuring specialist training, and practicing operational cooperation. Currently, there are six Coordinated Areas, each with their own coordinating body:

  1. Telematics: The task of the Federal Commission for Telematics in the Field of Rescue and Safety (*Eidgenössische Kommission für Telematik im Bereich Rettung und Sicherheit,* KomTm BORS) is to ensure transmission for all partner organizations in all situations.

  2. NBC protection:[105] The task of the Federal Commission for NBC Protection (*Eidgenössische Kommission für ABC Schutz,* KomABC) is to coordinate protection against CBRN risks and hazards.

  3. Medical service:[106] The task of the Coordinated Medical Services (*Koordinierter Sanitätsdienst,* KSD) is the coordination of civil and military resources for public health use in case of disasters and emergencies.

  4. Transportation:[107] The task of the Coordination of Transport in the Event of Disasters and Emergencies (CTE, *Koordination des Verkehrswesens im Hinblick auf Ereignisfälle,* KOVE) is to prepare, implement, and coordinate measures in the transport sector to cope with disasters and emergencies.

  5. Weather:[108] The task of the Coordinated Weather Service *(Koordinierter Wetterdienst)* is to provide information, advice, and warning on weather conditions.

  6. Natural hazards:[109] The task of the Steering Committee on Intervention in Natural Hazards (*Lenkungsausschuss Intervention Naturgefahren,* LAINAT) is to promote preparation for extreme natural hazards, and to manage concrete projects for hazard preparation and warnings.

Besides these cantonal and federal actors of the integrated system, there are various other organizations and agencies both at the federal level and in civil society, which also have operational resources at their disposal. They can make these available to the civil protection system on a subsidiary basis in response to specific disasters and emergencies. These organizations typically offer resources and services that are either limited or not available in the civil protection system.[110]

- DDPS Emergency Response Teams (*Einsatzequipen VBS,* EEVBS):[111] The DDPS's emergency response teams are available around the clock to provide advice, support, and verification services for first responders in CBRN situations. The teams are composed of volunteer specialists from Spiez Laboratory and the NBC EOD Centre of Competence of the Swiss Armed Forces. The National Emergency Operations Centre of FOCP is their point of contact.

- Military: The civilian authorities can request the support of the Swiss Armed Forces if the joint regional or cantonal civil protection resources are not sufficient or suitable for coping with a disaster or emergency. In such a situation, the Swiss Armed Forces primarily provide subsidiary protection (e.g., for critical infrastructures), military disaster relief (e.g., for damage control) and general support missions (e.g., airborne transports or engineering tasks). In the civil protection context, the Swiss Armed Forces are only ever deployed at the request of civilian authorities and always remain under their command.

- Other organizations: There are several other organizations that are not formally integrated within but nevertheless support the Swiss civil protection system when needed, for example, in the areas of SAR or first aid. These include the Swiss Association for Search and Rescue Dogs, the Swiss Air Rescue (Rega), the Swiss Red Cross (SRC), and the Swiss Samaritan Association. Some of these organizations are also integrated into Swiss Rescue (see Section 3.2.3).

3.1.3   Budget

In 2019, the federal government spent circa 166 million CHF on "Civil Protection and Civilian Service" (up from 153 million CHF in 2018).[112] This accounts for 3 per cent of all federal expenditure on security (in comparison, "Military" accounts for 4.934 billion CHF or 82 per cent of all expen-

diture, while "Police, Penal System and Intelligence" accounts for 489 million CHF or 8 per cent of all expenditure). The increase in expenditure between 2018 and 2019 is mainly due to a single costly project *(Werterhalt POLYCOM 2030)* as well as delayed projects that were advanced in 2019. For 2020, the federal government's estimate for the area of "Civil Protection and Civilian Service" envisaged expenditures of around 160 million CHF.[113] Increasing expenditures are projected for the following two years (173 million CHF in 2021 and 193 million CHF in 2022). Expenditures are expected to decrease again thereafter (167 million CHF in 2023 and 168 million CHF in 2024). The implementation of the requirements of the new Civil Protection Act from 2021 onwards, such as the procurement of CBRN materials, or the complete takeover of the siren-based alerting system by the federal government, explains the temporary increase in spending on civil protection on the federal level.

The civil protection costs for the respective cantons are not easily identifiable. The focus of expenditure varies according to the partner organization. Expenditure for the police, fire department, health care, and technical services is mainly for everyday and major incidents. Additional costs for coping with disasters and emergencies are generally low. Only the *Zivilschutz* is primarily geared for disaster management in terms of size, equipment, etc., and consequently also in terms of costs. In the *Zivilschutz,* the respective responsible authorities bear the costs in full – i.e., the cantons and municipalities pay for everything that does not fall within the remit of the federal government.

In 2015, FOCP commissioned an external study to assess the costs of the *Zivilschutz* for the public sector.[114] As part of this study, the total costs for all 26 cantons were extrapolated based on specific cost surveys in 11 representative cantons. In the three survey years 2011, 2012, and 2013, the total costs of the *Zivilschutz* amounted to around 323 million CHF per year or circa 40 CHF per capita. The federal government paid for about one third of these costs, or 103 million CHF. The cantons and municipalities paid the remaining 220 million CHF. The largest cost center for the cantons and municipalities was "Administration and Leadership", for which they spent about half of all *Zivilschutz* funding, followed by "Recruitment" (18 per cent of expenditure) and "Training" (17 per cent). The study also showed that the per capita *Zivilschutz* costs differ between cantons by up to a factor of two. Since there is no standardized *Zivilschutz* in Switzerland, the requirements for *Zivilschutz* organizations vary greatly from canton to canton, depending on the hazards relevant to the canton as well as societal expectations of the *Zivilschutz* services. Any cost comparison for the *Zivilschutz* between individual cantons must accordingly also take into account such cantonal characteristics.

3.1.4 Leadership[115]

Following the principle of subsidiarity, the political responsibility for the protection of the Swiss population, and thus also for civil protection, lies with the responsible executives at the three levels of government: municipal (local council), cantonal (cantonal government), and federal (Federal Council) (Figure 6). These bodies represent the strategic-political leadership structures in crisis management. At their respective levels, they designate the command and control structures *(Führungsorgan),* which provide the operational leadership. They are thus responsible for planning, management, and coordination in the event of disasters and emergencies.
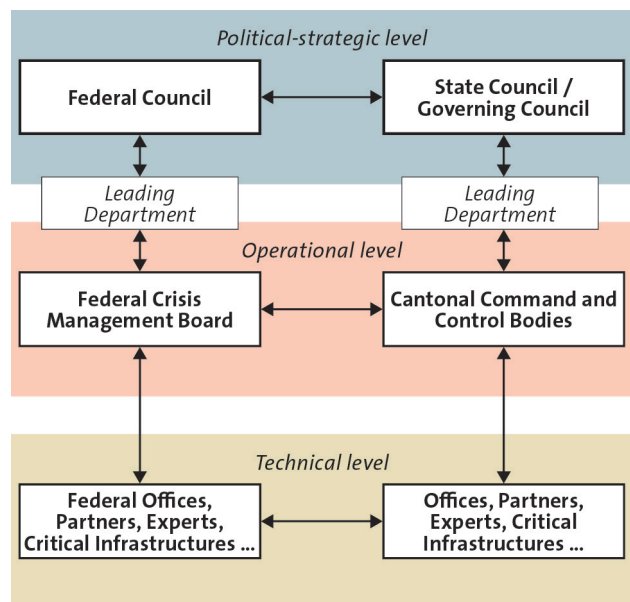
Figure 6. Swiss federal and cantonal leadership structures in civil protection (source: FOCP).

Cantonal Leadership Structures[116]

Larger cantons tend to have several governing bodies that oversee command and control at multiple levels, while smaller cantons often have one governing body at the cantonal level. The cantons appoint the cantonal and regional governing bodies in civil protection. Municipal executives appoint their respective municipal governing bodies for command and control purposes. These management entities must be able to cope with disasters and emergencies at their respective levels through the coordinated deployment of all partner organizations and by ensuring their own around-the-clock operational readiness. The cantonal governing bodies must be capable of dealing with disasters at inter-cantonal level.

Operational leadership in civil protection also follows the principle of subsidiarity. In the case of everyday events, the partner organizations are led by their own operational command *(Einsatzleitung).* In the case of major incidents, an overall operational command *(Gesamt-*

einsatzleitung), consisting of representatives of all in-volved partner organizations, leads the partner organizations that are deployed. The municipal, regional, or cantonal command and control bodies in civil protection only take over leadership if several or all partner organizations in their jurisdiction are deployed over a longer time period. In the case of inter-cantonal operations, each canton is in charge of its own resources.

Federal Leadership Structures

The Federal Council takes leadership in civil protection-related disasters and emergencies of national dimensions.[117] This refers to events that impact several cantons, the whole of Switzerland, or neighboring countries, and endanger a large part of the Swiss population or its livelihood. Examples include long-lasting electricity shortages, accidents at nuclear power plants, and pandemics. In such events, the Federal Council is in contact and coordinates with its counterparts on the strategic-political level in the cantons – the cantonal governments.

In such crises, the Federal Council is supported by the Federal Chancellery, which creates an overview of all the crisis units in operations and assists the *ad hoc* crisis unit *(ad hoc Krisenstab)* of the Federal Council, if one is established.[118] Outside of crises, the role of the Federal Chancellery in crisis management is to support the federal departments in training their own crisis units and to advise them on crisis management processes.[119] Furthermore, it is responsible for the planning, implementation, and evaluation of the periodic strategic leadership exercises *(Strategische Führungsübungen)* of the federal government. It actively takes part in the preparations for other major crisis exercises, such as the regular security network exercises *(Sicherheitsverbundsübungen).*

During crises, the Federal Council is also advised and supported at the operational level by the BSTB. In a normal situation *(normale Lage),* the BSTB is responsible, amongst other things, for coordinating the precautionary planning for various types of crises as carried out by the responsible federal offices.[120] During a crisis of national dimensions relevant to civil protection *(besondere und ausserordentliche Lage),* the BSTB is responsible for developing decision-making cases for the Federal Council and other involved bodies. It provides command support (e.g., situational awareness and resource management),[121] and is responsible for operational coordination with other crisis units at the federal level, the cantonal command and control bodies, and partner organizations abroad.

3.1.5 Situational Awareness

The NEOC is the responsible federal authority for dealing with extraordinary events.[122] This includes radioactivity, chemicals, biological, or natural hazards, as well as any other event of national significance relevant to civil protection.

The tasks of the NEOC include monitoring and analysis of the general situation by collecting, evaluating, and disseminating necessary information 365 days a year. It is available to partner organizations around the clock. In the event of an incident, the NEOC informs the relevant actors and partner organizations at federal and cantonal level, carries out coordination activities, and provides a continuously updated electronic situation report *(Elektronische Lagedarstellung,* ELD), which merges the different partial situational reports of the involved partners. When the BSTB is activated in the context of major disasters and emergencies, the NEOC acts as its operations and support unit *(Einsatz- und Supportelement).* The NEOC has the authority to independently inform and warn authorities, and alert the population of imminent danger, in case the responsible federal bodies are unable to act. The NEOC is a division of FOCP with a permanent staff of circa 30 full-time employees, which is supplemented by a militia-based military unit to ensure it is permanently available.

In order to fulfill its mission, the NEOC cooperates with various federal offices, cantonal authorities, the military, the partner organizations of the Swiss civil protection system, and international partners. At the cantonal level, the key partners are the cantonal command and control bodies, and the cantonal police operations centers.[123] At the international level, the NEOC's key partners are the emergency operations centers of the neighboring countries, the International Atomic Energy Agency (IAEA), the EU, the Nuclear Energy Agency, and the European Space Agency and Partnership for Peace.[124] Based on bilateral agreements, the NEOC is part of an international warning and information system via the emergency operations centers of its neighbors and the IAEA. Furthermore, the NEOC is the national contact point for nuclear accidents (EMERCON alarms), the EU's European Community Radiological Information Exchange (ECURIE), and for chemical accidents with cross-border consequences under the United Nations Economic Commission for Europe (UNECE) convention.

3.1.6 Resource Management

Coping with disasters and emergencies is resource intensive. The affected command and control bodies at municipal, regional, or cantonal levels may therefore require more or different resources and capabilities than those available to their own partner organizations. In principle, an affected canton is required to cope with an event with its own resources.[125] If this is not possible, the neighboring cantons provide assistance. If this is still not enough, other cantons and neighboring countries *(grenznahes Ausland)* provide support. As a last resort, the federal gov-

ernment may provide subsidiary support to the cantons. In this case, there is the possibility of allocating military (see Section 3.1.2) and civil support. The latter involves the procurement of civil resources and services from municipalities, cantons, the federal government, companies, international organizations, and foreign countries. The federal government's instrument for this procurement is the Resources Management at Federal Level (*Ressourcenmanagement Bund,* ResMaB).[126]

The cantonal command and control bodies, federal agencies, and operators of critical infrastructures can activate ResMaB.[127] They then can submit a request for specific resources and services via an electronic platform to the operational element of ResMaB run by the NEOC — the National Operation and Coordination Center (*Nationales Operations- und Koordinationszentrum,* NOCC).[128] The NOCC checks availability with its partners and, if possible, refers the desired resources and services to the requester. ResMaB can be activated during smaller events, for example, when elements of the NEOC are also in action. However, a more likely scenario is an activation of ResMaB in the context of a major incident, when the BSTB is also called upon as a command and control body. This was the case, for example, during the first phase of the COVID-19 pandemic in spring/summer 2020. In order to ensure that ResMaB provides support as needed in a crisis, external experts supplement the permanent members of the NOCC from the FOCP on a case-by-case basis (e.g., representatives of the Federal Office for National Economic Supply (basic supply), CTE, or from SDC and SRC (location and rescue)).

ResMaB thus ensures holistic coordination of all resources and services available at the federal level. The partners of the NOCC are the cantonal command and control bodies, federal offices, operators of critical infrastructures, NGOs, private companies, foreign government agencies, and international organizations. One of the organizational units at federal level with which the NOCC cooperates is SDC.[129] If necessary, SDC serves the NOCC as the contact and coordination point for offers of assistance from abroad, refers resources from foreign partner organizations to the NOCC, and sets up and operates the Reception and Departure Centers for foreign aid.

3.1.7   International Cooperation

Bilateral agreements with all its neighboring countries provide Switzerland with an insurance policy in disaster management. The first of such agreements was signed with Germany in 1984. It served as a template for analogous agreements signed in the subsequent years with France (1987), Italy (1995), Austria (2000), and Liechtenstein (2005).

The respective agreements are largely identical and provide the legal basis for three components. The first component provides mutual assistance in the event of a major incident via close cross-border cooperation. Services include firefighting, CBRN defense, medical aid, rescue, and recovery, but the scope is not limited to these.

The second component comprises joint preparedness measures, including simulation exercises and training workshops. Scenarios included chemical accidents (ATFEX, 2011), earthquakes (SEISMO, 2012), nuclear incidents (ConvEx3, 2017), as well as extreme wind events and animal diseases (AIOLOS, 2017). Simulations also strengthened the ties between the NEOC and its neighboring counterparts, which facilitates efficient exchange and coordination in times of crisis. These preparedness measures are coordinated by FOCP.

The third component comprises the integration of cross-border emergency services at different administrative levels. Following the principle of subsidiarity, the primary political responsibility lies at the municipal and cantonal level. Here, bilateral agreements concluded at the federal level have facilitated the integration of cross-border civil protection services for Switzerland's seven border cantons. The agreements remove red tape, such as waiving customs controls, to facilitate smooth border crossings of emergency services, and to regulate the allocation of deployment costs. The sending entities (countries, cantons, provinces, *Länder,* etc.) generally bear the costs for deployments abroad. An exception to the rule applies to services provided in support of a foreign commercial firm, such as a chemical plant or a small business. In such cases, the insurance company of the firm or the host state itself is liable for the expenses of foreign assistance.

International patient transport during the COVID-19 pandemic exemplifies the benefits of integrated cross-border emergency services and the cantons' operational autonomy in civil protection. In response to the strained healthcare systems in the severely affected French Alsace, the bordering cantons of northwestern Switzerland took the initiative and admitted more than 30 French patients in March 2020. The well-integrated cross-border emergency services allowed for the smooth transport and care of patients across the French-Swiss border. French President Emmanuel Macron praised this collaboration at the local level as an example of "European solidarity". The federal level in Switzerland only became involved in this cooperation at a later stage.

Despite its benefits, the integration of the Swiss civil protection system via bilateral agreements also has its shortcoming. The interoperability of cross-border services remains one of the major challenges. All of Switzerland's neighboring countries are Member States of the UCPM. The harmonization of civil protection services, common standards, and norms for cross-border deployments has been one of the UCPM's core tasks within Europe. However, Switzerland has not been part of this process, which presents a challenge when deploying modules and staff with distinct operational standards and norms

across borders. Cantonal fragmentation limits interoperability even further. The autonomy of cantons certainly has been an important catalyst of cross-border cooperation in civil protection. Nevertheless, the lack of inter-cantonal platforms or modules hampers Switzerland's ability to mobilize, and join forces from multiple cantons, in a holistic response to a disaster of national or international significance.

Further international agreements deepen the level of integration of the Swiss civil protection system in specific sectors. Nuclear safety is one such sector. At the bilateral level, the Swiss Federal Nuclear Safety Inspectorate's (ENSI) close coordination with regulatory partner agencies in Germany, France, Italy, and Austria, builds on a number of agreements going back as far as the 1970s. In addition to the duty to report nuclear incidents immediately, the bilateral agreements also provide the basis for a number of joint preparedness activities and exchanges of best practices, including the permanent disposal of radioactive waste, cross-border emergency responses, as well as the protection of nuclear power plants against terrorist attacks. As a founding member of the IAEA, and a signatory of its 1994 Convention on Nuclear Safety (CNS), Switzerland is also taking part in the development of legal and normative standards at a multilateral level.

Hosting one of the premier laboratories worldwide, Switzerland's international cooperation in the area of chemical, biological, and nuclear threats and disasters is particularly strong. Spiez Laboratory was originally created as a federal research institute following the proliferation of chemical warfare during the First World War. With the creation of FOCP in 2003, Spiez Laboratory became an integral part of the Swiss civil protection system. Today, a number of international agreements embed the laboratory, located in the canton of Bern, and its hundred staff, firmly into the multilateral system. As one of designated laboratories for the analysis of environmental samples of the Organization for the Prohibition of Chemical Weapons (OPCW), Spiez Laboratory is subject to stringent quality tests every year, and it performs critical tasks as part of verification procedures for the 1993 Chemical Weapons Convention. An example of Switzerland's good offices include the analysis of chemical samples from the Syrian civil war in 2013. The international remit of the Swiss civil protection system increased with the designation of Spiez Laboratory as a collaborating center of the IAEA in 2017 to support its nuclear forensic work. Further good offices include coordinating functions, such as hosting annual meetings for laboratories nominated by UN Member States to the United Nations Secretary-General's Mechanism (UNSGM) – a collaborative platform that connects international experts and laboratories in order to support international investigations of alleged use of chemical and biological weapons. An interdisciplinary forum, Spiez Convergence, organized in collaboration with

the CSS at ETH Zürich in 2014, aims at further strengthening the role of the laboratory at the nexus of science, policy, and practice. It brings together experts and practitioners from science, industry, and arms control to discuss how advances in chemical and biological sciences will affect multilateral treaties governing the prohibition of chemical and biological weapons.

