

Honduras, and El Salvador between 1900–2022. Disasters are analyzed by frequency, severity, financial cost, distribution by country, burden of death, affected and financial cost by country, and type of disasters most prevalent in each country. These trends are then graphed over the time period of the database.

Results: EM-DAT records 359 disasters in the Northern Triangle between 1900 and 2022. Meteorologic events (floods and storms) were the most common types of disaster (44%), followed by transport accidents (13%). Meteorologic events and earthquakes were the most severe, as measured by deaths (62% of total deaths caused by disasters), people affected (60%), and financial cost (86%). Guatemala had the greatest number of disasters (45%), deaths (68%), and affected people (52%). The financial costs of the disasters were evenly distributed between the three countries.

Conclusion: Meteorologic disasters are the most common and most severe type of disaster in the Northern Triangle. Earthquakes and transport accidents are also common. As climate change causes more severe storms in the region, disasters are likely to increase in severity as well. Governments and aid organizations should develop disaster preparedness and mitigation strategies to lessen the catastrophic effects of these coming disasters. Missing data in the EM-DAT dataset limits the conclusions of this study to general trends

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WHO Health EDRM Research Network and Health Data Management

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Introduction: The WHO Health Emergency and Disaster Risk Management (H-EDRM) Research Network has identified that health data collection during health emergencies and disasters is a key element to enable proper coordination and timely response, and research priorities of the network.

Method: Focus group discussion was performed to identify key challenges which hinder accomplishment of the data collection.

Results: It was concluded that the issue faces significant challenges including; (1) Access: Logistic issues including safety, transport and communication did not allow experts such as epidemiologists to access onsite and relevant stakeholders. It is also challenging for local public health stakeholders to accept new experts during emergencies. (2) Tools: forms or tools that are concise and operational to be accepted by frontline responders should be provided. (3) Standardization: to set standard forms or tools and its operational mechanism is essential to collect health data, otherwise collected data will be partial and fragmented. (4) Governance: overall governance of procedure and data ownership must be clarified before its implication administratively and legally. These should be endorsed by local health authorities. (5) Ethical procedure: Obtaining informed consent

and conducting timely procedures is difficult. Contextually, health data collection during emergencies and disasters in many cases is inappropriate. (6) Operation: Collected data should contribute to ongoing operation in a timely manner. The discussion also found the standard tool of the WHO; the Emergency Medical Teams Minimum Data Set, which has been already used in more than ten countries and has been providing leading examples for this topic.

Conclusion: Further research to fulfill the identified challenges and gaps will facilitate the collection and strengthen the health emergency and disaster risk management.

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Compliance of the Public with Governmental Regulations and Recommended Protective Health Behavior During COVID-19: Lessons Learned from Varied Waves of the Pandemic in Israel

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Introduction: Managing pandemics is dependent on the adherence of civil societies to directives and recommendations issued by governmental and public health authorities. In the context of the COVID-19 pandemic, hurdles were encountered by authorities regarding public compliance to orders and recommendations of protective health behavior. The objective is to investigate the factors that most powerfully enhance or impede compliance to varied measures—both regulations (i.e. lockdown, mask wearing, social distancing) and recommendations (i.e. vaccination etc.) in Israel.

Method: A longitudinal study, based on structured questionnaires was conducted to investigate factors that enhance or impede the uptake of protective health behavior throughout two years of COVID-19.

Results: Various factors throughout different phases of the pandemic have been identified as playing a significant role in compliance. During the initial phases of the pandemic, the most salient factors for enhanced compliance to non-pharmaceutical interventions (lockdown) were concern for family or self-health, while deterrence played little role. During the fourth wave, findings indicated that pandemic fatigue had begun to have cascading effects on vaccination efforts. Particularly at this stage, trust in authorities and even threat perception components were incapable of predicting uptake, while perceived importance of the vaccine and its effectiveness positively and significantly predicted uptake. Throughout the pandemic, a negative correlation between levels of resilience and distress symptoms and a positive correlation between resilience and enhanced compliance were identified.