3.2 Swiss Humanitarian Aid

3.2.1 Mandate and Structure

Switzerland draws on a long and internationally recognized humanitarian aid tradition. The historical roots of Switzerland's commitment to international humanitarian principles go back to the 19th century. The entrepreneurial role of the Swiss Henry Dunant led to the creation of the International Committee of the Red Cross (ICRC) in 1863, and facilitated the adoption of the first humanitarian treaty among major European powers in 1864. The First Geneva Convention provided the legal basis for Switzerland, other States, and the ICRC to provide medical aid and protection to victims of war, and to facilitate communication between prisoners of war and their families in European armed conflicts. Following the Second World War, the acceleration of decolonization and the changing nature of armed conflicts from inter-state to civil wars, changed the international and Swiss governance structure of humanitarian aid. In 1971, the Swiss Parliament approved the first financial assistance budget of 400 million CHF. It created the Swiss Relief Unit in 1973 in order to increase the coordination of international development and humanitarian aid.[130]

The Federal Act on International Development Cooperation and Humanitarian Aid, passed in 1976, provides the mandate for Swiss Humanitarian Aid today. Its main objective is to "help save human lives where they are at risk and to alleviate suffering through preventative measures and relief with a primary focus on the victims of natural disasters and armed conflict".[131] The department of Humanitarian Aid within SDC (SDC HA), which is part of the larger administrative structure of FDFA (Figure 7), is responsible for implementing Switzerland's commitment to humanitarian principles today.
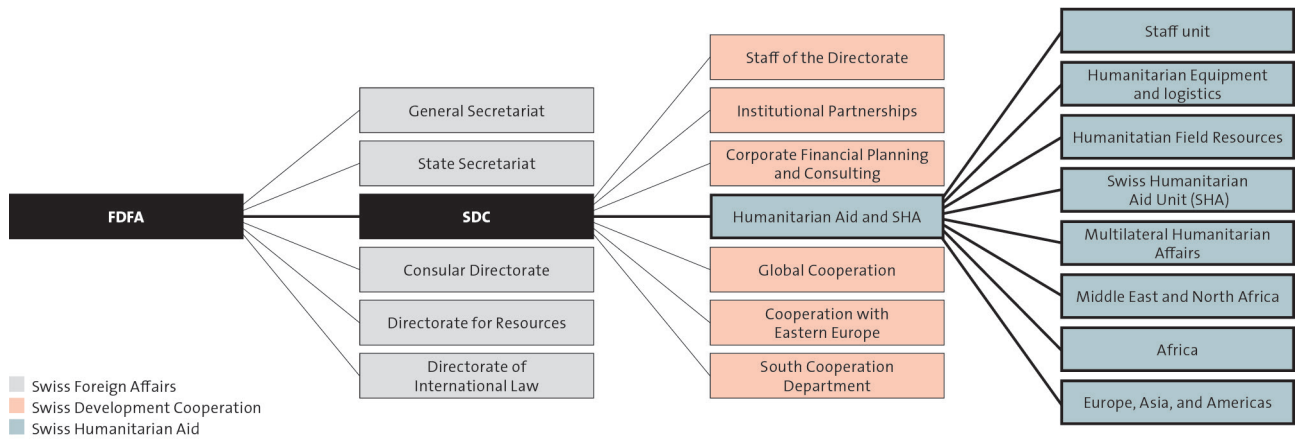
Figure 7. Administrative structure of Swiss Humanitarian Aid (source: FDFA / SDC).

3.2.2 Budget and Priorities

The budget for Swiss Humanitarian Aid is part of SDC's financial framework. The Swiss Parliament approves the framework for four consecutive years to enable longer-term engagements. In its recent approval of SDC's budgetary cycle for 2021−2024, the Parliament allocated 2.15 billion CHF for humanitarian aid.[132] This accounts for almost 20 per cent of Switzerland's budget for international cooperation of 11.25 billion CHF over the next four years, which is jointly implemented by the SDC, the FDFA's Human Security Division (HSD), and the State Secretariat for Economic Affairs (*Staatssekretariat für Wirtschaft,* SECO) (Figure 8). The share of SDC funds dedicated to humanitarian aid have remained constant over the past decade, typically accounting for approximately one fourth of the total SDC budget (Figure 9).[133] Over the next four years, around 500 million CHF will be made available for humanitarian aid missions each year out of the annual SDC budget totaling over 2 billion CHF.

Swiss Humanitarian Aid Budget
in million CHF

Figure 9. Swiss Humanitarian Aid budget in million CHF, 2001−2024 (source: FDFA/SDC).

In 2020, the Swiss federal government spent 0.48 per cent of its annual Gross National Income (GNI) on international development and humanitarian aid to countries eligible for ODA, as defined by the OECD DAC. Humanitarian aid provided by the SDC accounted for circa 18 per cent of Switzerland's total annual ODA, totaling 3.2 billion CHF.[134] In 2019, Switzerland's development assistance was the eighth highest among member countries of the DAC, just below the average of all EU-countries (0.47 per cent).[135] In terms of financial volume, the largest donors are the United States, Germany, the United Kingdom, Japan, and France, whereas Switzerland takes the 11th place in absolute numbers. Switzerland currently falls short of its pledge to spend at least 0.7 per cent of its GNI as part of its commitment to the 2030 Agenda for Sustainable Development.[136]
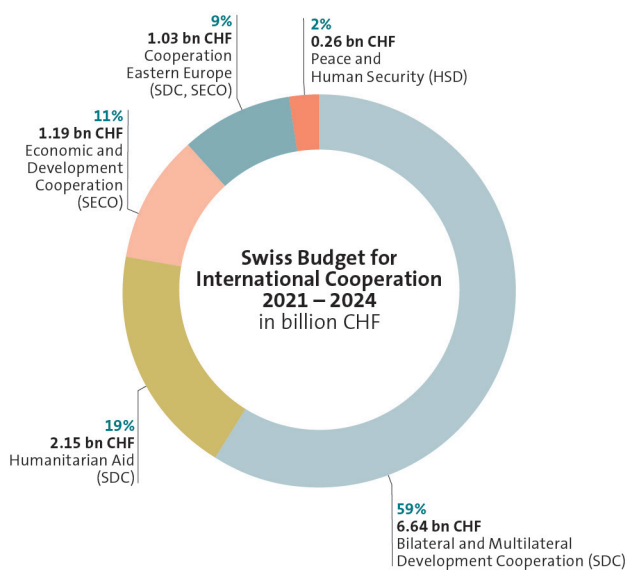

Figure 8. Switzerland's budget for international cooperation in billion CHF, 2021−2024 (source: FDFA/SDC/SECO).
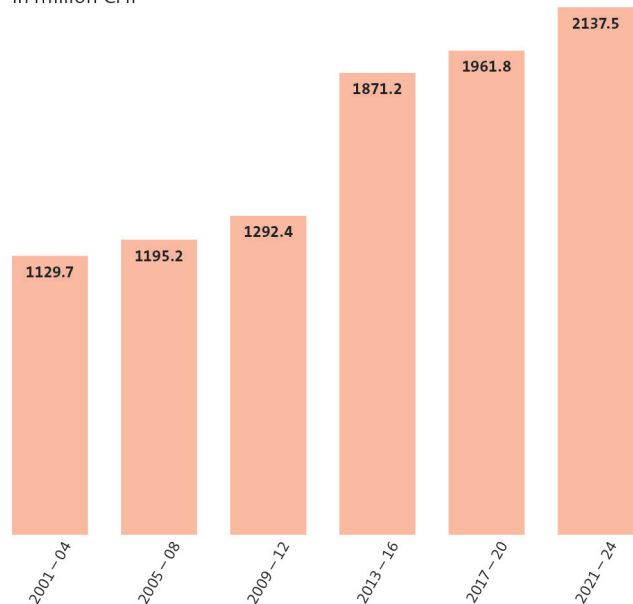
The mandate of Swiss Humanitarian Aid remains universal. For example, Switzerland contributed over 500 million CHF to relief missions in 65 countries across four continents (Africa, Asia, Latin America, Europe) in 2019 (Figure 10).[137] However, the lion share of this relief funding (more than two-thirds of the SDC HA budget in 2019) was allocated to crises in the Middle East and sub-Saharan Africa. This regional focus is part of a stronger alignment of the Swiss humanitarian aid sector with FDFA's bilateral international development initiatives, while nevertheless maintaining its universal mandate.
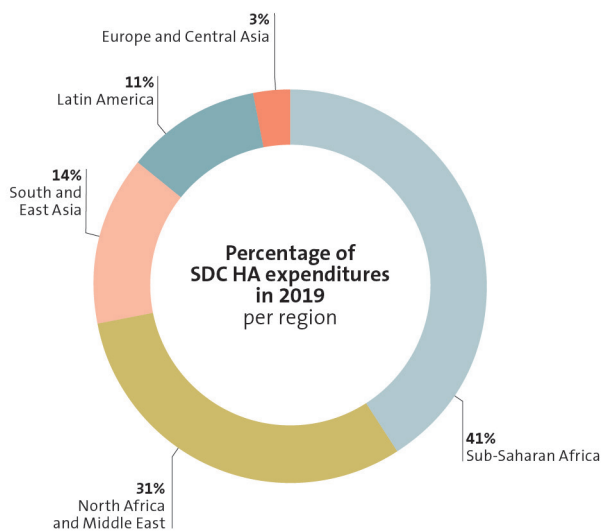

Figure 10. Percentage of SDCHA expenditures in 2019 per region (source: FDFA/SDC).

The protracted nature and increasing complexity of many humanitarian crises has increased the collaboration between the humanitarian aid and development cooperation domains within SDC. According to OCHA, more than 60 per cent of all humanitarian aid funding worldwide in 2018 was invested in crises that lasted five years or more, while the average length of humanitarian crises rose between 2005 and 2017 from four to seven years.[138] In addition, the number of active crises receiving an international response almost doubled from 16 to 30 in the same time span. The root causes of this changing humanitarian aid landscape are enduring civil wars and the higher frequency of extreme weather events, including severe floods and droughts.

SDC responded to these changes by facilitating a greater sharing of tasks between the humanitarian aid and international development initiatives within the department.[139] Both of SDC's work streams remain separate administratively and draw on financial resources from different budgetary streams. However, longer-term engagements are increasingly implemented as part of FDFA's bilateral international development initiatives. The

increasing task sharing within SDC also suggests a geographic narrowing of Switzerland's longer-term humanitarian aid commitment, such as disaster risk reduction and reconstruction efforts. International development initiatives are limited to SDC 's priority countries and regions, namely: 1) North Africa and the Middle East, 2) Sub-Saharan Africa, 3) Central, South, and South-East Asia, as well as 4) Eastern Europe, whereas the geographic scope of humanitarian aid engagements remains universal.

Budgetary transfers within SDC provide further financial flexibility in times of crisis. In 2013, a system of budgetary permeability was introduced within SDC, which allows for internal financial transfers from development cooperation divisions to the humanitarian aid division of a maximum of 120 million CHF per year.[140] The system seeks to accommodate the unpredictability of disasters into budgetary planning, and to free up resources in response to rapidly evolving humanitarian emergencies.

3.2.3 Instruments and Capacities

The SDC HA has four instruments at its disposal to fulfill its mandate to help save human lives at-risk and alleviate suffering through preventative measures and relief efforts. These instruments are: 1) financial contributions to humanitarian partners and multilateral organizations, 2) the secondment of Swiss humanitarian aid experts to its UN partners and to the ICRC, 3) facilitate access to humanitarian aid and to ensure the respect of international law, and 4) implement humanitarian projects and provide emergency relief during armed conflicts and disasters.

Multilateralism continues to be a core pillar of the Swiss humanitarian aid strategy. Over the past decades, two thirds of the SDC HA budget have funded programs and operations of multilateral humanitarian aid organizations (Figure 11). About half of this amount went to the ICRC, while the other half was earmarked for UN agencies. The budget for the 2021−2024 period continues this trend. Collaboration with UN agencies that play a central coordinating role in mobilizing multilateral response to disasters and humanitarian emergencies has been particularly close. These include the World Food Program (WFP), the UN High Commissioner for Refugees (UNHCR), the UN International Children's Emergency Fund (UNICEF), the UN Relief and Works Agency for Palestine Refugees in the Near East (UNRWA), the UN Office for Disaster Risk Reduction (UNDRR), and OCHA. As a signatory and depositary state of the Geneva Conventions, Switzerland's political and financial support of the ICRC has been strong historically. In addition to these intergovernmental agencies, Switzerland maintains close relationships with a number of international NGOs in humanitarian aid.
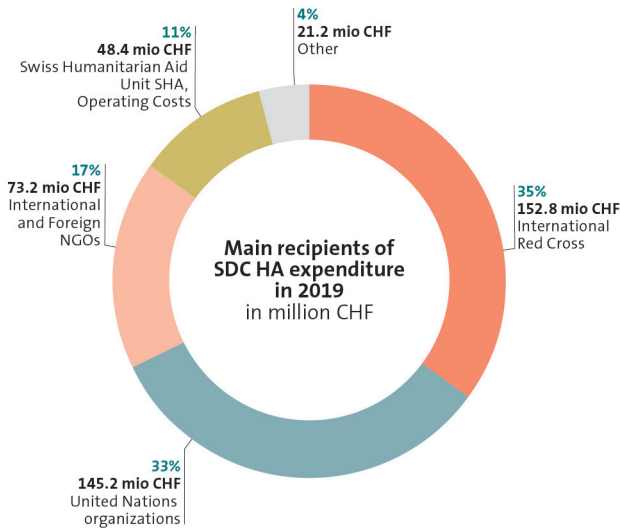
Figure 11. Main recipients of SDC HA expenditure in 2019 (source: FDFA/SDC).[141]

Although Switzerland's humanitarian aid engagement is not limited to specific events or services, food aid is an important area of focus. For example, Swiss contributions to the WFP in 2018 totaled 75 million CHF, about 15 per cent of the annual budget of SDC HA, which benefited over two dozen countries.[142] More than half of these contributions addressed humanitarian emergencies in Africa caused by armed conflicts, droughts, and floods, while the remaining funds were earmarked for crises in the Middle East, Asia, as well as Haiti and Colombia. In addition to its financial donations, Switzerland also provides in-kind contributions to the WFP, including dairy and cereal products, as part of rapid response efforts during emergencies and situations with chronic undernourishment. Switzerland is also one of the 16 parties to the Food Assistance Convention of 2012, a successor of the 1999 Food Aid Convention. Despite no hard-legal obligations, the Convention commits signatories to contribute to international response to emergency food situations and other food needs of developing countries.

The Swiss Humanitarian Aid Unit (SHA, *Schweizerisches Korps für Humanitäre Hilfe,* SKH) is the operational arm of Switzerland's response to disasters and complex emergencies abroad (see Figure 7). It consists of a rapid deployment corps of some 700 technical experts and field responders, who are on call in time of need.[143] In response to an emergency abroad, SHA members are assembled into Rapid Response Teams (RRT) that can be deployed within ten hours. The SHA is organized as a militia-system, meaning that its members fulfill duties in temporary missions with fixed-term contracts. Members of the SHA are under contract for the duration of a field mission. Their wage depends on the type of work to be performed during the mission, as well as the respective

person's level of training and experience. Joining the SHA is only possible with comprehensive professional and field experience, and it requires Swiss citizenship or a permanent residence permit (C) in Switzerland or the Principality of Liechtenstein. The specialists are divided into 11 expert groups (Figure 12). The SDC HA has the authority to evaluate and decide upon the secondment of Swiss humanitarian aid experts to international partner organizations.

The SHA and its expert groups

Coordination and Administration Manages Swiss and international aid programmes during and after conflicts or disasters
Support / Logistics Procurement , storage and distributions of basic necessities during and after conflicts or disasters
Construction Planning, advising and carrying out reconstruction projects (accommodation, schools, hospitals)
Water and Environmental Sanitation Groundwater abstraction, and setting up or rehabilitating systems for the treatment, storage and distribution of water
Environment and Disaster Risk Reduction Preventive work to reduce disaster risk
Medical Providing care for survivors, distributing health kits and supporting local hospitals
Rescue Assist victims of the earthquake and rescue people buried under rubble
TechCom Ensuring aid teams can communicate with each other
Security Advise Swiss Humanitarian Aid teams on security issues
Information Coordinate relations with media representatives on the ground during acute crises
Protection Protect the rights, security, integrity and dignity of people affected by armed conflict and disasters

Figure 12. The functions and capacities of the Swiss Humanitarian Aid Unit (SHA) (source: FDFA/SDC).

Swiss Rescue *(Rettungskette Schweiz),* a public-private consortium that specializes in Urban Search and Rescue (USAR) missions during earthquakes as well as initial emergency relief, is one of the rapid response instruments of SDC HA. Some of its members are also part of the SHA.[144] The consortium consists of eight private, non-governmental, state, and military organizations (see the textbox on Swiss Rescue), with approximately 80 specialists in the domain of USAR who draw on an independent pool of materials, search dogs, and technical modules. The Head of SDC HA/SHA decides, upon recommendation of the SDC HA crisis cell in case of an earthquake, on the activation and deployment of Swiss Rescue. In response to a seismic disaster or other complex emergencies, Swiss

Rescue should be ready for take-off within 12 hours and may be deployed for up to 10 days. Swiss Rescue is also part of the International Search and Rescue Advisory Group (INSARAG), a global network of more than 90 countries and accredited organizations under the auspices of the UN.[145] To be part of the network, USAR teams must fulfill minimum international standards, and complete classified training in the methodology for international coordination in earthquake response based on the INSARAG-guidelines.

Swiss Rescue: A public-private search and rescue consortium

1. Humanitarian Aid: SDC decides on the deployment of a mission. The funding is ensured by the SDC HA budget.
2. Swiss Seismological Service (SED): alerts the on-call service of the SDC HA.
3. Swiss Air Rescue (Rega): supports the initial assessment immediately after the alarm and, if necessary, provides an aircraft for the reconnaissance team.
4. REDOG – Swiss Search and Rescue Dog Association: provides SAR dog teams.
5. Swiss Army / Rescue Troops: provides rescue specialists and, if necessary, military air transport.
6. Swiss Red Cross: delivers and distributes aid supplies.
7. Swiss International Air Lines: supplies a wide-bodied jet.
8. Airport Zürich AG: Provides logistical services at Zurich Airport

---

The SHA provides emergency relief in crises, supports reconstruction of disaster-stricken areas, and engages in preventive disaster risk reduction measures.[146] Emergency relief covers the basic needs of individuals and communities by providing them with food and water, temporary shelter, sanitation systems, access to education, medical aid, as well as the protection of refugees and internally displaced people. Post-disaster reconstruction efforts encompass both material reconstruction and the socio-economic recovery of affected communities. It includes the renovation of public buildings (e.g., schools, hospitals, roads, bridges) and damaged homes, as well as the restoration of water supply systems. Disaster risk reduction refers to all preventative measures that seek to reduce the exposure and vulnerability of populations. This includes the creation of early warning systems and safe zones, as well as raising awareness and improving local crisis management structures.

Rapid response actions remain an important instrument of Switzerland's humanitarian aid toolbox, despite being a small part of the overall Swiss humanitarian aid remit (see Figure 11). In 2018, Switzerland deployed a total of 228 experts to 300 missions in 59 countries.[147] With the aim of strengthening Switzerland's contribution to acute disasters, the Swiss International Cooperation Strategy 2021–2024 increases the percentage earmarked for emergency relief from 66 per cent to 80 per cent compared to the previous budgetary cycle (2017–2020).[148]

Major disasters and emergencies affecting Swiss citizens abroad require close coordination between SDC HA and FDFA's Crisis Management Center (CMC, *Krisenmanagement-Zentrum,* KMZ) whose mandates overlap in such situations. The CMC is part of the FDFA's State Secretariat (see Figure 7) and helps Swiss nationals abroad who are impacted by political unrest, assassination attempts, kidnappings, as well as armed conflicts and natural hazards.[149] To fulfill its mandate, the CMC supports, partly in cooperation with the SHA, Swiss embassies and consulates worldwide in preparing for and dealing with crises. This includes the training of FDFA staff and other interested parties in crisis and security management, and managing a crisis intervention pool comprising more than 270 volunteers throughout the world. The CMC typically initiates a first response in the case of a hazard affecting Swiss citizens abroad, and hands over the crisis management to the SDC/SHA in a later stage. This happened, for example, during the major explosion in the harbor of the Lebanese capital Beirut in 2020 (see Section 4.3). The CMC may also activate an interdepartmental task force at any time and coordinate a horizontal crisis response. The latter happened in the case of the repatriation of Swiss citizens during the first months of the COVID-19 pandemic in 2020 (see Section 4.2).

3.3 Collaboration with DG ECHO

The Administrative Arrangement signed by FOCP, FDFA, and DG ECHO in 2017 provides a basis for dialogue between Switzerland and DG ECHO with regards to disaster preparedness, crisis management, and humanitarian aid.[2] An earlier Administrative Arrangement between the EU and the Republic of Moldovia signed in 2012, provided the blueprint for the EU-Swiss arrangement signed five years later.[150]

Knowledge transfer is one of the key areas where collaboration has increased since the Administrative Arrangement came into place, but it remains subject to some institutional barriers. The Administrative Arrangement provides for opportunities for Swiss professionals to participate in workshops and conferences aiming to share best practices. This includes participation in

the UCPM's training program, although it should be noted that many of these training sessions are designed for professionals from Member and Participating States in order to prepare them for possible deployment via the Mechanism.[151] Restrictions also applies to simulation exercises. While the Administrative Arrangement encourages the development of joint exercises for scenarios that may involve cross-border impacts, the participation of Swiss professionals in table top and operational exercises is limited to an observer status.[152] This limits the current integration of Swiss professionals at an operative level as well as the interoperability in disaster management and responses.

The 2017 Administrative Arrangement has established direct communication channels between the Swiss NEOC and CMC and the UCPM's ERCC. This includes sharing of information on national and international risk assessments as well as emergency relief operations in third countries. While the Arrangement has also provided a framework for some technical exchanges, Switzerland must become a Participating State of the UCPM in order to make use of its core operational, coordination, communication, training, and network services, including access to the Pool and benefiting from the new rescEU capacities (as outlined in Chapter 2).

The limits of the Administrative Arrangement in terms of operational collaboration are illustrated in the three case studies discussed in Chapter 4. The earthquake in Albania in 2019 and the Beirut explosion in Lebanon in 2020 highlight limitations to current collaborations between Switzerland and the UCPM at the operational level on the ground (see Sections 4.1 and 4.3). The close collaboration between Switzerland and the EU to repatriate Swiss (and other European) citizens in the first months of the COVID-19 pandemic in 2020, which took place on an *ad hoc* basis, is an example for the untapped potential of closer collaboration between Switzerland and the UCPM (see Section 4.2).

4   Comparison of Disaster Response Activities

To better understand the functioning and activities of the UCPM and Switzerland in the field, and to examine how and when, if at all, the two collaborate, this chapter analyses three recent case studies: 1) the 2019 earthquake in Albania, 2) the 2020 repatriations of citizens in response to the COVID-19 pandemic, and 3) the 2020 explosion in Beirut, Lebanon. These three case studies were chosen for two reasons: a) both Switzerland and the UCPM provided rapid response assistance to the disasters as they unfolded, and b) they cover diverse crises situations requiring different levels and types of skills and resources in Europe and internationally. The Albania earthquake and the Beirut explosion provide an opportunity to compare the operations, resources, collaborations, and financing of Swiss and UCPM rapid response deployments. Furthermore, Switzerland and the UCPM collaborated to repatriate European citizens during the COVID-19 pandemic, providing an opportunity to briefly review an example of the two entities collaborating to provide consular support.

4.1   Case Study 1: Earthquake in Albania, November 2019

On 26 November 2019 at 3.54 a.m. CET, an earthquake measuring 6.4 on the Richter scale shook the northwest of Albania. It lasted more than 50 seconds and was followed by hundreds of aftershocks. Its epicenter was located circa 15 kilometers west-southwest of Mamurras at a depth of 22 kilometers.[153] The earthquake affected over 202,200 people, 51 people died, and more than 913 were injured, while over 17,000 people became homeless.[154] Circa 1780 buildings collapsed and another 3,600 were seriously damaged, especially in the port city of Durres and the towns of Thumane and Laç near the epicenter. In the hours and days following the earthquake, numerous states and aid organizations sent SAR teams and in-kind assistance to the region to support local rescue operations. This included assistance from all of Albania's neighboring countries, as well as Turkey, Romania, France, Italy, Croatia, Israel, and Switzerland.[155] The EU activated the UCPM at the request of the Albanian authorities on the day of the disaster.[156]

4.1.1   Response: UCPM

The ERCC received a request for assistance from the Albanian National Civil Protection Agency (ANCPA) for three Medium Urban Search and Rescue (MUSAR) teams at 5.15 a.m. CET on 26 November 2019. Based on early warning in-formation from the Global Disaster Alert and Coordination System (GDACS) and consultation with ARISTOTLE (All Risk Integrated System TOwards The hoListic Early-warning),[157] the ERCC decided to open an information transmission case in CECIS at 6.34 a.m. CET. At 7.40 a.m. CET it was upgraded to a request for assistance. While 11 countries responded to the call and offered MUSAR teams, the Albanian authorities ultimately accepted the offers from Italy, Romania, and Greece. The ERCC liaison officers arrived in Albania during the course of 26 November 2019, as did the Romanian and Greek MUSAR teams and an Italian advanced team. The Italian MUSAR team and the EUCPT arrived in the country the following day. On 28 November 2019, the initial request by Albania was followed by an official request for assistance from the ANCPA to the ERCC, which included a list of specific material needs such as shelters and WASH (Water, Sanitation and Hygiene) items. The immediate relief action of UCPM lasted from 26 November to 20 December 2019. Thereafter, DG ECHO continued to help Albania with recovery through the deployment of a humanitarian aid expert.

Besides the aforementioned MUSAR teams, UCPM provided the following assistance to Albania:

- An initial six-person EUCPT was replaced by a ten-person team on 4 December 2019 that included additional expertise in logistics and structural damage assessment. Two ERCC liaison officers and two technical experts from the UN Disaster Assessment and Coordination (UNDAC) accompanied both teams.
- A Damage Assessment Coordination Cell (DACC) headed by the UCPM and consisting of circa 185 structural engineers from 18 different countries, including 2 Swiss engineers. Together with Albanian experts, these engineers conducted 3,101 building assessments.
- Six grading maps of affected areas were produced by the Copernicus Emergency Management Service.
- DG ECHO provided 300,000 EUR in emergency funds via the International Federation of Red Cross and Red Crescent Societies (IFRC).
- The EC provided 15 million EUR for immediate assistance in early recovery.
- A Rapid Response Coordinator assessed and followed up on the humanitarian aid situation and remaining needs, and a humanitarian aid expert from DG ECHO was deployed in January 2020.
- In-kind assistance of beds, blankets, hygiene packs, generators, tents, mattresses, kitchen sets, first aid kits, and sleeping bags was provided by eight Member States of the UCPM.
- In the aftermath, the EC organized a donors' conference in Tirana in early 2020 to support recovery and reconstruction efforts. The EU, the UN, and the World Bank also launched a Post Disaster Needs Assessment under their tripartite agreement.

France, Croatia, Turkey, North Macedonia, and Montenegro deployed USAR teams on a bilateral basis outside of the UCPM. Furthermore, Bulgaria, the Czech Republic, Hungary, Montenegro, Slovenia, and Turkey delivered in-kind assistance on a bilateral basis.

In-kind assistance and modules channeled through UCPM were delivered to Albania either overland or by air. The UCPM co-financed up to 75 per cent of the overall transport and operational costs incurred by its Member and Participating States, which amounted to 670,000 EUR.

During this mission there was active cooperation between the civil protection and humanitarian aid sections of DG ECHO. One liaison officer and one UNDAC representative, who accompanied the two EUCPT, were humanitarian aid experts. In addition, a DG ECHO Rapid Response Coordinator was deployed to assess the humanitarian aid situation, and a DG ECHO humanitarian aid expert was deployed in early January 2020. Representatives from both sides of DG ECHO were present at coordination meetings.

Apart from Member and Participating States, the UCPM also worked with representatives from the USA, Israel, Kosovo, and Switzerland within the framework of the DACC. According to the survey results, there was no further explicit cooperation with Swiss representatives on the ground, although they were aware of their presence and work, especially the pilot project for emergency cash.

From the Mechanism's point of view, a particularly positive result of the response was the immediate deployment of the MUSAR teams on the same day as the request for help was received. The division of the EUCPT into two teams, which allowed a simultaneous focus on multiple tasks, such as SAR and damage assessment, is also seen as an effective deployment strategy. Furthermore, the UCPM would like UNDAC representatives to accompany the EUCPT again in the future. Another positive aspect was the rapid and successful adaptation of the UCPM mission to the on-the-ground operational needs. The DACC was established and 90 newly arrived structural engineers were successfully trained and deployed. Close cooperation with national and international partners, such as the Albanian authorities, NGOs, the embassies of Member and Participating States, and the UN Resident Coordinator, was maintained throughout the operation and was seen as a key success factor. The deployment of a coordinator and other humanitarian experts from DG ECHO after the end of the SAR phase to strengthen the subsequent humanitarian aid operations also proved its worth.

One challenge encountered by the UCPM during this operation was the simultaneous deployment of SAR teams by Member and Participating States via bilateral agreements, in addition to the specifically requested MUSAR teams via the UCPM. This increased the coordination effort and led to potential redundancies in the already complex initial phase. A further challenge was encountered in the initial phase as a result of the strong focus on SAR and damage assessment, which tied up almost all resources. This relegated attention to humanitarian aid needs to the second phase. In-kind assistance also faced a bottleneck upon arrival in Albania, as the Albanian authorities only designated one administrative body in the Ministry of Defense as the legitimate consignee for all in-kind assistance. The creation of this bottleneck was exacerbated, as not all donations matched the parameters of requested items.

4.1.2   Response: Switzerland

Switzerland proactively submitted an offer of assistance to the Albanian authorities on 26 November 2019 at 10.00 a.m. CET, 6 hours after the initial earthquake. After positive feedback from the Albanian government, Ambassador Manuel Bessler in his function as the Federal Council's Delegate for Humanitarian Aid, and Head of SHA, made the decision to deploy resources at 1 p.m. CET on the same day.[158] At this time, the ERCC had disseminated information through the Virtual On-Site Operations Coordination Center (Virtual OSOCC) that SAR operations were only needed in two impacted areas, with seven international teams already deployed in Albania. Therefore, SDC decided not to mobilize Swiss Rescue but to send a larger, tailor-made RRT. Fifteen experts were mobilized and transported by a chartered aircraft from Edelweiss Air (a Swiss airline) to the Albanian capital Tirana, where they landed at midnight, 20 hours after the earthquake. Until the end of the RRT operation on 16 December 2019, SDC HA and the SHA deployed 23 experts in total, who together completed the equivalent of 200 days of deployment, with a further 100 days' worth of deployment of local staff. A Swiss expert for Cash & Voucher supported UNICEF for another six months (from February to August 2020) after the end of the RRT operation.

SDC HA in Bern led the mission together with the Political Directorate of FDFA and representatives of the DDPS and SRC. The Swiss Embassy in Albania supported the RRT operation on-site.

Swiss assistance in response to the Albanian earthquake focused on three areas:

1. Damage assessment: Through the evaluation of damaged but still standing buildings the RRT assisted circa 2,550 people in need.
2. Shelter: The provision of emergency shelters suitable for use in winter helped circa 1,126 people in need.
3. Emergency cash: The provision of 300,000 CHF in the form of multipurpose (i.e. unrestricted, unconditional) money via Western Union helped circa 1,600 people in need.

The provided emergency supplies (with a total value of 240,000 CHF) were delivered to Albania either overland directly from the producer in Belgium or by ship from the UN Humanitarian Response Depot in Brindisi, Italy. Some goods were also procured locally. The total cost of the Swiss intervention in Albania amounted to roughly 1 million CHF, which were covered by the regular SDC HA budget.

The operational level survey highlighted a number of positive aspects regarding the Swiss operational approach. The use of structural engineers was successful and result-oriented, despite being a niche approach for Switzerland. The pilot project for emergency cash allowed the distribution of cash without conditions only eight days after the earthquake – earlier than in any previous deployment. The use of Geographic Information Systems and Smartphone-based assessment and mapping tools facilitated visualization and communication in the field, while an application-based post-distribution monitoring by local partners allowed for quality control of the emergency response.

On site, the RRT coordinated their efforts with the UCPM by participating in their coordination meetings, as the UCPM was responsible for the coordination of all non-USAR-activities. In addition, the structural engineers of the RRT worked closely with the DACC, also headed by the UCPM. The survey responses highlighted that this set-up made it challenging for the RRT to get consolidated information because the UCPM did not share information via Virtual OSOCC as per usual, instead using another electronic tool of the UCPM. The Situation Report was also handled as internal to the EU.

The RRT was positively enabled by working with the locally active Swiss NGO Helvetas, which gave it direct access to local authorities, and in some cases with other international humanitarian organizations, such as the Albanian Red Cross and the IFRC.

4.2 Case Study 2: COVID-19 Pandemic Repatriations, Spring 2020

Starting with the first major cluster of identified cases in China between October and December 2019, the new coronavirus (SARS-CoV-2) and the resultant respiratory disease COVID-19 spread rapidly around the world.[159] After alerting its Member States about the occurrence of viral pneumonia of unknown origin in Wuhan on 5 January 2020, the WHO announced a Public Health Emergency of International Concern on 30 January 2020, and declared COVID-19 a pandemic on 11 March 2020.[160] As a result, many countries hastily introduced travel restrictions, reduced or stopped air travel altogether, and closed their land and sea borders to non-citizens. In order to bring their citizens home, European countries undertook one of the largest repatriation operations in recorded history in 2020. After France requested assistance from the UCPM to provide consular assistance to EU citizens in Wuhan on 28 January 2020, the EU activated the Mechanism.[161] In coordination with the UCPM, Member and Participating States subsequently organized numerous repatriation flights, partly co-financed by the Mechanism. In Switzerland, the CMC of FDFA was responsible for organizing the repatriation of Swiss nationals abroad who were no longer able to travel home independently due to the circumstances.[162] In these efforts, Switzerland and the EU were in close contact to bring their citizens home from all over the world.

4.2.1 Response: UCPM

The UCPM offers a last resort for consular support when commercial transport options are limited or non-existent, and when citizens from more than one Member and Participating State are in need of assistance or repatriation.

Since the beginning of the COVID-19 outbreak, 19 Member States, 2 Participating States, and the United Kingdom have requested assistance through the UCPM for the repatriation of citizens. As of January 2021, the UCPM has facilitated the repatriation of 100,313 people to Europe on 408 flights, of which 90,060 are EU citizens.[163] States requesting assistance for consular support through the UCPM were encouraged to fit as many European citizens as possible on board their flights. As a consequence, 1,017 Swiss nationals and more than 5,700 citizens from other non-UCPM countries were also on board these flights. For the UCPM, cooperation with Switzerland in the form of information exchange with the CMC, contributed to better situational awareness and helped to maximize the efficiency of repatriation flights. The ERCC was in the lead of the operations but it cooperated closely with other EC services, EU Agencies, and the European External Action Service (EEAS). However, the ERCC was not responsible for organizing these flights. This was done at the local consular level by the foreign ministries. Thus, it was the respective Member and Participating States organizing the flights that ultimately decided on the passenger lists.

Repatriations via the UCPM offer certain advantages compared to repatriations by individual countries:

- Financial support: The EC can co-finance up to 75 per cent of the incurred transport costs for repatriations.
- Coordinated consular protection: Once the Mechanism is activated for repatriations, the ERCC facilitates the coordination of all activities in close cooperation with the EEAS and all Member and Participating States. As the COVID-19 pandemic has shown, this can be particularly valuable in times when international cooperation is under pressure.

- Efficient use of resources: The coordination of repatriation flights allowed for a high efficiency of such efforts and the best use of limited available resources.
- Transport of humanitarian aid cargo: DG ECHO's close cooperation with partners, such as the WHO, Médecins Sans Frontières, and the Global Logistics Cluster, facilitates the transport of humanitarian aid cargo on board the UCPM repatriation flights on the outbound leg. The ERCC's call to Member and Participating States to be attentive to such synergies in the early stage of the COVID-19 pandemic was particularly helpful for the humanitarian aid community, as transport options were limited, and their costs had risen sharply.

The ERCC is at the time of writing in the process of evaluating the lessons learnt from the COVID-19 operations. The total amount granted under the UCPM for repatriation flights is not yet known, as grant agreements are still being processed.

4.2.2   Response: Switzerland

Between March and May 2020, FDFA under the direction of the CMC, organized return flights to Switzerland from all over the world. A decisive factor for the success of these efforts was the involvement of FDFA's extensive network of diplomatic representations abroad.[164] This enabled around 7,000 people stuck abroad to be flown back to Europe. Of these, circa 4,000 were Swiss nationals or had their residence in Switzerland, while 3,000 were from other, mainly European, countries. A further 1,500 Swiss nationals were repatriated on flights coordinated by European countries.

In order to achieve the necessary coordination for flights with other European countries, the Mission of Switzerland to the EU in Brussels was able to participate on an *ad hoc* basis in circa 40 consular coordination meetings in the Working Party on Consular Affairs (COCON+)[165] format. Besides the timely exchange of information between the represented states on planned flights, participation in these meetings also brought other benefits for Switzerland. Logistical and security-related information was shared at these meetings, for example, on police roadblocks preventing access to airports, some of which were unknown to the Swiss. Switzerland indirectly benefited from diplomatic demarches for flight permits in non-European countries, which were planned and discussed at EU level in order to resolve deadlocked situations. The cooperation with the EU and neighboring countries during this crisis also allowed Switzerland to present itself as an important and reliable partner to the EU in crisis situations.

As Switzerland was not a Participating State of the UCPM, it could not benefit from the Mechanism's co-financing of repatriation flights, despite the inclusion of citizens from Member or Participating States on the same flights as Swiss nationals and residents. Instead, the Swiss administration pre-financed the flights. The total cost incurred of circa 10 million CHF were co-financed by contributions from travelers in accordance with the market price for a corresponding flight, which covered 80 per cent of the costs, and FDFA covered the remaining 20 per cent.[166]

4.3   Case Study 3: Explosion in Beirut, August 2020

On 4 August 2020 at 5.08 p.m. CEST, circa 2,750 tons of ammonium nitrate stored at the port of the Lebanese capital Beirut exploded.[167] The blast had an estimated explosive power equivalent to 1.1 kiloton of TNT, making it one of the biggest non-nuclear explosions in recorded history.[168] It killed more than 200 people, injured a further 6,500, and left over 300,000 people homeless.[169] Circa 40,000 buildings in Beirut were damaged, of which 3,000 severely, affecting roughly 200,000 households.[170] Large parts of the city's infrastructure were damaged or destroyed, such as the harbor, the Beirut-Rafic Harriri International Airport, and more than half of the cities' 55 hospitals.[171] The following day, the Lebanese government officially asked for rapid international assistance.[172] Numerous countries and organizations responded to the call and sent rescue teams and emergency supplies to Beirut, including the USA, Australia, Indonesia, Russia, Japan, the EU, and Switzerland.[173] The EU activated the UCPM at the request of the Lebanese authorities one day after the explosion on 5 August 2020.[174]

4.3.1   Response: UCPM

The ERCC opened an information transmission case in CECIS on 4 August at 8.38 p.m. CEST, which enabled Member and Participating States to start their preparations for a likely request for assistance. As a further preparation, the ERCC contacted the EU Delegation in Beirut to support a potential request. The ERCC received the official request for assistance from the Lebanese Government the same day at 11.51 p.m. CEST and immediately activated the UCPM. An hour later, Lebanon received the first UCPM offer from Greece for a MUSAR team and accepted it. The fact that this process was so quick and smooth was due both to the Lebanese government's prior experience with the UCPM during the 2019 forest fire response, and to the established contacts of the EU delegation in Beirut. By noon on 5 August, the Greek MUSAR team was in action in Beirut. The immediate relief action of the UCPM lasted from 5 August to 17 September 2020.

Besides the aforementioned MUSAR team, UCPM provided the following assistance to Lebanon:

- Circa 300 emergency response professionals from seven Member States of the UCPM via various teams and modules.
- In-kind assistance from 16 Member and Participating States of the UCPM.
- A nine-person EUCPT, a six-person Technical Assistance and Support Team (TAST), and two ERCC liaison officers.
- Seven humanitarian aid experts for shelter, WASH items, health issues, logistics, and information/communication to reinforce the DG ECHO office in Lebanon.
- Three DG ECHO Humanitarian Air Bridge flights delivering a total of 58 tons of in-kind assistance from various countries and humanitarian partners.
- Circa 64 million EUR from the EC to help address the immediate needs of those affected by the explosion.
- Three maps of affected areas were produced by the Copernicus Emergency Management Service.

Turkey deployed an USAR team and Hungary delivered in-kind assistance on a bilateral basis outside of the UCPM.

In-kind assistance and modules channeled through the UCPM were delivered to Lebanon mainly by air and some by ship. The UCPM co-financed up to 75 per cent of the overall transport and operational costs incurred by its Member and Participating States, which amounted to over 6 million EUR.

During this mission, there were synergies and active cooperation between the civil protection and humanitarian aid sides of DG ECHO. The existence of a DG ECHO office in Beirut allowed the humanitarian aid experts on the ground to support the civil protection deployment from the outset. Another seven humanitarian aid experts from the DG ECHO office in Jordan could also quickly reinforce the Beirut office. The establishment of good cooperation and information sharing between the ERCC liaison officers and the DG ECHO office in Beirut ensured a smooth transition between the civil protection and humanitarian aid response, both in the field and at headquarters. Among other things, the humanitarian aid side of DG ECHO took over the facilitation of civil protection in-kind assistance once the EUCPT left. The ERCC in turn organized shared videoconferences with civil protection and humanitarian aid authorities in the Member and Participating States engaged in this mission to foster common situational awareness. The continuous exchange of information between the civil protection and humanitarian aid sections of DG ECHO created overview of the assistance delivered to Lebanon via the UCPM or through humanitarian aid funding.

The EUCPT deployed to Beirut organized team leader meetings for all international teams (e.g., Russia, Qatar) on the ground. Together with the DG ECHO office in Beirut, it also attended meetings organized by the Leb-

anese Armed Forces for all embassies and the local UN Resident Coordinator to explain the management of the incoming humanitarian aid. The EUCPT was based next to the Swiss RRT in the same hotel, and both teams undertook joint environmental assessments together with UN-DAC. In addition, one of the ERCC liaison officers put the Swiss RRT in contact with a key decision-maker in the Lebanese Armed Forces to facilitate coordination and communication between these two parties.