Conclusion: Utilizing tools for empowering the population rather than instilling fear or other deterrence measures are more effective approaches to increase compliance with governmental directives. Furthermore, the results highlight the importance of adapting and adjusting risk communication efforts to accommodate specific concerns and hesitations demonstrated by distinct groups during an evolving pandemic. Public health officials and authorities need to engage the public in resilience building activities to promote compliance.

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World Organization for Animal Health Platform on Animal Welfare for Europe Survey on Veterinary Service Preparedness for Natural Disasters

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Introduction: National Veterinary Services of World Organization for Animal Health (WOAH) are responsible for a wide range of activities including animal health, animal welfare and veterinary public health. The WOAH European Region member countries were surveyed to determine and quantify the level of capacity to respond to natural disasters, determine the types of disasters experienced, determine their levels of education and training and identify gaps in capacity and specific needs of Member Countries for disaster response. **Method:** A web-based Qualtrics survey on Animal Welfare in Natural Disasters was conducted by Lincoln Memorial University in conjunction with the World Organization for Animal Health (OIE) Platform on Animal Welfare for Europe. The 50 question survey was distributed by email link to Member Countries points of contact provide by OIE. The survey was emailed to 53 OIE European Member Countries with reminder emails to complete. Survey results were compiled and tabulated. Only aggregate data is published and presented.

Results: Forty-nine countries responded to the survey for a 92% completion rate. Floods, earthquakes and fire were the three most commonly encountered disasters. Fifty-two percent indicated they incorporated animal welfare into their disaster planning. Thirty-one percent indicated they had no or limited legal authority to manage animal emergencies in natural disasters. The species covered in the national response plan ranged from laboratory animals at 17% to livestock at 48%. Eighty-two percent had no or limited standard operating procedures and 73% had no training to respond to animal welfare in disasters. Budgets, trained personnel, equipment/supplies and legal authority were the most frequently identified gaps

Conclusion: The survey demonstrated there is a wide range of European Member Countries capacity to respond to animal welfare in natural disasters. This provides the baseline for the OIE Platform for Animal Welfare Europe to provide focused and actionable support to Member Countries

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No Ordinary Moments—Improving the Response to Disasters by Enhancing the Incident Command System

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Introduction: Disasters have adversely affected human life since the beginning of our existence. In response, societies have attempted to improve disaster response & reduce the consequences of disasters by developing standardized organizational arrangements, often known as Incident Command Systems (ICS). These ICS response systems have a military heritage in hierarchical organizational command & control (C2) that is authoritative by nature and fits well with bureaucratic organization. While emergency service agencies have embraced ICS, other agencies often involved in community-level disaster response, such as public health, non-government organizations and community groups, have not. Although ICS have become the backbone of disaster management (DM) policy in Australia and overseas, worldwide debate over the effectiveness of ICS continues. Therefore, this study investigated ICS systems used worldwide to aid in the development of an improved conceptual framework for managing the response to modern-day disasters, for all agencies, at all levels and across all hazard types.

Method: Phase one involved a review and critical analysis of the literature. Phase two used inductive research methods to gain a better understanding of the barriers & facilitators of ICS to the multi-agency disaster response. Two studies were conducted in this phase: Study one used semi-structured interviews with key informants involved in the 2018 Central Queensland Bushfire & 2019 North & Far North Queensland Monsoon Trough Flood & Study two participants from any disaster. Phase three undertook a policy analysis of recent disaster reviews and inquiries. This was triangulated with previous findings and presented to an expert panel by way of a 2-round modified Delphi.

Results: The most significant outcome of this research was the improved understanding of the strengths and weaknesses of ICS within the context of multi-agency engagement in disaster management.

Conclusion: Development of conceptual framework based on modifications to the ICS principles and includes other phases of the DM continuum with psychological aspects taken into consideration.

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One Health: How to Build an Italian Model

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Introduction: The Concept of One Health is a cross-sectoral approach that aims at the protection of humans, animals, and the environment acknowledging their interconnection at a global, regional and local level.