The deployment to Beirut was a substantial UCPM mission involving 20 Member and Participating States with teams and in-kind assistance. The international DACC carried out more than 580 assessments of damaged buildings in Beirut, more than half of them done by engineers from UCPM teams. International SAR teams supported local authorities in the recovery of seven fatalities. Italian CBRN experts supported these efforts by identifying possible CBRN related risks. French medical team and medical personnel that were part of SAR teams treated over 150 injured people. UCPM teams donated some of their equipment to local emergency services, and 26 hospitals received over 1,100 tons of equipment as in-kind assistance. All of this was done successfully despite the volatile security situation, the ongoing political and financial crisis, as well as the COVID-19 pandemic. The efficient coordination with the Lebanese Armed Forces, who was in charge of the overall response, was seen as being key to this success.

4.3.2 Response: Switzerland

Switzerland received an official request for help via the Lebanese Embassy in Bern on 5 August 2020, the day after the explosion. On the same day, Ambassador Manuel Bessler in his function as the Federal Council's Delegate for Humanitarian Aid and Head of SHA, made the decision to deploy.[158] Swiss Rescue was not activated but a RRT was deployed with the first representatives arriving in Beirut on 6 August 2020 at 1 p.m. CEST (circa one and a half days after the explosion), transported by the Federal Air Transport Service (*Lufttransportdienst des Bundes*, LTDB). Until the end of the RRT operation on 5 September 2020, SDC HA and SHA deployed 39 experts, who together completed the equivalent of 448 days' worth of deployment.

As the explosion also affected the Swiss Embassy in Beirut, the CMC first led the coordination of the Swiss response in Bern. They handed over leadership of the intervention to SDC HA on 5 August 2020. Its intervention cell consisted of representatives from numerous other organizations and organizational units, including the MENA State Secretariat, MENA South Cooperation SDC, the DDPS, SRC, the Swiss Embassy in Beirut, and the RRT Team leader.

Swiss intervention in response to the Beirut explosion focused on four areas:

1. Structural analysis of buildings: evaluation of damaged but still standing buildings.
2. Medical expertise: provision of medical experts to two hospitals.
3. Restoration of infrastructure: repair of 2 hospitals and 19 schools.
4. Financial contributions to humanitarian aid organizations: among others to the Lebanese Red Cross and the ICRC.

The emergency supplies used were either procured locally (construction materials) or flown in by LTDB (medical equipment). The total cost of the Swiss intervention in Beirut amounted to circa 6 million CHF, including contributions to humanitarian aid organizations and NGOs, and was covered by the regular SDC HA budget.

On site, the UCPM was in charge of the USAR operations but this had little relevance for the Swiss intervention, as Swiss Rescue was not deployed. The structural engineers of the RRT coordinated their work either directly through the city administration or through SARA-ID (a British SAR charity). Nevertheless, there was a regular exchange of information between the RRT and the UCPM through the operational offices that were located on the same hotel floor. This made it possible, for example, to share information about liaising with local authorities and the Armed Forces.

In addition, Switzerland coordinated and cooperated with various embassies, UN Organizations (e.g. UNICEF), the ICRC, and international, local, and Swiss NGOs.

4.4 Lessons Learnt from the Three Case Studies

The two case studies of the earthquake in Albania and the explosion in Beirut show that cooperation and coordination between Swiss Humanitarian Aid and the UCPM on the ground were limited to those areas of responsibility where there was operational overlap between the two parties. Where such overlaps existed, cooperation was constructive and goal-oriented, with potential for improvement in access to information from Switzerland's perspective. Where there were no overlaps, little cooperation took place.

In Albania, the UCPM was responsible for all non-USAR-activities. Since Switzerland had not activated Swiss Rescue with its USAR capabilities, the Swiss RRT on the ground coordinated its efforts with the UCPM by participating in its coordination meetings. Since the UCPM used its own information sharing tools to which Switzer-

land did not have access, the RRT found it challenging to obtain consolidated information in this set-up. In Lebanon, the UCPM was responsible for USAR operations. Since Switzerland had not activated Swiss Rescue in this case either, the cooperation of the Swiss RRT with the UCPM was limited to joint environmental assessments together with UNDAC. However, the RRT was able to benefit from UCPM contacts to the Lebanese Armed Forces on an informal basis.

The constructive and goal-oriented cooperation between Switzerland and the UCPM was also evident in the context of the case study examining the repatriations resulting from the COVID-19 pandemic. The challenges of the repatriations in spring 2020 were unique in recent history in terms of scope and impact. Switzerland was, on an *ad hoc* basis, able to participate in and contribute to numerous relevant consular coordination meetings. Thanks to this set-up both sides were able to benefit from constructive cooperation and achieve a swift repatriation of their citizens. However, it should not be assumed that Switzerland will gain access to the EU's crisis management services on an *ad hoc* basis in future crises – both given the unprecedented situation of the COVID-19 pandemic and because Switzerland is not at present a Participating State of the UCPM.

The flow of communication between the UCPM and Swiss Humanitarian Aid in the immediate run-up to a mission was adequate in the two case studies analyzed – Albania and Beirut. In the case of Albania, based on the information shared, Swiss Humanitarian Aid was able to tailor its assistance according to what was still needed on the ground. In terms of response time, the UCPM and Swiss Humanitarian Aid were roughly similar in speed, with the Mechanism having a small lead. This is, in part, due to the Mechanism's resources being spread over a larger geographic area and can thus, on average, be mobilized to the scene more quickly. The Beirut case study, in turn, showed that the more familiar the country seeking assistance is with the Mechanism, the faster and smoother the process becomes. Thus, it can be expected that these processes will become even faster in the future, the more times the Mechanism deploys to a given region. The rapid response time of the UCPM also shows that despite its size and the numerous actors involved, the UCPM is a well-rehearsed and streamlined mechanism that can respond to an event just as quickly as a disproportionately smaller organizational unit, such as Swiss Humanitarian Aid. The deployment of the UCPM in Beirut, which included teams and in-kind assistance from 20 Member and Participating States, also illustrates that the UCPM can successfully handle large missions with many actors.

In addition, the two case studies of Albania and Beirut show that Member and Participating States of the UCPM can continue to send teams and in-kind assistance on a bilateral basis if desired. Thus, innovative approaches

on the part of Swiss Humanitarian Aid, such as the distribution of multipurpose emergency cash via Western Union in the wake of the earthquake in Albania, would still be possible even if Switzerland were to become a Participating State of the Mechanism. However, as the Albanian and Lebanese case studies show, it is essential not to create excess capacity on the ground when deploying on a bilateral basis. Otherwise, the coordination effort increases, and resources compete with each other instead of adding value.

These two case studies also demonstrate that there is no shortage of SAR capabilities in Europe. In the case of the earthquake in Albania, within hours no less than 11 countries responded to the call via CECIS and offered SAR teams, of which the Albanian authorities accepted three. Not surprisingly, Swiss Rescue was therefore not activated in Albania and Lebanon because there was simply no need for the full range of its capabilities. Instead, Swiss Humanitarian Aid focused on deploying parts of Swiss Rescue in individually customized RRT, whose selected capabilities were needed on the ground. Although the deployment of some of these capabilities is a niche approach for Swiss Humanitarian Aid, such as the role of its structural engineers, there was a demand for these resources and their deployment was a success. Thus, there is still a demand for the capabilities of Swiss Rescue but not for its entire range in the majority of cases. The emerging modularization of the individual elements of Swiss Rescue, and the compilation of customized RRT, was therefore a successful strategy in the two case studies examined. Since the significant availability of SAR capacities in Europe is unlikely to diminish in the future, this emerging strategy of modularization by Swiss Humanitarian Aid is likely to a be a fitting ongoing strategy.

Both Swiss Humanitarian Aid and the UCPM used national representations abroad as well as existing contacts of national and international NGOs in the affected countries for their missions. Due to the large number of Member and Participating States of the UCPM, the Mechanism has more options open to it in this regard than Switzerland. This advantage manifested itself in particular in the context of the repatriations in spring 2020, where Switzerland benefited from the direct sharing of information with other European countries regarding the security-relevant and the on-the-ground logistical situations in many countries during the coordination meetings.

Another advantage of the Mechanism is the presence and utilization of regional DG ECHO offices in the context of deployments, such as in Lebanon. This means that relevant expertise with local knowledge and established connections to authorities is often already available in the affected regions, or it can be transferred to the crisis area from nearby offices to quickly reinforce operations as needed. They also support the longer-term

sustainability of operations after the end of the initial response phase of a mission, when the civil protection elements leave the crisis area and humanitarian aid takes over. In general, the cooperation between the civil protection and the humanitarian aid sections of DG ECHO seems to have worked well in the case studies examined, with tangible benefits to internal operations, the local crisis area, and their cooperation with external stakeholders.

5 Assessment of Switzerland's Potential Participation in the UCPM

This chapter presents the study evaluation of Switzerland becoming a Participating State of the UCPM based on the results of the cantonal, federal, and international surveys and interviews conducted during 2020 and early 2021 (see Figure 2). Following the analytical cues of the BOCR-framework introduced in Chapter 1 (see Figure 1), this chapter focuses on four particular dimensions of Switzerland's potential participation in the UCPM: the direct benefits (Section 5.1), the immediate costs (Section 5.2.), the opportunities held by future positive externalities and indirect benefits (Section 5.3), and the risks posed by developments that may increase the costs or reduce the benefits (Section 5.4).

5.1 Benefits

5.1.1 Full Access to the UCPM's Training Program and Knowledge Platforms

A major benefit of becoming a Participating State is the full access it would provide Switzerland to all of the UCPM's programs and platforms intended to increase disaster preparedness and prevention activities. This includes the Knowledge Network, training program, the peer review program for disaster risk management and civil protection systems, as well as exercises and expert exchanges (as described in Chapter 2).

International knowledge exchange is crucial for Switzerland to prepare for current and future hazards. This is one of the reasons why Swiss Civil Protection already has bilateral agreements with countries inside and outside of Europe. However, the returns from bilateral knowledge transfers have been varied in the past. Results from institutional exchange with non-European countries, including Israel, South Korea, and Russia, have been modest at best for the further development of Swiss Civil Protection, according to the surveyed FOCP representatives. In contrast, bilateral exchanges with neighboring countries have resulted in closer collaboration between national crisis centers, including the exchange on metrics for national risk assessments. In addition to mutual support during major disasters, the bilateral agreements with neighboring countries also support joint training and simulation exercises to aid the exchange of lessons learnt and best practices at all administrative levels (as described in Chapter 3). However, such knowledge exchanges have largely been limited to border cantons with little benefit for other Swiss cantons. In addition, training and simulation exercises have primarily focused on the integration of emergency services. A major reason why the bilateral agreements do not provide further benefits is that all of Switzerland's neighbors (with the exception of the Principality of Lichtenstein) are EU Member States and therefore already benefit from the UCPM's training program and comprehensive network of experts. The UCPM's multilateral level exchanges have supplanted their need to invest in institutionalized exchange of lessons learnt and best practices at the bilateral level. This is a key reason why Switzerland would benefit from becoming a Participating State of the UCPM.

The 2017 Administrative Arrangement between Switzerland and DG ECHO made a small step to fill this gap. The Administrative Arrangement enables the exchange of information between the Swiss crisis centers (NEOC and CMC) and the ERCC. However, access to the core services of the UCPM's Knowledge Network and training program remains limited. Participation at international simulation exercises are restricted to an observer status. While the EU makes a limited number of courses in the UCPM's training program available to Swiss participation, many of the courses are for the upgrading and certification of modules registered with the Pool. The arrangement also excludes access to internal debriefings, and the annual meeting where lessons learnt, new best practices, and improvements needed from all deployments are shared and discussed with Member and Participating States. The value of these centralized services to the development of both civil protection capacities and humanitarian aid operations are highly recognized by Member and Participating States.[88] Germany, for example, during its presidency of the EU Council in the second half of 2020, launched an initiative to further expand the internal lessons learnt practice by institutionalizing a formal Knowledge Network. The EC is currently translating the initiative into concrete proposals in collaboration with Member and Participating States.

Becoming a Participating State would therefore benefit Switzerland by providing potent international resources with which to develop national civil protection systems at the federal and cantonal levels. All of the cantons surveyed in this study would welcome Swiss participation in the UCPM. However, four out of the five cantons specifically identified access to the UCPM's Knowledge Network and training program as one of the most desirable aspects, due to Switzerland's expected increased needs for knowledge and resources to cope with catastrophes related to climate change. These include extreme weather events, forest fires, floods, and landslides. Furthermore, socio-technical challenges, which drive the strategic development of Swiss Civil Protection at the federal level, are increasingly transnational in nature, including digitalization, supply chains, mobility, and cybersecurity.[175]

A closer strategic and operational collaboration via the UCPM with European countries facing similar and shared challenges would therefore serve Switzerland's interests.

5.1.2 More Operational Experience with a Smaller Price Tag

Another major benefit of becoming a Participating State of the UCPM would be more deployment opportunities and, in turn, valuable first-hand operational experience for Swiss Civil Protection and Swiss Humanitarian Aid.

Until the occurrence of the COVID-19 pandemic, Switzerland has been fortunate not to experience major disasters in recent decades. However, this also means Swiss Civil Protection has limited operational experience with certain hazards. This applies in particular to hazards that are expected to occur more frequently in Switzerland in the future (as discussed below). In other areas, such as flood response or SAR, Swiss Civil Protection and Swiss Humanitarian Aid have a great deal of experience and expertise that are only rarely deployed. In this context, the UCPM offers the opportunity to gain more operational experience, and to use existing expertise in well-established and continuously evolving structures.

In our survey of the cantons and FOCP, participants highlighted that Swiss Civil Protection currently has limited operational experience in dealing with likely consequences of climate change (more extreme as well as new natural hazards), globalization (pandemics, migration flows, etc.), and technological progress (interdependencies, critical infrastructures, etc.). These are also the areas of civil protection where the federal and cantonal survey participants expected more deployments in Switzerland in the future.[176] The acquisition of more theoretical and practical knowledge and the increase in international exchange of experts, as described above, would aid the successful handling of these expected hazards by establishing a core of well-trained first responders that have experience in dealing with these hazards.

A shift in priorities towards Europe and the EU in terms of cooperation in crises would not negatively affect the existing bilateral agreements discussed above, as they are primarily issue-driven. In this context, it is not surprising that the surveyed cantonal representatives cite the prospect of more operational experience for civil protection as fueling their interest in Swiss participation in the UCPM, in addition to the opportunity to take part in international training, exercises, and expert meetings.

In comparison to Swiss Civil Protection, elements of Swiss Humanitarian Aid are regularly deployed and always in an international environment. They therefore have a great deal of operational experience and exchange with international partners. Nevertheless, Swiss Humanitarian Aid has increasingly been outpaced by the UCPM in recent years in certain areas. For example, de-spite the high quality of Swiss Rescue, demand for its capabilities has declined over the last decade. Instead, SAR teams have often been deployed by the UCPM during earthquakes in Europe and abroad (see Chapter 4). Switzerland's participation in the Mechanism would allow Swiss Humanitarian Aid to deploy registered resources as part of the UCPM, if so desired. In case of participation, it would still be possible for Swiss Humanitarian Aid to deploy teams and resources on missions independent of the UCPM, like it currently does. Even a parallel deployment of resources on a bilateral basis with simultaneous UCPM deployment is possible, as the examples of the earthquake in Albania in 2019 and the explosion in Beirut in 2020 illustrate (see Chapter 4). In these two disasters, a number of Member and Participating States sent SAR teams on a bilateral basis despite that such teams were also deployed via the UCPM.

Participation in the UCPM would make it possible for Switzerland to deploy its civil protection and some of its humanitarian aid resources, such as the SHA and modules of the Swiss Rescue, more often than is the case today, if desired (see also Section 5.3.3). Member and Participating States always retain the option of declining requests for the deployment of modules und experts registered with the Pool if these resources are needed domestically. There is also no obligation on the part of Member and Participating States to register modules or experts with the UCPM, although registration of resources is mutually beneficial for both parties in terms of resource availability, sharing of deployment costs, and financial contributions by the EC towards the upkeep and upgrade of national capacities registered in the Pool (as discussed in Chapter 2). If Switzerland were to participate in the UCPM, there would not only be the prospect of more deployments from a country geographically well-positioned in the heart of Europe, but also that these deployments would be at lower cost due to the partial reimbursement of operational and travel costs from the Mechanism.

During deployment as a Participating State, Switzerland would benefit from the well-established structures, communication system, resources, and capabilities of the ERCC, some of which exceed those currently available to/in Switzerland. For example, the ERCC generally facilitates multilateral coordination during missions, which tends to improve response time, situational awareness, air transport, and resource management on the ground.[177] It also has established contacts for host nation support and can draw on other EU services, such as the EEAS and the Copernicus Emergency Management Service, for up-to-date satellite imagery and maps of impacted area.

This could lead to a number of synergies for Switzerland. For example, Switzerland currently intends to buy into the French "Composante Spatiale Optique" reconnaissance satellite system – predominantly for security policy purposes but also for use in disasters and hu-

manitarian aid missions.[178] The French system will eventually consist of three satellites. In comparison, the EU's Copernicus program is more extensive. It is expected to consist of circa 20 satellites by 2030.[179] In addition, data will be fed into Copernicus from other national and commercial satellites, aircraft, and ground- or sea-based observation infrastructures, which together offer more sensory and analytical capabilities in the area of disaster and crisis management. By participating in the Mechanism, Switzerland could thus make use of the Copernicus Emergency Management Service in the event of an incident in Switzerland and during missions via the UCPM abroad. For example, in January and February 2021 alone, France, Italy, Germany, and Ireland used Copernicus to monitor domestic floods, and to produce real-time satellite images and maps of affected areas.[180] The use of the French system could be limited to security purposes. Access to the ERCC would thus provide Switzerland with advantages that reach beyond simple exchange of information, and limited coordination in the field, which is the basis of the Administrative Arrangement in force today.

It is important to note that in order to maximize the benefits of Switzerland's potential participation in the UCPM, the country would need to register its own modules and experts with the Mechanism, at least in the medium to long term, as discussed above. This would require certain adjustments to existing structures in Switzerland, especially in the area of civil protection (see Section 5.3.2).

5.1.3 Strengthened Capacities to Respond to the Needs of Swiss Nationals in Distress Abroad

Another benefit of participating in the UCPM would be to strengthen Switzerland's capacity to assist Swiss nationals abroad during emergencies and disasters.

The case study of repatriations following the outbreak of the COVID-19 pandemic (see Section 4.2) illustrates how the Mechanism can help Member and Participating States to provide consular assistance to citizens in distress abroad. The UCPM can be activated for repatriations if, among the citizens to be repatriated, there are also citizens from Member or Participating States. Although the states concerned still have to organize the exact details of the repatriations, the ERCC can offer support by coordinating all necessary actions between multiple Member or Participating States, as well as with other EU services.

This coordination with other Member and Participating States, as well as the involvement of other EU services, such as the EEAS and the Copernicus Emergency Management Service, can be crucial for the success of such efforts. It can rapidly build a more complete picture of the security and logistical challenges on the ground in an affected country, and provide more political weight to

repatriation efforts, for example, in order to bring movement to deadlocked situations. In the case of mass repatriations by many countries simultaneously, as was the case in spring 2020, multilateral coordination also allows for the most efficient use of limited logistical resources. In addition, repatriations can be cheaper for the organizing state once the Mechanism is activated, as the EC can finance up to 75 per cent of the logistical costs incurred. The interviewed representatives from Germany, Norway, and the Swiss Mission to the EU also highlighted that participation in the Mechanism only results in a small workload increase in Brussels. In other words, Swiss participation would not require a substantial increase in the number of federal staff in Brussels and associated costs.

According to the surveyed representatives of the CMC, who are responsible for consular support for Swiss nationals in distress abroad, their main focus in recent years has been on responding to small and medium-sized events (terrorist attacks, disasters, etc.). In the coming years, they expect an increase in complex crises and events that affect Swiss overseas nationals and the embassy network. As discussed in Section 4.2, Switzerland was able to participate in the relevant coordination meetings on an *ad hoc* basis during the repatriations in the context of the COVID-19 pandemic, with positive results for both sides. However, it cannot be assumed that Switzerland, as a non-Participating State of the Mechanism, will be granted such access in future crises.

Switzerland's participation would guarantee activation of the UCPM as a last resort for consular assistance, if other Member and Participating States are also affected, and if only limited or no commercial transport options remain available. As a result, Switzerland could benefit from the exchange of information and coordination of repatriation efforts between the Member and Participating States concerned, and from the services of other EU agencies. It might even be reimbursed for part of the logistical costs incurred, with limited additional staff in Brussels required.

5.1.4 Switzerland as a Capable and Reliable Partner in Crisis Management

By participating in the Mechanism, Switzerland could continue to build a reputation as a reliable and capable partner in crisis management. This would promote a positive image of Switzerland in Europe and to the EU.

Cooperation in crisis is a tangible expression of solidarity both towards other stakeholders and towards people in need of assistance. The UCPM is an expression of solidarity in action. For European countries with well-equipped civil protection systems, the Mechanism offers the possibility of providing internationally coordinated assistance to affected countries more quickly and efficiently.

For smaller European countries and those with less well-developed civil protection systems, the UCPM serves as an insurance policy for, among other things, receiving rapid external assistance in the event of a crisis. From a political point of view, the fact that the Mechanism is activated regularly and provides tangible outcomes – often to people in need – makes it one of the EU's most visible services in the eyes of the public. This visibility positively influences public perceptions of, and increases public trust in, the EU. In the interviews with Norwegian and German representatives, the role of the Mechanism as a concrete expression of belonging to a "family" with a shared bigger purpose, created a sense of neighborliness, and was highlighted as a key driver of national engagement. Swiss Civil Protection, Swiss Humanitarian Aid, and the CMC/NEOC are well-equipped and experienced services. Switzerland can therefore – if willing – offer the UCPM experience, knowledge, and capabilities as an expression of solidarity in times of crisis, in return for reciprocal UCPM services and assistance during expected future climatic, environmental, biological, and technological underpinned disasters.

Participation in the Mechanism is thus an opportunity for Switzerland to visibly and measurably express its commitment to helping others in need, in collaboration with a broader range of European countries, and in concrete terms that go beyond current bilateral agreements. In this way, Switzerland could use the UCPM as a tool to demonstrate that it will actively cooperate with the EU in this area. As in other areas where Switzerland already actively cooperates with the EU, this would reflect positively on Switzerland's image in the EU and throughout Europe. Positioning Switzerland as a capable and reliable European partner in matters of civil protection and humanitarian aid, could also serve Switzerland in broader future negotiations with the EU. Switzerland could point out existing collaborative cases with the UCPM, and how such constructive cooperation can be beneficial for both sides. This could potentially generate political goodwill in other, unrelated policy areas – a view confirmed by several FDFA representatives interviewed in the course of this study.

5.1.5 Access to Tried and Tested Operational Capacities, Systems, and Cooperation

By participating in the UCPM, Switzerland would benefit from access to the Mechanism's extensive operational capacities, information from its state-of-the-art communication and surveillance systems, and the formalized but streamlined international cooperation that takes place within it (as discussed in Chapter 2).

The current Administrative Arrangement mainly covers the exchange of information between DG ECHO and Switzerland, via the UCPM, in the case of crisis management and Swiss participation as observers in training and exercise scenarios. However, it excludes access to valuable resources, such as the Pool, rescEU, and associated grants for building up and maintaining resources capacities, as well as the Copernicus Emergency Management Services and other civil protection services by third-party stakeholders. The value of these capacities and systems was highlighted both in our study interviews and in published literature. For example, Ekengren and Hollis argue that one of the most important emerging capacities of the ERCC is the production of situational awareness through the rapid collection, analysis, and communication of crisis information, used by transnational crisis management that deploy joint tools to respond to multiple hazards in local contexts.[87,88] They describe existing transnational practice of crisis cooperation within the UCPM as "strong", "extremely pragmatic and flexible", and the Mechanism (along with other EU institutions) as a "form of security insurance" that builds on "the strong transnational practice of testing new tools and using tools that are recognized to work". Nevertheless, their study also highlights a lack of an information sharing culture at the EU level. These strengths and weaknesses both emphasize the importance of common practice, and the need for operational activities to lead civil protection policy developments.

As a Participating State of the UCPM, Switzerland would have access to all of the UCPM's tried and tested operational, situational awareness, and communication systems (such as CECIS), and their further developments via an extensive network of experts and knowledge-holders. When Norway first joined as a Participating State in 2007, these features were major drawcards. All their neighboring Nordic countries are Members of the EU and thus already had full access to the benefits of the UCPM. The Norwegian representatives interviewed emphasized how participation provided Norway with the insurance of having access to robust international technological information gathering systems, and high-cost resource capacities available for incidents in Norway (e.g., forest fires, landslides, maritime/coastal safety, SAR), which the country could not cover with national resources. Functioning as a "safety net", Norway thought it wiser to join a common European emergency system (the UCPM) rather than to try to fix disaster management and civil protection needs alone nationally. For example, the Norwegian Emergency Medical Team (EMT),[181] now registered with the Pool, is a capacity that was specifically developed with the encouragement of, and part-funding from, the UCPM. However, the annual fee for participating in the UCPM was not nearly as prominent in 2007 as it is today due to the recent creation of rescEU and the recent financial changes (as described in Chapter 2). Therefore, the initial drawcards are currently being reassessed by Norway, as part of the renewal process for its contin-

ued participation. It raises questions about the value of rescEU given the substantial price tag it necessitates (see Chapter 2), which is not a straightforward calculation, as discussed in Section 5.2.2 below.

5.2   Costs

5.2.1   Participation Fee

Participation requires an annual fee to be paid to the UCPM. For Switzerland, the annual fee is based on a fixed formula (also described in Figure 5), which places Switzerland's GDP in relation to the aggregate GDP of all Member States (Figure 13).

Participation does not require a financial commitment for the entire seven-year budgetary cycle. Switzerland may therefore enter into an agreement with the UCPM at any point of the budgetary cycle. Vice versa, Switzerland may decide to leave the Mechanism at any point during the budgetary cycle without incurring any further dues.

The decision by the EU Member States in 2019, 2020, and 2021 to invest in a strategic reserve of core capacities at the European level (rescEU, see below) increased the UCPM's multiannual budget from 368 million EUR for the 2014−2020 period to 1.263 billion EUR for the 2021−2027 period. This substantial budgetary increase has raised all Participating States' annual fee by a factor of four. Based on the EU's Multiannual Financial Framework 2021−2027[35] approved by the European Parliament and adopted by the European Council in December 2020, the annual participation fee for Switzerland would be between 8 and 11 million CHF, depending on the given year.

With the participation fee comes full access to almost all of the UCPM's services, along with financial assistance for the cost of operational and expert deployments as modules registered with the Pool (as discussed above). This is to facilitate rapid deployments and incentivize registration of modules with the Pool. It also includes insurance policies (travel, health, accident, and liability insurance). In addition, up to 2.056 billion EUR of the NextGenEU recovery instrument is available to the UCPM until the end of 2023 to implement civil protection-related measures that address the impacts of the COVID-19 crisis. Only the ESI remains accessible to Member States only (see Section 2.2.6), along with voting rights (see Section 5.4.1).

5.2.2   A Service with a Sizable Price Tag: rescEU

Our study raises questions about the value of rescEU given the substantial price tag it necessitates. It is not a straightforward calculation, as the pros and cons differ depending on the needs, capacities, political stance, and GDP of individual Member and Participating States. The additional capacity provided by the rescEU aerial forest firefighting resources has already proven its worth both in Europe and internationally (as discussed in Chapter 2), and the COVID-19 pandemic has clearly highlighted the need for greater medical capacity (including EMT), infectious disease medical capacity, mass casualty medivac capacity, and the stockpiling of medical countermeasures, such as PPE. However, representatives from both Norway and Germany described the political view in their countries towards the creation of rescEU as somewhat hesitant. This is despite both countries benefiting from funds to build new capacities for rescEU, such as a costly Norwegian air ambulance with epi-shuttle system[182] ready for deployment in 2021. For stockpiling of PPE or medical equipment, such as ventilators, DG ECHO awards grants to Member States who then purchase and store the resources in accordance with national legislation. This approach both addresses the impracticality of having EU commissioned warehouses with equipment scattered around Europe, and the view shared by UCPM representatives that rescEU complements the Pool, and that as such, the operational capability should remain with the Member States, at least for now. Could this stockpiling exercise be done in a more cost-effective way by individual countries according to their respective needs rather than significantly increase the financial envelope of the UCPM as a whole? This is a question for both independent states, such as Switzerland and Norway, and the multilateral structure of the UCPM to consider.

5.3   Opportunities

5.3.1   Closer Integration of Switzerland's Civil Protection System

Becoming a Participating State of the UCPM could provide an opportunity to strengthen and institutionalize cooperation between cantons, as well as between the cantonal and federal levels of civil protection and related areas.

$$\text{Swiss annual participation fee} \quad = \quad \text{UCPM annual budget} \quad x \quad \frac{\text{GDP Switzerland}}{\text{Combined GDP of all EU-Members + GDP Switzerland}}$$

Figure 13. Formula for calculating the annual fee if Switzerland becomes a Participating State of the UCPM.

In Switzerland, the cantons are primarily responsible for the civil protection system, while the federal level primarily has a coordinating role (as described in Chapter 3). With 26 largely autonomous cantons and 4 national languages, horizontal (between the cantons) and vertical (between the federal and cantonal levels) integration within the civil protection system inevitably poses a challenge that should not be underestimated, for example, in terms of cooperation, coordination, and standardization.

The cantonal and FOCP representatives surveyed rated inter-cantonal cooperation in civil protection as good or very good, with improvements in recent years, especially at the operational level. Nevertheless, integration between cantons in certain Swiss regions seems to work better than in others, and in the cantons' own opinion, there is still room for improvement in terms of cooperation, especially at the strategic level. The same applies to vertical integration between the cantons and the federal level.

Participation in the UCPM could offer the Swiss civil protection system an opportunity to strengthen institutionalized cooperation and thus improve the integration of the system alongside its simultaneous adaptation to participate in the UCPM. In this context, Germany is an illuminating example, as its civil protection system is structured in a similar way to Switzerland due to both countries being Confederations. Like in Switzerland, the *Länder* (cantons) in Germany are also primarily responsible for civil protection, while the federal level has a largely coordinating role. Prior to the establishment of the UCPM, incentives for cooperation between the individual *Länder* as well as with the national level were limited. This was especially true for those *Länder* with well-developed and large civil protection capacities of their own. Germany's participation in the UCPM as a Member State had two outcomes. On the one hand, the *Länder* and the BBK were required to work together more closely and in a more structured manner. The BBK and the federal level in general act as gatekeepers *vis-à-vis* the *Länder* if they want to benefit from all the advantages of the UCPM (for example, with regard to training and knowledge transfer). The federal level, in turn, often depends on the *Länder* for Germany to be able to register modules and experts with the UCPM. In addition, the Mechanism gave the cooperation between the federal government and the *Länder* new impetus towards more institutionalization and standardization, for example, in the area of risk analyses at the *Länder* level. On the other hand, the *Länder* also had to gradually intensify cooperation among themselves, and coordination with each other, in order for Germany to speak with a united voice in Brussels in the area of civil protection. The Mechanism also increased the incentive for *Länder* with large civil protection resources to cooperate with other *Länder* because access to the Pool meant that they would

no longer just provide assistance but could also potentially receive assistance in a crisis.

It is reasonable to assume that similar dynamics would develop in Switzerland were the country to become a Participating State of the UCPM. Similar effects would be expected in the medium to long term, especially if the cantons register modules and experts with the UCPM, as this would in many cases only be possible in cooperation with other cantons and in coordination with the federal level (see Section 5.3.2). Participation in the UCPM could thus help reconfigure the preferences of cantons that are hesitant about closer inter-cantonal cooperation, and possible pooling of capacities, by offering additional incentives to do so. As a result, not every canton would have to maintain every capability on its own, which could help to reduce the overall costs of civil protection in Switzerland. This relates directly to another opportunity arising from potential Swiss participation in the UCPM, which is outlined next.

5.3.2 Impetus to Evolve Swiss Civil Protection

Another opportunity arising from Switzerland's potential participation in the UCPM are new and important impetuses for the future development of Swiss Civil Protection. Since the hazard landscape is constantly changing due to social, technological, political, and ecological dynamics, civil protection must continuously adapt and evolve as well. This is the only way to ensure that the system can fulfil its task to meet future needs.

Building on the benefits of theoretical and practical exchanges of skills and resources via the UCPM, as outlined above, participation would also provide an additional opportunity to derive new, important, and necessary inputs for a future-oriented development of the Swiss civil protection system.[183] Through participation in expert meetings and exercises, as well as through international operational experience, the responsible people in Swiss Civil Protection could acquire new skills and expand existing knowledge, for example, in the area of innovative technologies, resource management, or international standards. This input could then be applied to assist the development of civil protection in Switzerland.

A welcome side effect of international deployment experience for Swiss Civil Protection could also be better operational integration of civil protection resources with those of Swiss Humanitarian Aid. If civil protection formations had international deployment experience and were regularly deployed abroad via the UCPM, they could theoretically also be deployed within the framework of bilateral Swiss Humanitarian Aid missions. This could possibly expand the range of tasks of Swiss Humanitarian Aid.

In the area of procurement, participation in the UCPM could make civil protection more cost-efficient. Switzerland would no longer necessarily have to procure and maintain all capacities on its own. Instead, the procurement of certain new capacities could be coordinated and harmonized with other countries in the UCPM in order to avoid duplications. In addition, Switzerland would have access via the Pool to capabilities that may otherwise be out of reach in the future for financial reasons. According to the international representatives interviewed, Norway has pursued such a strategy. The resources available via the Pool, especially in neighboring and like-minded countries (i.e., Nordic cooperation), aids their decision-making process regarding which acquisitions to make and which capabilities to rely on the UCPM for. This is one of the main issues being discussed in Norway's current deliberations about whether to remain a Participation State due to the considerable increase in its annual participation fee.

Furthermore, the Mechanism offers financial assistance for standardization, maintenance, and upgrading of response capacities committed to the Pool to make them operational in international contexts, as well as for building and maintaining new capacities for rescEU (as described in Chapter 2). This possibility is also open to Participating States should they decide to register existing capacities with the UCPM or build up new capacities for rescEU.

In terms of organization and structures, Swiss participation in the UCPM could also provide new impetus for the furthering of civil protection, if Switzerland intends to make modules available to the Mechanism in the medium to long term. This could affect the structures of civil protection at both federal and inter-cantonal level. At the federal level, for example, the current EEVBS (see Chapter 3) could be used as the basis for modular CBRN operational resource capacities that meet EU requirements, and could be registered with the Pool, if desired.

The registration of operational resources from the cantonal civil protection organizations would require considerable organizational adjustments, and probably the establishment of inter-cantonal Civil Protection Bases that bundle the resources and expertise of several cantons, combined with a certain professionalization of the capacities stationed there. FOCP and cantonal representatives surveyed identified the militia system as the biggest hurdle for the registration of Swiss modules in the Pool (see Chapter 3). This is because the suitability of militia formations for deployment in the UCPM is limited. In addition to a solid proficiency level, the prerequisite for UCPM deployment is the ability to deploy quickly for a period (up to two months), and competence of soft skills, such as language and cultural sensitivity for cooperation in an international context. According to the interviewed representative from Germany, it is for these reasons that the country has only registered modules consisting of

professionals, mostly from professional fire brigades, and no militia formations. However, for smaller, specialized contingents it would likely be possible to find individual solutions if the will is there, as the Norwegian example shows. The Norwegian EMT is staffed by civilian medical personnel who are normally employed in national medical facilities and have an agreement with their employers that they can be deployed by the UCPM for a period of time (usually several weeks). Potential opportunities for Switzerland include professional *Zivilschutz* formations concentrated in inter-cantonal bases, voluntary *Zivilschutz* formations analogous to military personnel who voluntarily register for SHA missions, or *Zivilschutz* formations whose members complete their compulsory service during one extended period *(Durchdienerformationen)*.

The establishment of inter-cantonal bases in *Zivilschutz* has repeatedly been discussed in Switzerland for various reasons, regardless of Switzerland's participation in the Mechanism. One such discussion, for example, is between the French-speaking cantons. There are also already concrete efforts, for example, between the cantons of Grisons and Glarus with regards to CBRN capacities. Welcome side effects of inter-cantonal bases would not only be increased interregional cooperation, but possibly also increased operational readiness, standardization of training, operational doctrine, and other operational aspects between the various cantonal civil protection organizations. So far, no such base exists. Against this background, it is not surprising that all the cantonal representatives surveyed are principally in favor of inter-cantonal bases, under certain conditions. In many cantons, the idea falters because they do not want to be dependent on another canton for the protection of their population. Thus, the most frequently mentioned condition for embracing the idea is more professional personnel in the *Zivilschutz* for such bases, so that highly specialized capacities, which cost a lot but are used relatively rarely, are combined instead of general capacities of the *Zivilschutz*.

Adjustments to the *Zivilschutz* service model towards a partial professionalization are also often discussed in Switzerland, mostly due to the increasingly acute problem of finding enough volunteer personnel. Both FOCP and cantonal representatives surveyed see this as one of the greatest future challenges for Swiss Civil Protection. A stronger professionalization of the *Zivilschutz,* as a possible consequence of participation in the UCPM, can arguably also be seen as a "cost", given the almost sacrosanct status of the militia system in Switzerland. However, such a cultural change could become necessary in the coming years or decades due to the problem of obtaining and retaining personnel in the *Zivilschutz,* regardless of potential participation in the UCPM.

Switzerland's participation in the UCPM could therefore provide the necessary impetus for the development of civil protection towards regionalization and cen-

tralization of certain resources in inter-cantonal bases, combined with a partial professionalization and standardization. In addition, knowledge from expert exchanges and experience from international deployments could flow into this process, while harmonizing new procurements with the resources available in the Pool could reduce its costs.

5.3.3 Avenues for Streamlining Swiss Humanitarian Aid

Another opportunity arising from participating in the UCPM would be to streamline and increase the cost-effectiveness of SHA.

SHA – a pool of circa 700 experts with various professional backgrounds – has been an integral part of Switzerland's commitment to humanitarian principles at the international level for several decades (see Section 3.2). However, since the establishment of SHA in 1973 the humanitarian landscape has changed with the number of protracted humanitarian crises increasing. These changes require adaptation and innovation from all humanitarian actors, including Switzerland.

Participation in the UCPM could provide an opportunity to streamline the operational capacities of SHA and Swiss Rescue. While there is no formal requirement to register modules with the Pool, doing so would offer Switzerland not only the benefit of more operational experience with a smaller price tag due to reimbursements from the UCPM for transport and operational expenses (see Section 5.1.2) but also an opportunity to reduce the broad current scope of SHA to a smaller number of unique core capacities. Existing capacity gaps in the Pool could aid the streamlining process. It should not be limited to the reduction of existing capacities in order to decrease redundancy across Member and Participating States. The case of Norway demonstrates that a streamlining process can also include the development of new capacities. While access to the Pool provided Norway with a useful resource with which to spare valuable funds that would otherwise have been used to invest in the maintenance and build-up of national capacities, the Mechanism also supported Norway with the technical expertise and financial means to develop new capacities, such as the EMT discussed above. Access to the UCPM's training and certification programs proved crucial to this streamlining process (see Section 2.2.5).

Registering Swiss resource capacities in the Pool could also increase the speed and flexibility of future deployments while lowering operational costs and maintaining political control. Once part of the Pool, the UCPM covers up to 75 per cent of transportation costs for deployments inside and outside the EU, as well as up to 75 per cent of deployment and operational costs if deployed inside the EU. When countries requiring assistance are eli-

gible for ODA, assistance provided through the Mechanism by Participating States can be counted towards national ODA targets if OECD DAC criteria are met (see Sections 2.2.2 and 3.2.2). Registration in the Pool enables the delivery of assistance within a few hours to countries who have requested help, with lower budgetary impact on those offering the assistance. The coordination support of the ERCC furthermore increases the efficiency of deployments. The Center has a fully staffed and trained duty system, which operates around-the-clock to ensure real-time monitoring and rapid response. It also commands further resources to support deployments, such as the EEAS and the Copernicus Emergency Management Service for up-to-date satellite imagery and maps of impacted area (see Section 2.2.3).

These benefits for operational deployments do not interfere with the sovereign authority over national capacities. Response capacities made available by Member and Participating States remain available for national purposes at all times, and the ultimate decision on resource deployment is taken by the country who registered the response capacity. Switzerland would therefore maintain full political discretion, and may deploy national capacities outside the Mechanism in support of the multilateral missions of its many humanitarian partners, including the ICRC and OCHA (see Section 3.2).

5.4 Risks

There are two particular interconnected risk factors that evolve continually with political developments and changing hazards, which may influence the benefits, costs, and opportunities associated with Switzerland being a Participating State of the UCPM.

5.4.1 Lack of Formal Decision-Making Powers

The first risk factor is the limited decision-making power of Participating States. Participating States do not have a formal say in any political or budgetary negotiations concerning the UCPM. Only Member States – i.e. direct donors to the EU – have representatives in the European Council and European Parliament where the political negotiations take place and the final decisions are made.

As a Participating State, Switzerland would therefore not have the formal means to influence future developments within the UCPM. However, Participating States may contribute ideas, suggestions, and concerns in direct and indirect communication with other Member and Participating States and the UCPM. Strong ties and close contacts with other countries can help Participating States to exert indirect influence. In other policy areas, Switzerland, like other non-EU Member States, has been

doing this for decades and can draw on relevant experience. Becoming a Participating State, Switzerland could capitalize on existing relationships and bilateral agreements with EU Member States to influence future developments of the UCPM. Furthermore, the EU's interest in creating mutually beneficial and long-lasting agreements with Participating States to build up the core-strength of the UCPM, appears to create a willingness from DG ECHO to engage and consider the concerns of Participating States. The renegotiation of agreements up for renewal during the current transition towards a new and increased budgetary cycle, indicates that Participating States command some political leverage despite their lack of formal decision-making powers. Political maneuvering by other Participating States might therefore benefit Switzerland's short and longer-term interests.

5.4.2   Future Budgetary Increases

The second risk factor links directly to the first risk factor, as the lack of formal decision-making power is relevant in any potential decision to further grow the UCPM's envelope to meet future civil protection needs. Such growth will increase the direct operational costs and the acquisition of additional rescEU capacities, and it is therefore likely to further increase the annual fee for Participating States. An increase in direct costs may reduce the direct benefits for Switzerland of being a Participating State.

An increase in operational costs is likely in the longer-term given the already unfolding as well as expected further climatic changes. More extreme weather events, as well as ongoing or new pandemics, would augment the need for more rescEU capacities, driving up direct and indirect costs. This would result in the need for a new cost-benefit analysis of Switzerland's participation in the UCPM.

This risk factor is not a straightforward cost-benefit calculation in the context of the diversity of the UCPM's current 27 Member States and 6 Participating States. All budgetary increases are subject to lengthy political negotiations, and the geographical size, terrain, and demographics of different Member and Participating States appear to influence the perceived and actual need of costly shared resources. Member and Participating States that are smaller geographically often have a greater need for shared resources in major disasters and therefore appear more inclined to support the buildup of rescEU capacities. Member and Participating States that are geographically larger appear to be more opposed to a move towards a "supranational" structure with the build-up of rescEU capacities, and consequently appear more opposed to budgetary increases. However, the interviewed representatives from Germany, Norway, and Brussels agreed that due to the significant changes within the Mechanism in recent years, the main focus today and in

the medium term should be on implementing and consolidating the agreed adjustments, and not on further major structural reforms of the UCPM. The interviewed representative from Germany, for example, sees one of the main challenges in the upcoming years to be structural reforms in the individual Member and Participating States, so they can advance their current contributions to the Mechanism.

That said, it is important to note that the creation and development of rescEU does not change the devolved operational structure of the UCPM, the ERCC, and the Pool. This means that with recent developments, the benefits and opportunities that participation in the UCPM holds, which pre-2020 came at an affordable annual fee, now needs to be weighed up with the sizable price tag it entails, as well as the potential risks and political considerations it raises.

6   Conclusion

This report has provided an independent evaluation of the benefits, costs, opportunities, and risks for Switzerland in becoming a Participating State of the UCPM. Survey and interview methods were used to examine each of these points of evaluation with cantonal, federal, and international stakeholders. A systematic review of published literature was used to triangulate findings from the empirical data.

The findings emphasize that any strategic approach to determining future collaborations between Switzerland and the UCPM has to take into account the uncertainties as well as known challenges of Switzerland's future hazard landscape and potential disasters. Major disasters have fortunately been rare in Switzerland over the past decades, but socio-economic, environmental, climatic, and technological developments are continually changing the context and conditions of the hazard landscape. Climate change, for example, is placing Switzerland's population and environmental heritage at much higher risk by increasing the frequency and impact of many natural hazards, such as floods, drought, forest fires, and landslides. A changing climate will also increase the frequency and intensity of extreme weather events and social upheavals internationally, placing Swiss nationals abroad at higher risk. Furthermore, it will change the field of humanitarian aid, requiring fundamental adaptations from all stakeholders, including Switzerland. Socio-economic and technological transformations, such as the digitalization of society and the economy, will also increase interdependencies, and create new challenges for the protection of Swiss society and its critical infrastructure in the coming decades.

These emerging and growing challenges are not unique to Switzerland. The changing nature of future natural, social, and technological hazards will also require adaptation and innovation from the current 27 Member States and 6 Participating States of the UCPM. Tapping into the transnational expertise, networks, and resource capacities of the Mechanism would thus support the capacity of Swiss cantonal and federal authorities to prepare for, respond, and adapt to the future risks in their areas of responsibility. If a major disaster were to occur within its borders, immediate access for Switzerland to the comprehensive and state-of-the art operational capacities of the Mechanism would significantly increase the capacity, speed, and effectiveness of national crisis management. The coordinating role of the ERCC and its technical capabilities, as well as the diplomatic capital of related EU services, such as the EEAS, would also increase the efficiency of Switzerland's response to crises and disasters abroad at lower operational costs, while maintaining full sovereign control over national response capacities. Becoming a Participating State in the UCPM would thus provide Switzerland with an all-hazard insurance policy for major disasters at home and abroad at a time shaped by uncertainty and profound transformations.

Overall, the evaluation highlights many immediate benefits and long-term opportunities for both Swiss Civil Protection and Swiss Humanitarian Aid from participating in the Mechanism. These advantages have to be weighted up against the substantial participation fee and potential risks, such as Participating States' lack of formal decision-making powers over the Mechanism's future strategic developments and financial envelope. While Switzerland's participation in the UCPM is ultimately a political decision, this decision will have immediate and long-term implications for Switzerland's operational capacity to protect lives, livelihoods, and assets.
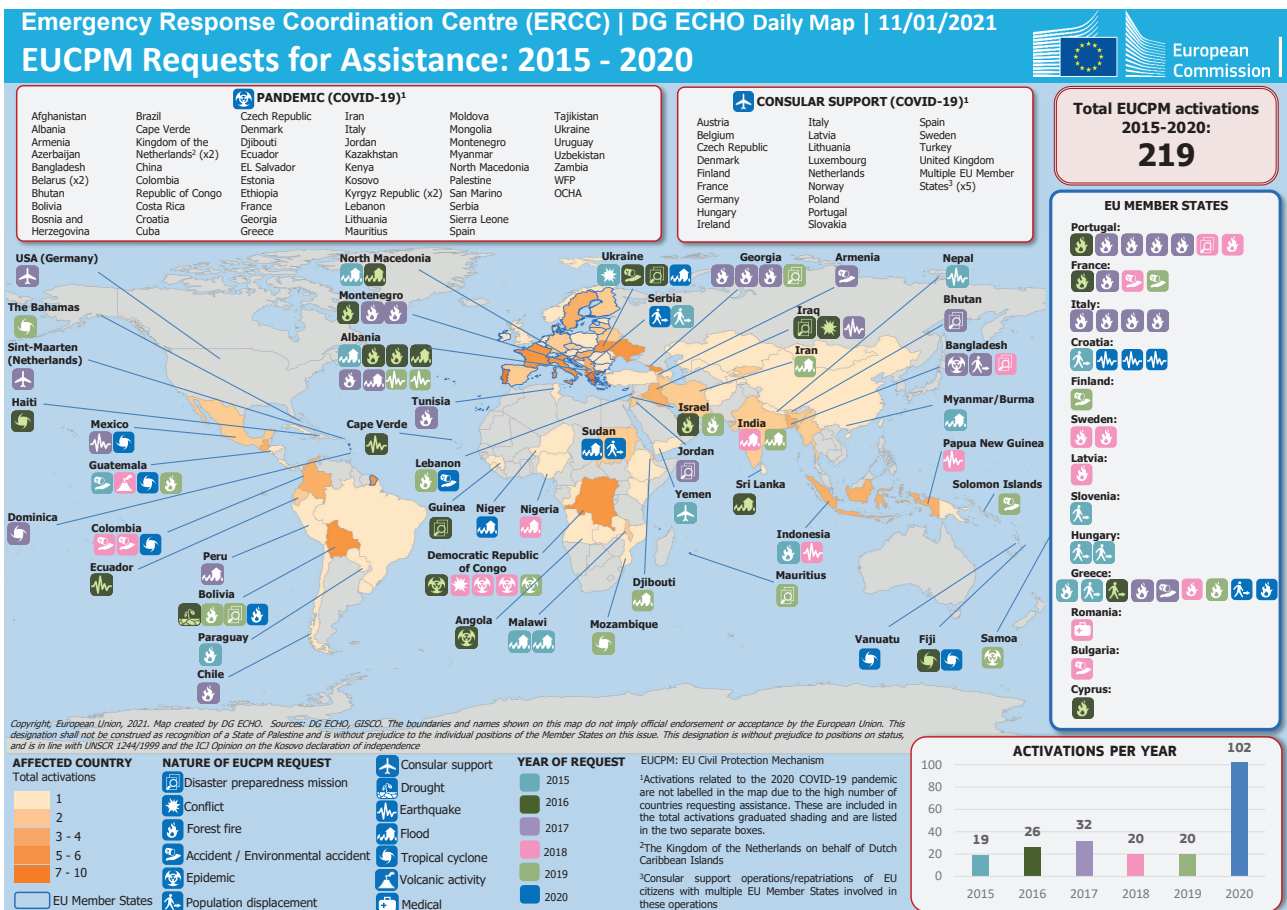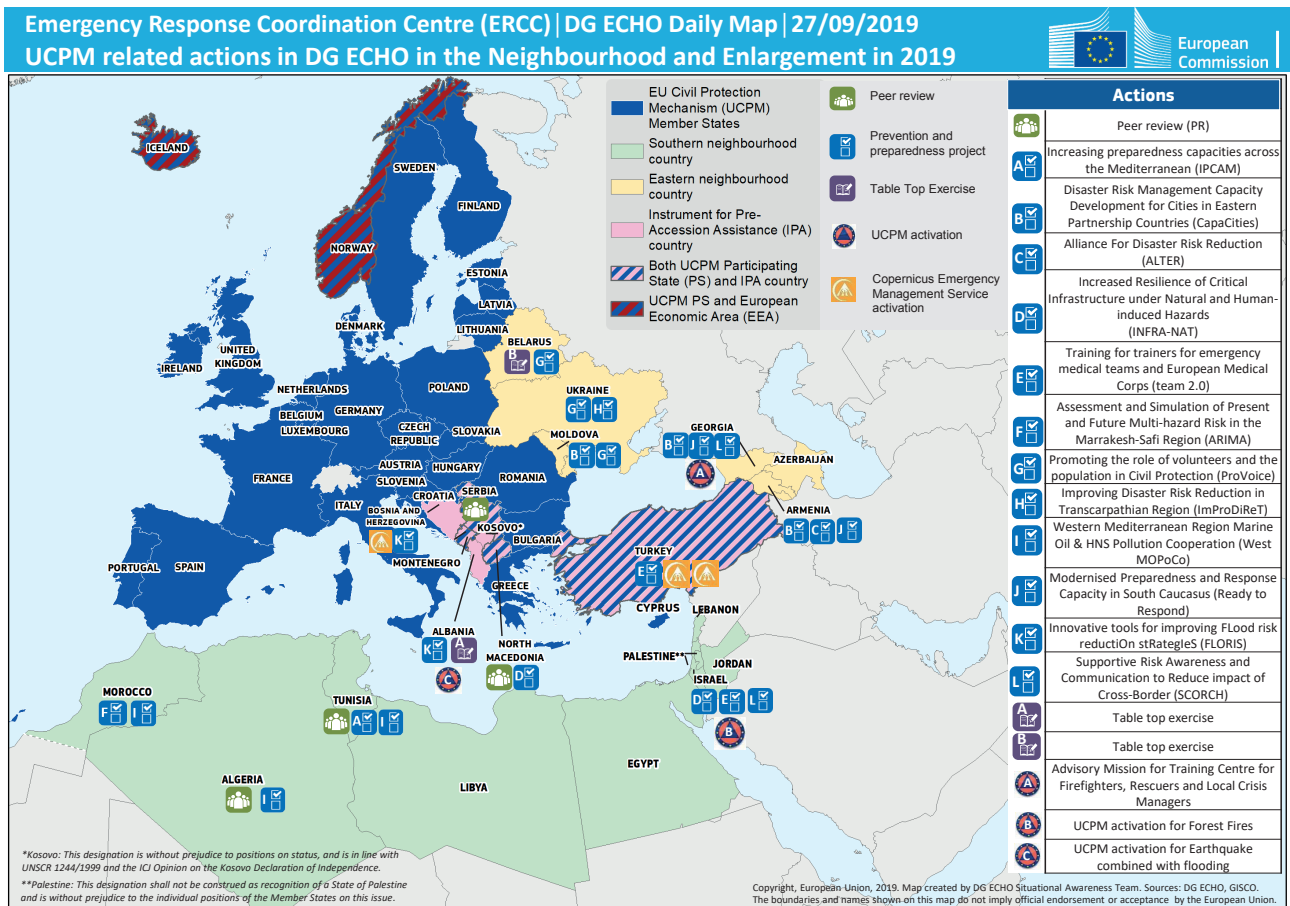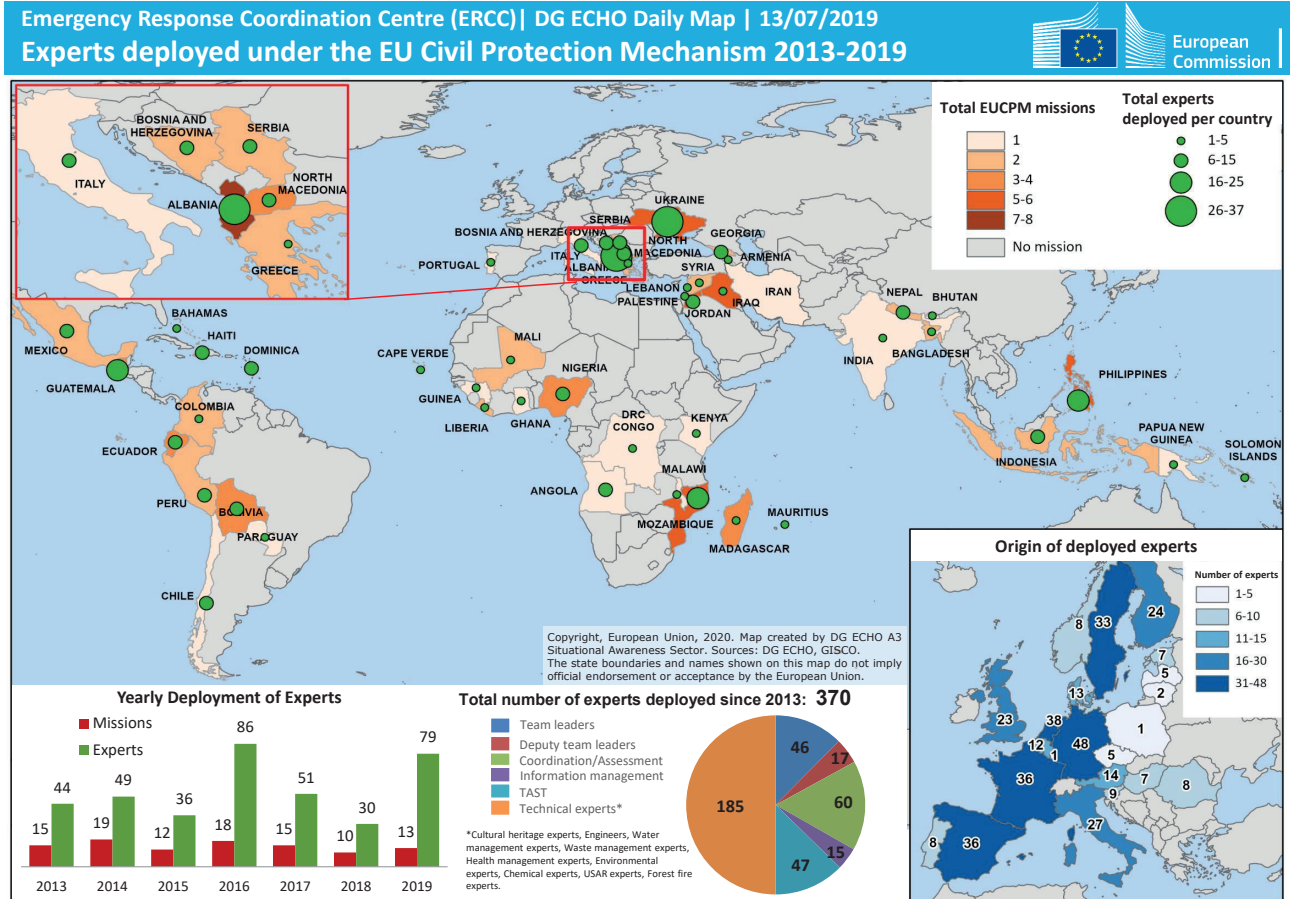
Appendix

Appendix A

Appendix B[184]

Emergency Response Coordination Centre (ERCC)| DG ECHO Daily Map | 13/07/2019
Experts deployed under the EU Civil Protection Mechanism 2013-2019

European Commission

Total EUCPM missions
- 1
- 2
- 3-4
- 5-6
- 7-8
- No mission

Total experts deployed per country
- 1-5
- 6-15
- 16-25
- 26-37

Countries labelled on map: BOSNIA AND HERZEGOVINA, SERBIA, ITALY, ALBANIA, NORTH MACEDONIA, GREECE, PORTUGAL, BAHAMAS, HAITI, MEXICO, DOMINICA, GUATEMALA, COLOMBIA, ECUADOR, PERU, BOLIVIA, PARAGUAY, CHILE, CAPE VERDE, GUINEA, LIBERIA, GHANA, NIGERIA, MALI, DRC CONGO, KENYA, ANGOLA, MALAWI, MOZAMBIQUE, MADAGASCAR, MAURITIUS, SERBIA, BOSNIA AND HERZEGOVINA, ITALY, ALBANIA, GREECE, NORTH MACEDONIA, GEORGIA, ARMENIA, SYRIA, IRAN, LEBANON, PALESTINE, JORDAN, IRAQ, NEPAL, BHUTAN, INDIA, BANGLADESH, PHILIPPINES, INDONESIA, PAPUA NEW GUINEA, SOLOMON ISLANDS, UKRAINE

Copyright, European Union, 2020. Map created by DG ECHO A3 Situational Awareness Sector. Sources: DG ECHO, GISCO. The state boundaries and names shown on this map do not imply official endorsement or acceptance by the European Union.

Yearly Deployment of Experts

- Missions
- Experts

Year	Missions	Experts
2013	15	44
2014	19	49
2015	12	36
2016	18	86
2017	15	51
2018	10	30
2019	13	79

Total number of experts deployed since 2013: 370

- Team leaders: 46
- Deputy team leaders: 17
- Coordination/Assessment: 60
- Information management: 15
- TAST: 47
- Technical experts*: 185

*Cultural heritage experts, Engineers, Water management experts, Waste management experts, Health management experts, Environmental experts, Chemical experts, USAR experts, Forest fire experts.

Origin of deployed experts

Number of experts
- 1-5
- 6-10
- 11-15
- 16-30
- 31-48

Values shown on map: 8, 33, 24, 7, 5, 2, 13, 23, 38, 12, 48, 5, 14, 7, 8, 36, 9, 8, 36, 27, 1

Emergency Response Coordination Centre (ERCC)│DG ECHO Daily Map│27/09/2019
UCPM related actions in DG ECHO in the Neighbourhood and Enlargement in 2019

European Commission

Legend:
- EU Civil Protection Mechanism (UCPM) Member States
- Southern neighbourhood country
- Eastern neighbourhood country
- Instrument for Pre-Accession Assistance (IPA) country
- Both UCPM Participating State (PS) and IPA country
- UCPM PS and European Economic Area (EEA)
- Peer review
- Prevention and preparedness project
- Table Top Exercise
- UCPM activation
- Copernicus Emergency Management Service activation

Countries labelled: ICELAND, SWEDEN, FINLAND, NORWAY, ESTONIA, LATVIA, LITHUANIA, DENMARK, UNITED KINGDOM, IRELAND, NETHERLANDS, BELGIUM, LUXEMBOURG, GERMANY, POLAND, BELARUS, UKRAINE, MOLDOVA, GEORGIA, AZERBAIJAN, ARMENIA, CZECH REPUBLIC, SLOVAKIA, AUSTRIA, HUNGARY, ROMANIA, SLOVENIA, CROATIA, SERBIA, BOSNIA AND HERZEGOVINA, KOSOVO*, BULGARIA, TURKEY, CYPRUS, LEBANON, MONTENEGRO, GREECE, ALBANIA, NORTH MACEDONIA, PALESTINE**, JORDAN, ISRAEL, FRANCE, ITALY, PORTUGAL, SPAIN, MOROCCO, TUNISIA, ALGERIA, LIBYA, EGYPT

Actions

	Action
	Peer review (PR)
A	Increasing preparedness capacities across the Mediterranean (IPCAM)
B	Disaster Risk Management Capacity Development for Cities in Eastern Partnership Countries (CapaCities)
C	Alliance For Disaster Risk Reduction (ALTER)
D	Increased Resilience of Critical Infrastructure under Natural and Human-induced Hazards (INFRA-NAT)
E	Training for trainers for emergency medical teams and European Medical Corps (team 2.0)
F	Assessment and Simulation of Present and Future Multi-hazard Risk in the Marrakesh-Safi Region (ARIMA)
G	Promoting the role of volunteers and the population in Civil Protection (ProVoice)
H	Improving Disaster Risk Reduction in Transcarpathian Region (ImProDiReT)
I	Western Mediterranean Region Marine Oil & HNS Pollution Cooperation (West MOPoCo)
J	Modernised Preparedness and Response Capacity in South Caucasus (Ready to Respond)
K	Innovative tools for improving FLood risk reductiOn stRategieS (FLORIS)
L	Supportive Risk Awareness and Communication to Reduce impact of Cross-Border (SCORCH)
A	Table top exercise
B	Table top exercise
A	Advisory Mission for Training Centre for Firefighters, Rescuers and Local Crisis Managers
B	UCPM activation for Forest Fires
C	UCPM activation for Earthquake combined with flooding

*Kosovo: This designation is without prejudice to positions on status, and is in line with UNSCR 1244/1999 and the ICJ Opinion on the Kosovo Declaration of Independence.

**Palestine: This designation shall not be construed as recognition of a State of Palestine and is without prejudice to the individual positions of the Member States on this issue.

Copyright, European Union, 2019. Map created by DG ECHO Situational Awareness Team. Sources: DG ECHO, GISCO. The boundaries and names shown on this map do not imply official endorsement or acceptance by the European Union.

Appendix C[185]

Emergency Response Coordination Centre (ERCC) | DG ECHO Daily Map – 04/09/2020
European Civil Protection Pool - Offered capacities

Notes

1. EC, *Report from the Commission to the European Parliament and the Council on progress made and gaps remaining in the European Emergency Response Capacity, Brussels, COM(2017) 78 Final*, https://www.europarl.europa.eu/RegData/docs_autres_institutions/commission_europeenne/com/2017/0078/COM_COM(2017)0078_EN.pdf, 17.2.2017.

2. DG ECHO, *Administrative Arrangement Switzerland*, https://ec.europa.eu/echo/sites/echo-site/files/swiss_aa_postisc.pdf, 28.04.2017.

3. Tchangani, A. P., and Pérès, F. "BOCR Framework for Decision Analysis," *IFAC Proceedings Volumes*, 43:8 (2010), 507−513, https://doi.org/10.3182/20100712-3-FR-2020.00083

4. This report makes a conscious effort to address problematic social norms that over time have become embedded (and hidden/unquestioned) in common language usage. For example, unlike natural hazards, most disasters are not natural but a result of the social construction of risk. Disasters are a result of the exposure of vulnerable people or assets to natural, biological, cultural, or technological hazards. Also, in an effort to eliminate gender biases, the term "man-made disasters" is equally problematic and should be avoided. The report also refers to "people impacted" or "people in need" instead of "victims". The concept of "victims" is problematic, as it labels people as disempowered. People impacted by disasters are often both resilient and resourceful. We only make an exception to this rule when quoting directly from published material.

5. The European Commission is the EU's politically independent executive arm. Whereas the European Council sets the overall political direction of the EU, the Commission is responsible for drawing up proposals for new European legislation, which the European Parliament and the Council of the European Union adopts. Once adopted, the Commission and the EU Member States implement them, and the Commission ensures the laws are properly applied and implemented. The day-to-day running of Commission business is organized into departments known as Directorates-General (DGs), each responsible for a specific policy area, such as the DG ECHO. Within the General Secretariat of the Council, which assists the European Council and the Council of the EU, the Working Party on Civil Protection (PROCIV) is the body responsible for discussing issues related to civil protection, such as legislative proposals from the Commission, Council conclusions on specific topics, contributions to negotiations in international fora, and policy discussions and exchanges on particular topics. PROCIV also prepares EU contributions to the UN-led work on disaster risk reduction (such as the Sendai Framework for Disaster Risk Reduction 2015−2030); deals with the protection of critical infrastructure in the EU; and works on chemical, biological, radiological and nuclear security to prevent malicious use of such material, including for terrorist attacks. It is within this regulative structure that decisions regarding upgrades to the DG ECHO/UCPM budget, operational structure, and resource capacities are made. For further details, see: EU (2020) *About the EU: Institutions and bodies,* https://europa.eu/european-union/about-eu/institutions-bodies_en (version 20 May 2020); General Secretariat of the Council (2020) *European Council / Council of the European Union: Policies: Civil Protection, European Union,* https://www.consilium.europa.eu/en/policies/civil-protection/ (version 20 October 2020).

6. Humanitarian emergencies include complex emergencies, such as protracted conflict, increases in armed non-state groups, emergencies caused by climate change and poverty, resource scarcity and overpopulation, increased urbanization and displaced people.

7. The Treaty of Lisbon (signed December 2007, enforced December 2009) forms the constitutional basis for the EU. The Treaty is an amendment of the two founding treaties − the Treaty of Rome (1957, amended in 2007 to become the Treaty of the Functioning of the EU) and the Maastricht Treaty (1992, amended in 2007 to become the Treaty of EU).

8. DG ECHO, *Legal Framework, European Commission,* https://ec.europa.eu/echo/who/about-echo/legal-framework_en, 02.06.2020.

9. DG ECHO, *Civil Protection, European Commission,* https://ec.europa.eu/echo/what/civil-protection_en, 01.07.2020.

10. DG ECHO, *Humanitarian Aid, European Commission,* https://ec.europa.eu/echo/what/humanitarian-aid_en, 12.06.2020.

11. Interventions such as: food, nutrition, shelter, healthcare, water and sanitation, and education in emergencies.

12. Both DG ECHO and Switzerland are among the 62 signatories to the 2016 Grand Bargain agreement (signed by 25 states, 11 UN Agencies, 5 inter-governmental organizations, Red Cross/Red Crescent Movements and 21 NGOs), which represented 73 per cent of all humanitarian contributions donated in 2018 and 70 per cent of aid received by agencies. See: DG ECHO, *Grand Bargain,* https://ec.europa.eu/echo/what/humanitarian-aid/grand-bargain_en (version 17 October 2018); Grand Bargain Secretariat, "The Grand Bargain", *Inter-Agency Standing Committee,* https://interagencystandingcommittee.org/grand-bargain, 2020.

13. Council of the EU, *Draft Council conclusions on cooperation between humanitarian aid and civil protection authorities: building a new partnership for disaster management, 15831/14, 2014,* https://data.consilium.europa.eu/doc/document/ST-15831-2014-INIT/en/pdf

14. DG ECHO, EU Civil Protection Mechanism, https://ec.europa.eu/echo/what/civil-protection/mechanism_en, 27.04.2021.

15. Council of the EU, *Council conclusions on EU relations with the Swiss Confederation,* press release 19 February 2019, https://www.consilium.europa.eu/en/press/press-releases/2019/02/19/council-conclusions-on-eu-relations-with-the-swiss-confederation/

16. Modified from DG ECHO diagram: https://ec.europa.eu/echo/sites/echo-site/files/echo_organigramme_en.pdf and https://ec.europa.eu/echo/who/about-echo/organisational-chart_en

17. Parker, C. F., Persson, T., and Widmalm, S. "The effectiveness of national and EU-level civil protection systems: evidence from 17 member states," *Journal of European Public Policy,* 26:9 (2019), 1312−1334.

18. DG ECHO, *Emergency Response Coordination Centre,* https://ec.europa.eu/echo/what/civil-protection/emergency-response-coordination-centre-ercc_en, 04.05.2020.

19. EU, *Decision No 2001/792/EC, Euratom: Council Decision of 23 October 2001 establishing a Community mechanism to facilitate reinforced cooperation in civil protection assistance interventions,* EUR-Lex, http://data.europa.eu/eli/dec/2001/792/oj (no longer in force).

20. EU, *Decision No 1313/2013/EU of the European Parliament and of the Council of 17 December 2013 on a Union Civil Protection Mechanism,* EUR-Lex, http://data.europa.eu/eli/dec/2013/1313/2019-03-21 (in force); EU, *Decision No 2014/762/EU: Commission Implementing Decision of 16 October 2014 laying down rules for the implementation of Decision No 1313/2013/EU of the European Parliament and of the Council on a Union Civil Protection Mechanism and repealing Commission Decisions 2004/277/EC, Euratom and 2007/606/EC, Euratom (notified under document C(2014) 7489),* EUR-Lex, http://data.europa.eu/eli/dec_impl/2014/762/2019-04-10 (in force).

21. EU, *Consolidated versions of the Treaty on European Union and the Treaty on the Functioning of the European Union, 2012/C 326/01,* EUR-Lex, http://data.europa.eu/eli/treaty/tfeu_2012/oj (in force).

22. DG ECHO's humanitarian aid operations are specifically linked to Article 214 of the Treaty of the Functioning of the EU.

23. European Environment Agency, *Indicator Assessment: Economic losses from climate-related extremes in Europe,* https://www.eea.europa.eu/data-and-maps/indicators/direct-losses-from-weather-disasters-3/assessment-2, 2019.

24. DG ECHO, *European Disaster Risk Management,* https://ec.europa.eu/echo/files/aid/countries/factsheets/thematic/disaster_risk_management_en.pdf, 26.07.2019.

25. See: Butler, A. et al. "Foraging for identity: the relationships between landscape activities and landscape identity after catastrophic landscape change," *Landscape Research,* 44 (2019), 303−319; de Vet, E. et al. "An Unmitigated Disaster: Shifting from Response and Recovery to Mitigation for an Insurable Future," *International Journal of Disaster Risk Science,* 10 (2019), 179−192; Eriksen, C. et al. "Rethinking the interplay between affluence and vulnerability to aid climate change adaptive capacity," Climatic Change, 162 (2020), 25−39.

26. DG ECHO, *Forest Fires,* https://ec.europa.eu/echo/what-we-do/civil-protection/forest-fires_en, 03.06.2020.

27. Eriksen, C. "Europe's Fiery Future: Rethinking Wildfire Policy," *CSS Policy Perspective* 8/12, 2020, https://css.ethz.ch/content/dam/ethz/special-interest/gess/cis/center-for-securities-studies/pdfs/PP8-12_2020-EN.pdf

28. European Environment Agency, *Indicator Assessment: Forest Fires,* https://www.eea.europa.eu/data-and-maps/indicators/forest-fire-danger-3/assessment, 2020.

29. Source: https://www.consilium.europa.eu/en/infographics/civil-protection

30   Müller, M.M., Vilà-Vilardell, L. and Vacik, H. *Forest Fires in the Alps – State of Knowledge, Future Challenges and Options for an Integrated Fire Management,* EUSALP Action Group 8, EU Strategy for the Alpine Region, European Commission, 2020, http://alpine-region.eu/results/forest-fires-alps-state-knowledge-and-further-challenges

31   EDA, *Geography – Facts and Figures,* https://www.eda.admin.ch/aboutswitzerland/en/home/umwelt/geografie/geografie---fakten-und-zahlen.html, 2017.

32   European Commission, *Commission Staff Working Document: Overview of Natural and Man-made Disaster Risks the European Union may face, Brussels, 23.5.2017 SWD(2017) 176 final,* 2017, https://ec.europa.eu/echo/sites/echo-site/files/swd_2017_176_overview_of_risks_2.pdf

33   EU Decision No 1313/2013/EU, Article 28(1a).

34   European Commission, *A strengthened EU Civil Protection Mechanism endorsed by European Parliament,* press release 27 April 2021, https://ec.europa.eu/commission/presscorner/detail/en/ip_21_1940

35   European Council, *Multiannual Financial Framework for 2021−2027 adopted,* https://www.consilium.europa.eu/en/press/press-releases/2020/12/17/multiannual-financial-framework-for-2021-2027-adopted, 17.12.2020; and https://ec.europa.eu/info/sites/default/files/about_the_european_commission/eu_budget/mff_2021-2027_breakdown_current_prices.pdf

36   OECD, *DAC List of ODA Recipients* https://www.oecd.org/development/financing-sustainable-development/development-finance-standards/daclist.htm

37   EU Decision No 1313/2013/EU, Article 28(3).

38   See financial assistance as referred to in EU Decision No. 1313/2013/EU, Article 20 and Article 21(1) points a, b, f and h.

39   EU Decision No 1313/2013/EU, Article 28(2).

40   EU Decision No 1313/2013/EU, Articles 14−16.

41   DG ECHO, *European Civil Protection Pool,* https://ec.europa.eu/echo/what/civil-protection/european-civil-protection-pool_en (version 3 September 2020).

42   On Rue de la Loi 86, Brussels. Entrance for visitors on Rue Joseph II 79.

43   Cooper, H. "Europe to the rescue! Emergency response team's global mission," *Politico,* 2017 https://www.politico.eu/article/eu-emergency-response-team-global-mission-ercc-relief-portugal-fire/

44   Staff members are not recruited directly by DG ECHO but are selected through the European Personnel Selection Office (EPSO) with all other candidates for the EU institutions. Besides permanent positions, EPSO also hires contract and temporary agents, as well as interim staff on a temporary basis for specialized tasks.

45   EU Decision No 1313/2013/EU, Article 11.

46   EU Decision No 1313/2013/EU, Article 11(7).

47   Belgium, Estonia, the Czech Republic, Italy, France, Germany, Norway, Portugal, Slovakia, Spain, and Sweden.

48   "Emergency medical teams (EMT) provide direct medical care to people affected by a disaster. These teams are certified to ensure they meet quality standards by the WHO. So far, Norway, Germany, Belgium, Italy, Spain, Portugal, France, Estonia, and the Czech Republic have committed such teams. The Italian, Norwegian, Portuguese, and Spanish Emergency Medical teams have been classified by the WHO, while an additional 9 other European medical teams are currently in the process of classification. In addition, Germany contributes a specialized infectious disease isolation field hospital from the German Red Cross. Mobile biosafety laboratories were developed and deployed during the 2014 Ebola crisis. Belgium has since committed its B-Life Lab (Biological Light Fieldable Laboratory for Emergencies) and Germany the European Mobile Laboratory, coordinated by the Bernhard-Nocht-Institute for Tropical Medicine. Medical evacuation capacities are key for mass casualty disasters requiring the evacuation of EU citizens, and for retrieving humanitarian and medical workers from disaster areas, if needed. Currently, Sweden provides such assets to the European Medical Corps, while Slovakia is in the process of certifying its committed capacity. Work is also ongoing to facilitate the mobilization and deployment of medical experts with specific profiles under the Mechanism, such as epidemiologists with strong field expertise or burns assessment specialists to help assess the appropriate level of treatment of large numbers of patients." (DG ECHO 2020[49])

49   DG ECHO, *European Medical Corps,* https://ec.europa.eu/echo/what-we-do/civil-protection/european-medical-corps_en, 03.02.2020); Haussig, J.M., Severi, E., et al. "The European Medical Corps: first Public Health Team mission and future perspectives," *Eurosurveillance,* 22:37 (2017), 30613; Vybornova, O. and Gala, J.-L. "Structured decision-making for the management of a biological fieldable laboratory during outbreaks: a case for European Union Civil Protection Mechanism (EUCPM)," *Environment Systems and Decisions,* 39:1 (2019), 65−76.

50   UN Environment Program, *Readiness for and response to environmental emergencies,* https://www.unep.org/explore-topics/disasters-conflicts/what-we-do/preparedness-and-response/readiness-and-response

51   OCHA, *Environmental Dimensions of Emergencies,* https://www.unocha.org/themes/environmental-dimensions-emergencies

52   Environmental Emergencies Centre (2020) *UN Environment/Office for the Coordination of Humanitarian Affairs (OCHA) Joint Unit,* https://www.eecentre.org/

53   European Commission, *Copernicus Emergency Management Service,* https://www.copernicus.eu/en/services/emergency, 2020.

54   European Maritime Safety Agency, *About us,* http://www.emsa.europa.eu/about.html, 2020.

55   DG ECHO, *Monitoring Tools,* https://ec.europa.eu/echo/what/civil-protection/monitoring-tools_en, 24.01.2020.

56   Copernicus Emergency Management Service, *European Flood Awareness System (EFAS),* https://www.efas.eu/european-flood-awareness-system-efas

57   Copernicus Emergency Management Service, *European Forest Fire Information System (EFFIS),* https://effis.jrc.ec.europa.eu/

58   Global Disaster Alert and Coordination System (GDACS), https://www.gdacs.org/

59   European-Mediterranean Seismological Centre (EMSC), https://www.emsc-csem.org/#2

60   EU Decision No 2019/420/EU, Article 1(8).

61   DG ECHO, *Union Civil Protection Knowledge Network,* https://ec.europa.eu/echo/what/civil-protection/knowledge-network_en, 16.11.2020.

62   EU, *Decision 2019/420/EU of the European Parliament and of the Council of 13 March 2019 amending Decision No 1313/2013/EU on a Union Civil Protection Mechanism,* EUR-Lex, 2019, https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:32019D0420

63   European Commission, *The Union Civil Protection Mechanism Training Programme,* Publications Office of the European Union, Luxembourg, 2016, https://ec.europa.eu/echo/files/civil_protection/civil/prote/pdf-docs/Training%20brochure.pdf

64   DG ECHO, *Call for Proposals,* https://ec.europa.eu/echo/funding-evaluations/financing-civil-protection/calls-for-proposal_en, 24.04.2020; DG ECHO, *Procurement,* https://ec.europa.eu/echo/funding-evaluations/public-procurement/procurement_en, 18.06.2020.

65   DG ECHO, *List of EU-supported civil protection exercises,* https://ec.europa.eu/echo/funding-evaluations/financing-civil-protection/civil-protection-exercises_en, 29.01.2020.

66   DG ECHO, *EU MODEX,* https://www.eu-modex.eu/Red/about, 2020.

67   Fundația „Centrul Național APELL pentru Managementul Dezastrelor" (CP-APELL RO), *Exchange of Experts Programme, General Inspectorate for Emergency Situation,* Romanian Ministry of Internal Affairs, http://www.exchangeofexperts.eu/#about, 2018.

68   DG ECHO, *Peer Review Programme,* https://ec.europa.eu/echo/what-we-do/civil-protection/peer-review_en, 27.10.2020.

69   World Health Organization, *Emergency Medical Teams,* https://www.who.int/emergencies/partners/emergency-medical-teams, 2020.

70   EU Decision No 1313/2013/EU, Article 21(2c).

71   DG ECHO, *rescEU,* https://ec.europa.eu/echo/what/civil-protection/resceu_en, 25.09.2020.

72   EU Decision No 1313/2013/EU, Article 12.

73   Morsut, C., and Kruke, B. I. "Europeanisation of civil protection: the cases of Italy and Norway," *International Public Management Review,* 20:1 (2020).

74   EU Decision No 1313/2013/EU, Article 21(3).

75   EU Decision No 1313/2013/EU, Article 32(1g).

76   Provided by Croatia, Cyprus, France, Greece Italy, Spain and Sweden.

77   European Commission, *EU Budget for the Future: rescEU,* European Union, 2 June 2020, https://ec.europa.eu/echo/files/aid/countries/fact-sheets/thematic/2020_rescEU_MFF_en.pdf

78   DG ECHO, *COVID-19: Commission creates first ever rescEU stockpile of medical equipment,* https://ec.europa.eu/echo/news/covid-19-commission-creates-first-ever-resceu-stockpile-medical-equipment_en, 19.03.2020.

79   European Commission, *Health Security and Infectious Diseases: Preparedness and Response Planning,* https://ec.europa.eu/health/security/preparedness_response_en, 2020.

80   DG ECHO, *Emergency Support Instrument,* https://ec.europa.eu/echo/what/civil-protection/emergency-support-instrument_en, 18.09.2020.

81   European Commission, *Proposal for a Decision of the European Parliament and the Council amending Decision No 1313/2013/EU on a Union Civil Protection Mechanism,* Brussels, 2 June 2020, https://www.europarl.europa.eu/RegData/docs_autres_institutions/commission_europeenne/com/2020/0220/COM_COM(2020)0220_EN.pdf

82   In alignment with Articles 196 and 322(1a) of the Treaty on the Functioning of the European Union.

83   European Commission, *The pillars of Next Generation EU,* https://ec.europa.eu/info/live-work-travel-eu/health/coronavirus-response/recovery-plan-europe/pillars-next-generation-eu_en, 2020.

84   European Commission, *Recovery plan for Europe,* https://ec.europa.eu/info/live-work-travel-eu/health/coronavirus-response/recovery-plan-europe_en, 2020.

85   DG ECHO (2021) *Financing Civil Protection,* https://ec.europa.eu/echo/funding-evaluations/financing-civil-protection_en, 19.02.2021.

86   EU Decision No. 1313/2013/EU, Article 19, Annex I-IA.

87   See also: Ekengren, M. and Hollis, S. "Explaining the European Union's Security Role in Practice," *Journal of Common Market Studies,* 58:3 (2020), 616–635.

88   See also: Widmalm, S., Parker, C. and Persson, T. *Civil Protection Cooperation in the European Union: How Trust and Administrative Culture Matter for Crisis Management.* (Palgrave Macmillan, 2019).

89   Bundesrat, *Bundesgesetz über den Bevölkerungsschutz und den Zivilschutz,* www.admin.ch/opc/de/classified-compilation/20011872/index.html, SR 520.1, 2002, Art. 2.

90   Bundesrat, *Bundesgesetz über den Bevölkerungsschutz und den Zivilschutz,* www.admin.ch/opc/de/classified-compilation/20011872/index.html, SR 520.1, 2002, Art. 4.

91   BABS, *Bericht zur nationalen Risikoanalyse,* www.babs.admin.ch/content/babs-internet/de/aufgabenbabs/gefaehrdrisiken/natgefaehrdanalyse/_jcr_content/contentPar/tabs/items/fachunterlagen/tabPar/downloadlist/downloadItems/109_1604480153059.download/KNSRisikobericht2020-de.pdf, 2020, p. 10.

92   BABS, *Bericht zur nationalen Risikoanalyse,* 2020.

93   In order to distinguish between the two German terms *Bevölkerungsschutz* (the entire integrated system of civil protection) und *Zivilschutz* (a distinct organization that is part of the integrated civil protection system), both of which can be translated in English as civil protection, the German word *Zivilschutz* is used throughout this report to refer to the latter.

94   Bundesrat, *Bundesgesetz über den Bevölkerungsschutz und den Zivilschutz,* www.admin.ch/opc/de/classified-compilation/20011872/index.html, SR 520.1, 2002, Art. 3.

95   BABS, *Die Polizei im Bevölkerungsschutz,* www.babs.admin.ch/de/verbund/polizei.html, 2020.

96   BABS, *Die Feuerwehr im Bevölkerungsschutz,* www.babs.admin.ch/de/verbund/feuerwehr.html, 2020.

97   BABS, *Das Gesundheitswesen im Bevölkerungsschutz,* www.babs.admin.ch/de/verbund/sanitaet.html, 2020.

98   BABS, *Die technischen Betriebe im Bevölkerungsschutz,* www.babs.admin.ch/de/verbund/techbetriebe.html, 2020.

99   BABS, *Der Zivilschutz im Bevölkerungsschutz,* www.babs.admin.ch/de/verbund/zs.html, 2020.

100   BABS, *Organisation des Zivilschutzes,* www.babs.admin.ch/de/zs/org.html, 2020.

101   VBS, Umsetzung Strategie Bevölkerungsschutz und Zivilschutz 2015+, www.newsd.admin.ch/newsd/message/attachments/44796.pdf, 2016, p. 53–60.

102   Bundesrat, *Bundesgesetz über den Bevölkerungsschutz und den Zivilschutz,* www.admin.ch/opc/de/classified-compilation/20011872/index.html, SR 520.1, 2002, Art. 5.

103   BABS, *Organisation des BABS,* www.babs.admin.ch/de/ueberuns/org.html, 2020.

104   BABS, *Die koordinierten Bereiche,* www.babs.admin.ch/de/verbund/kobe.html, 2020.

105   BABS, *Die Eidgenössische Kommission für ABC Schutz KomABC,* www.babs.admin.ch/de/aufgabenbabs/abcschutz/org/komabc.html, 2020.

106   Schweizer Armee, *Koordinierter Sanitätsdienst,* www.vtg.admin.ch/de/organisation/astab/san/ksd.html, 2020.

107   Bundesamt für Verkehr (BAV), *KOVE – Koordination des Verkehrswesens im Hinblick auf Ereignisfälle,* www.bav.admin.ch/bav/de/home/themen-a-z/kove.html, 2020.

108   Bundesamt für Meteorologie und Klimatologie (MeteoSchweiz), *Koordinierter Wetterdienst,* www.meteoschweiz.admin.ch/home/ueber-uns/portraet/koordinierter-wetterdienst.html, 2020.

109   Bundesamt für Umwelt (BAFU), *Geschäftsstellen LAINAT und GIN,* www.bafu.admin.ch/bafu/de/home/amt/geschaeftsstellen-lainat-und-gin.html, 2020.

110   VBS, *Umsetzung Strategie Bevölkerungsschutz und Zivilschutz 2015+,* 2016, p. 21f.

111   Labor Spiez, *Einsatz Organisation,* www.labor-spiez.ch/de/ein/index.htm, 2020.

112   Eidgenössische Finanzverwaltung (EFV), *Bericht zur Staatsrechnung 2019,* www.efv.admin.ch/dam/efv/de/dokumente/Finanzberichte/finanzberichte/rechnung/2019/rg1-2019.pdf.download.pdf/RG1-d.pdf, 2020, p. 113.

113   Eidgenössische Finanzverwaltung (EFV), *Bericht zum Voranschlag 2021 mit IAFP 2022 – 2024,* www.efv.admin.ch/dam/efv/de/dokumente/Finanzberichte/finanzberichte/va_iafp/2021/va1-2021-d.pdf.download.pdf/VA1-d.pdf, 2020, p. 80.

114   Ernst Basler + Partner, *Kosten Zivilschutz Schweiz – Schlussbericht,* 2015.

115   BABS, *Das Führungsorgan im Bevölkerungsschutz,* www.babs.admin.ch/de/verbund/fuehrung.html, 2020.

116   VBS, *Umsetzung Strategie Bevölkerungsschutz und Zivilschutz 2015+,* p. 12f.

117   VBS, *Umsetzung Strategie Bevölkerungsschutz und Zivilschutz 2015+,* p. 13–15.

118   *Weisungen über das Krisenmanagement in der Bundesverwaltung,* http://www.admin.ch/opc/de/federal-gazette/2019/4593.pdf, 21.06.2019.

119   Bundeskanzlei, *Krisenmanagement,* www.bk.admin.ch/bk/de/home/regierungsunterstuetzung/fuehrungsunterstuetzung/krisenmanagement.html, 2021.

120   Bundesrat, *Verordnung über den Bundesstab Bevölkerungsschutz (VBSTB),* https://www.fedlex.admin.ch/eli/cc/2018/162/de, SR 520.17, 2018, Art. 3

121   Bundesrat, *Verordnung über den Bundesstab Bevölkerungsschutz (VBSTB),* https://www.fedlex.admin.ch/eli/cc/2018/162/de, SR 520.17, 2018, Art. 4.

122   NAZ, *Die NAZ,* www.naz.ch/de/naz/index.html, 2020.

123   NAZ, *Nationale Partner,* www.naz.ch/de/naz/nationale_partner.html, 2020.

124   NAZ, *Internationale Partner,* www.naz.ch/de/naz/internationale_partner.html, 2020.

125   BABS, *Ziviles Ressourcenmanagement Bund (ResMaB) – Kurzbeschrieb,* www.babs.admin.ch/content/babs-internet/de/aufgabenbabs/ressourcenmanagement-bund/_jcr_content/contentPar/tabs/items/dokumente/tabPar/downloadlist/downloadItems/158_1528720478499.download/KurzbeschriebResMaB_de.pdf, 2017, p. 3.

126   BABS, *Das Ressourcenmanagement Bund,* www.babs.admin.ch/de/aufgabenbabs/resmab.html, 2020.

127   BABS, *Ressourcenmanagement Bund (ResMaB),* www.docplayer.org/39204904-Ressourcenmanagement-bund-resmab.html, 2014, p. 1.

128   BABS, *Ziviles Ressourcenmanagement Bund – Kurzbeschrieb,* 2017, p. 6f

129 BABS, *Ziviles Ressourcenmanagement Bund – Kurzbeschrieb,* p. 8; BABS, *Ressourcenmanagement Bund (ResMaB) – Grundlagen,* docplayer. org/39204904-Ressourcenmanagement-bund-resmab.html, 2014, p. 58 – 81.

130 Bundesrat, *Botschaft des Bundesrates an die Bundesversammlung über Wirtschafts- und Finanzhilfe an die Entwicklungsländer und insbesondere über die Gewährung eines Rahmenkredites für die Finanzhilfe,* www.amtsdruckschriften.bar.admin.ch/viewOrigDoc.do?id=10044964, 26.02.1971.

131 Bundesrat, *Bundesgesetz über die internationale Entwicklungszusammenarbeit und humanitäre Hilfe,* www.admin.ch/opc/de/classified-compilation/19760056/index.html, SR 974, 1976, Art. 7.

132 DEZA, *IC: Jobs, Climate, Mitigation and the Rule of Law,* www.eda.admin. ch/deza/en/home/sdc/aktuell/dossiers/alle-dossiers/iza-2021-2024. html, 2020

133 DEZA, *SDC Expenditures,* www.eda.admin.ch/deza/en/home/sdc/portrait/figures-statistics/sdc-expenditures-2009-2013.html, 2020.

134 DEZA, *Swiss Official Development Assistance,* https://www.eda.admin. ch/deza/en/home/sdc/portrait/figures-statistics/swiss-oda.html

135 DEZA and SECO, *Swiss International Cooperation Annual Report,* www. admin.media-flow.ch/deza-seco-jahresbericht-2019-en#2021, 2019.

136 Swissinfo, *Parliament approves increase in Swiss aid budget,* www. swissinfo.ch/eng/parliament-approves-increase-in-swiss-aid-budget/46034492, 15.09.2020.

137 DEZA, *SDC Expenditures,* www.eda.admin.ch/deza/en/home/activities-projects/figures-statistics/sdc-expenditures-2009-2013.html, 2020.

138 OCHA, *World Humanitarian Data and Trends 2018,* http://www.unocha. org/sites/unocha/files/WHDT2018_web_final_singles.pdf, 2018, p. 32f.

139 EDA and WBF, *Switzerland's International Cooperation Strategy 2021 – 24,* www.eda.admin.ch/dam/deza/en/documents/publikationen/Diverses/Broschuere_Strategie_IZA_Web_EN.pdf, 2020, pp. 21, 25, 27.

140 EDA and WBF, *Switzerland's International Cooperation Strategy 2021 – 24,* 2020, p. 21.

141 SDC, *SDC Expenditures,* eda.admin.ch, 2020

142 SDC, *Food aid – risk reduction and crisis prevention,* www.eda.admin.ch/ deza/en/home/themes-sdc/agriculture-food-security/food-aid-risk-crisis.html, 2020.

143 DEZA, *Swiss Humanitarian Aid Unit,* www.eda.admin.ch/deza/en/ home/activities-projects/activities/humanitarian-aid/swiss-humanitarian-aid-unit.html, 2020.

144 DEZA, *Swiss Rescue,* www.eda.admin.ch/deza/en/home/activities-projects/activities/humanitarian-aid/operational-resources/swiss-rescue. html, 2020.

145 International Search and Rescue Advisory Group (INSARAG), https://www.insarag.org.

146 EDA and WBF, *Switzerland's International Cooperation Strategy 2021 – 24,* 2020, p. 21.

147 EDA and WBF, *Switzerland's International Cooperation Strategy 2021 – 24,* 2020, p. 24.

148 EDA and WBF, *Switzerland's International Cooperation Strategy 2021 – 24,* 2020, p. 23.

149 EDA, *Crisis Management Center,* www.eda.admin.ch/eda/en/fdfa/fdfa/ organisation-fdfa/state-secretariat/crisis-management.html, 2020.

150 DG ECHO, *Administrative Arrangement Moldavia,* ec.europa.eu/echo/ sites/echo-site/files/administrative_arrangement_moldova.pdf, 30.05.2012.

151 Interview with DG ECHO Representatives, winter 2020.

152 Surveys with Swiss Federal Civil Protection Representatives, autumn 2020.

153 U.S. Geological Survey, *M 6.4 – 15 km WSW of Mamurras, Albania, 2019.* https://earthquake.usgs.gov/earthquakes/eventpage/us70006d0m/ executive

154 Mihaljevic, J., Ormeni, R., and Gevorgyan, L. *Opinion: What We Can Learn From the 2019 Earthquake in Albania,* 2020, reliefweb.int/report/albania/opinion-what-we-can-learn-2019-earthquake-albania

155 Becatoros, E., and Semini, L. "Balkan countries rush to help in Albanian earthquake," *Associated Press,* 29.11.2019. https://apnews.com/article/ e420b7fde44a4ba390f3db312f3d5041

156 "EU mobilises emergency support to Albania after deadly earthquake," *The Brussels Times,* 30.11.2019. https://www.brusselstimes.com/news/ eu-affairs/81133/eu-mobilises-emergency-support-to-albania-after-deadly-earthquake; Kostreci, K. "Albania Search, Rescue Operation for Earthquake Survivors Ends," *voanews.com,* 30.11.2019. https://www. voanews.com/europe/albania-search-rescue-operation-earthquake-survivors-ends.

157 ARISTOTLE is a consortium of scientific entities in Europe under contract to the ERCC. It provides the ERCC with 24/7 multi-hazard scientific advice focused on earthquakes, tsunamis, volcanic eruptions and extreme meteorological events. This includes both longer-term advice following an emergency and advice when a potentially hazardous event is just beginning to unfold.

158 This decision was made based on three standard premises: Is there a need? Are Switzerland's interests represented? Can added value be offered?

159 Lucy van Dorp et al., Emergence of genomic diversity and recurrent mutations in SARS-CoV-2, *Infection, Genetics and Evolution* 83 (2020), 104351.

160 WHO, *Timeline: WHO's COVID-19 response,* www.who.int/ emergencies/diseases/novel-coronavirus-2019/interactive-timeline?gclid=Cj0KCQiAlsv_BRDtARIsAHMGVSY_1ngEMP5zQGpn8Bq JAvbsfakP9WBt8kfV9g2B1BmVG8ru_Zi0BnkaAtqIEALw_wcB#event-6, 2020; Ghebreyesus, T.A. *WHO Director-General's opening remarks at the media briefing on COVID-19 – 11 March 2020,* www.who.int/director-general/speeches/detail/who-director-general-s-opening-remarks-at-the-media-briefing-on-covid-19---11-march-2020, 2020.

161 European Commission, *Coronavirus: EU Civil Protection Mechanism activated for the repatriation of EU citizens,* www.ec.europa.eu/echo/news/ coronavirus-eu-civil-protection-mechanism-activated-repatriation-eu-citizens_en, 28.01.2020.

162 EDA, *Crisis Management Centre,* www.eda.admin.ch/eda/en/fdfa/fdfa/ organisation-fdfa/state-secretariat/crisis-management.html

163 For more information, see: https://ec.europa.eu/info/live-work-travel-eu/coronavirus-response/crisis-management-and-solidarity_en#bringi ngstrandedcitizenshome

164 EDA, *Das EDA hat bisher fast 7000 im Ausland blockierte Reisende in die Schweiz zurückgeholt,* www.admin.ch/gov/de/start/dokumentation/ medienmitteilungen.msg-id-78895.html, 24.04.2020.

165 The Working Party on Consular Affairs (COCON) coordinates consular cooperation among EU member states and non-EU countries, and within the EU. The COCON + format includes the Council of the EU, the EEAS, Member and Participating States of the EUCPM and Schengen guest states.

166 EDA, *Das EDA hat bisher fast 7000 im Ausland blockierte Reisende in die Schweiz zurückgeholt,* 2020.

167 U.S. Geological Survey, *M 3.3 Explosion – 1 km ENE of Beirut, Lebanon* earthquake.usgs.gov/earthquakes/eventpage/us6000b9bx/executive, 2020.

168 "Beirut explosion: Port officials under house arrest as rescue efforts continue," *BBC.com,* 06.08.2020, https://www.bbc.com/news/world-middle-east-53670839.

169 "Lebanon explosion: Deadly fuel tank blast rocks Beirut," *BBC. com,* 09.10.2020, https://www.bbc.com/news/world-middle-east-54486402; "Beirut port blast death toll rises to 190," *reuters.com,* 30.08.2020. https://www.reuters.com/article/us-lebanon-crisis-blast-casualties-idUSKBN25Q08H; OCHA Lebanon, "Beirut Port Explosions Situation Report No.1," *reliefweb.int,* 05.08.2020, https://reliefweb.int/ report/lebanon/lebanon-beirut-port-explosions-situation-report-no-1-5-august-2020-enar

170 OCHA Lebanon, "Beirut Port Explosions Situation Report No.7," *reliefweb.int,* 25.08.2020, https://reliefweb.int/report/lebanon/lebanon-beirut-port-explosions-situation-report-no-7-25-august-2020-enar

171 "UNESCO besorgt über Zustand historischer Gebäude in Beirut," *ORF. at,* 13.08.2020. https://orf.at/stories/3177357/; "Death toll in Lebanese capital rises to 135 as about 5,000 people are wounded," *theguardian. com,* 07.08.2020, https://www.theguardian.com/world/live/2020/ aug/04/beirut-explosion-huge-blast-port-lebanon-capital; "Beirut airport damaged in explosion, but flights continue," *thenationalnews.com,* 06.08.2020, www.thenationalnews.com/lifestyle/travel/beirut-airport-damaged-in-explosion-but-flights-continue-1.1059310; "Über die Hälfte von Beiruts Spitälern 'nicht funktionsfähig'", *ORF.at,* 12.08.2020, https://orf.at/stories/3177194/

172 Nakhoul, S., and Francis E. "Libanon bittet nach Explosionskatastrophe um rasche Hilfe," *de.reuters.com,* 05.08.2020, https://de.reuters.com/ article/libanon-explosion-idDEKCN2511XS

173 "Beirut explosion: international rescue workers fly in to boost search for survivors," *theguardian.com*, 06.08.2020, https://www.theguardian.com/world/2020/aug/06/beirut-explosion-international-rescue-workers-fly-in-to-boost-search-for-survivors

174 Statement by Commissioner Janez Lenarcic on the explosion in Beirut, Lebanon, *ec.europa.eu*, 05.08.2020, https://ec.europa.eu/echo/news/statement-commissioner-janez-lenar-i-explosion-beirut-lebanon_en

175 Hauri, A. et al., *Trend Analysis Civil Protection 2030 – Uncertainties, Challenges and Opportunities,* Center for Security Studies CSS, ETH Zürich, 2020. https://css.ethz.ch/content/dam/ethz/special-interest/gess/cis/center-for-securities-studies/pdfs/RR-Reports-2020-TrendsBev%C3%B6lkerungsschutz.pdf

176 See also BABS, *Bericht zur nationalen Risikoanalyse,* 2020: https://www.babs.admin.ch/content/babs-internet/de/aufgabenbabs/gefaehrdrisiken/natgefaehrdanalyse/_jcr_content/contentPar/tabs/items/fachunterlagen/tabPar/downloadlist/downloadItems/109_1604480153059.download/KNSRisikobericht2020-de.pdf; and VBS, *Umsetzung Strategie Bevölkerungsschutz und Zivilschutz 2015+,* 2016, p.11: https://www.newsd.admin.ch/newsd/message/attachments/44796.pdf

177 See Christensen et al. for a comparative study of crisis management coordination structures in different countries. Their study concludes that no single principle of organization dominates crisis management, and that path-dependency and administrative culture play a greater role in determining coordination quality than coordination structure does. Christensen, T., et al. "Comparing Coordination Structures for Crisis Management in Six Countries," *Public Administration,* 94:2 (2016), 316–332.

178 Bundesrat, *Bundesrat will Kooperation mit Frankreich bei Satellitenbildern,* https://www.admin.ch/gov/de/start/dokumentation/medienmitteilungen.msg-id-81321.html, 25.11.2020.

179 Copernicus, *What is Copernicus?,* copernicus.eu, 02.03.2021.

180 Copernicus Emergency Management Service, *List of EMS Rapid Mapping Activations,* emergency.copernicus.eu, 02.03.2021.

181 The Norwegian EMT consists of 75–80 medical experts who are deployed on a rotating basis. When deployed, the on-the-ground Norwegian EMT consists of around 20–30 people. The Norwegian EMT is formally registered in the Pool, but its capacities are also available for deployment with the WHO and the UN (see also Note[48]).

182 EPiGUARD, *EpiShuttle,* https://epiguard.com/products/, 19.03.2021.

183 See Morsut and Kruke (2020) for a case study of how national crisis management governance in Norway and Italy were shaped by EU developments, and how these national contexts in turn shaped changes within the EU.[73]

184 Sources: https://reliefweb.int/sites/reliefweb.int/files/resources/20201222_UCPM_activations_2015_2020_FINAL.pdf, https://reliefweb.int/sites/reliefweb.int/files/resources/echo_0.pdf, https://reliefweb.int/sites/reliefweb.int/files/resources/20190927_DailyMap_The_relation between the UCPM and Neighbouring Countries4.pdf

185 Source: https://reliefweb.int/sites/reliefweb.int/files/resources/20200904_DM_CivilProtectionPool_offered.pdf

CSS
ETH Zürich

The **Center for Security Studies (CSS) at ETH Zürich** is a center of competence for Swiss and international security policy. It offers security policy expertise in research, teaching and consulting. The CSS promotes understanding of security policy challenges as a contribution to a more peaceful world. Its work is independent, practice-relevant, and based on a sound academic footing.