

The image features a stylized map of North America, including the United States, Canada, and Mexico. The map is composed of various shades of green, blue, and orange, overlaid with a white network of lines and nodes. Several icons are scattered across the map: a butterfly in the upper left, an airplane in the upper right, and a semi-truck in the lower right. The background is a light blue gradient with a subtle pattern of white lines and nodes.

NORTH AMERICA 2.0

Forging a Continental Future






EMERGENCY MANAGEMENT IN NORTH AMERICA

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Emergency Management in North America

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In North America, disasters and emergencies have no national boundaries. When the United States closed its airspace on September 11, 2001, more than 200 U.S.-destined aircraft carrying tens of thousands of passengers were rerouted to Canadian airfields. In 2003, a massive blackout struck the eastern United States and the Canadian province of Ontario, affecting more than 50 million North Americans. Each year, the flooding of the Red River in North Dakota – floods which are expected to worsen due to climate change – overflows into Canada. Since 1959, firefighters from Naco, Arizona, regularly have crossed into Mexico to tackle fires breaking out south of the U.S. border.

As these examples demonstrate, and as the COVID-19 pandemic certainly proves, Mexico, the United States, and Canada share both common borders and a vulnerability to disasters and emergencies. During a catastrophic disaster, when the rapid flow of assistance is required to save lives and reduce suffering, these three countries must effectively plan for and coordinate a cross-border response. The evolving security trends requiring this capacity among the three countries are numerous. However, to date, a comprehensive emergency management compact for North America cannot be identified. Instead, there are various “parallel” bilateral agreements – between the U.S. and Canada and the U.S. and Mexico – without a holistic, trilateral overall approach. This chapter reviews the main challenges to effective emergency management that result from this gap and outlines a proposal for a comprehensive North American Emergency Management Compact.

The Challenges to Emergency Management across North America

The number of understandings between the governments of Canada, Mexico and the United States on emergency management has grown throughout the past two decades. There are a variety of bilateral agreements, memoranda of understanding, and initiatives currently in place. Additionally, there is one trilateral agreement, in support of cross-border preparedness and response within North America.

However, North America continues to face evolving challenges to comprehensive emergency management. As climate change, technology, global health, and the nature and scale of emergencies change, so does the need for improved coordination among the U.S., Mexico, and Canada. This is further complicated by the distinct federal systems that operate in each country, and the different roles that national, regional, and private corporations can and should play across all of these separate jurisdictions. Each provides a unique solution, yet none can exist alone. To meet these challenges, North America must progress beyond the historic approach of primarily sharing information to a more systemic and operational cooperation. This is a key component to more comprehensive and effective emergency management.

Evolving Trends in Emergencies

Disasters and emergencies have never known boundaries, and current climate and development trends are only generating greater challenges for emergency management across North America. Natural disasters are evolving: wildfires are growing in frequency and intensity, advancing across borders, destroying forests, homes, and croplands; hurricanes increase in strength and travel

trajectory, reaching farther north and leaving greater destruction in their wake; volcanoes have increased in activity; lengthy droughts persist; and environmental migration is a growing reality. Additionally, we must respond to the likely potential for more pandemics on a global and/or continental scale and human-made disasters, whether terrorist in origin or stemming from the cross-border movement of dangerous substances.

Simultaneously, population growth increases demand for housing, services, food, mobility, and more. Urban settlements that now occupy natural spaces on rivers and deforestation that provokes landslides have become risk areas that require permanent monitoring and emergency plans in case of a disaster. The challenge is to broaden with an international vision both our perspective and response and recovery capabilities.

As COVID-19 affects the global environment, the three core North American countries have coordinated to address the threat and acted to protect their respective national interests. With the goal of containing the further spread of coronavirus, in late March 2020, the U.S. reached agreements with both Canada and Mexico to limit all “non-essential travel” across borders. Working closely and collaboratively, the Department of Homeland Security joined with its counterparts in Mexico and Canada to formulate a North American approach to limit the spread of the virus by restricting temporarily inbound land border crossings of people while permitting a continued unfettered movement of cargo and goods. (As specified by the U.S. Embassy in Mexico, this does not prevent U.S. citizens from returning to their country and similarly with respect to nationals of the other two countries.) These restrictions were reviewed (and renewed) monthly and remained in effect until late 2021.

Previously, the likelihood that natural or human-made disasters and risks would span both the U.S.-Mexico and U.S.-Canada borders was smaller than it is today. Currently, however, the rapidly intensifying effects of climate change, the increased globalization and potential spread of infectious disease outbreaks, and the rise in both the threat and impact of disruption to technology or infrastructure pose an expanded risk across North America on a continental basis. Consequently, while bilateral agreements for emergency planning and response may have sufficed in the past, the U.S., Canada, and Mexico must recognize that the changing paradigm of emergencies necessitates trilateral cooperation. The unique and evolving nature of emergency management therefore opens the door to greater trilateral cooperation among countries that heretofore have typically preferred bilateral arrangements.

Acknowledging the Necessity for Both Federal and Local Management

Disaster reduction and risk management depend on coordination mechanisms across all sectors and levels. Accordingly, one of the main challenges for cooperation across the region is advancing collaboration with and among institutions at the local level in disaster risk management and emergency response. In general, disaster risk factors have local and specific characteristics which must be understood in order to determine the required actions to reduce disaster risk that may have national, regional, or global reach. In this context, it is crucial to continue incorporating major participation from local institutions in disaster risk management and emergency response across the three nations.

Regional cooperation, for example between U.S. states and Canadian provinces, also enables faster and more targeted responses. One instance of this is how local communities have expressed concern regarding the federal Canada-U.S. framework to facilitate the movement of goods and people across the border during and following an emergency. Non-government observers note that some of the systemic barriers that exist between various levels of domestic government can hinder national cooperation, further exacerbated in a bilateral context. Conversely, states and provinces/territories, beyond the issue of guarding their jurisdictions, value the practical benefits that have emerged from regional agreements. Furthermore, they are concerned that broadening governance from regional to federal levels could affect the action-oriented nature of the regional agreements.

This highlights some of the inherent tensions and relative values between federal, regional, and non-governmental emergency management approaches. Each provides certain benefits and challenges, and a successful North American Emergency Management Compact therefore will capitalize on strengthening and integrating each, rather than emphasizing agreement at only one level of government or exclusively within one sector.

Moving from Information-Sharing to Systemic Cooperation

There has been a substantial focus, with eminently positive results, on intelligence sharing across U.S. borders, north and south, to ensure appropriate situational awareness. This focus has been accompanied by significant bilateral agreements for operational response sharing, though those could be made stronger. Ideally, the U.S., Mexico, and Canada would have strategic aims translated into practical mechanisms such as common tools and assets, and shared plans and response protocols that can address several key common risk areas. Additionally, it is essential to define and establish trilaterally approved measures and guidelines for risk analysis. It is important to have a regional Risk Atlas, especially to monitor the hydro-meteorological phenomena that can affect any of the three countries. These practical mechanisms compose the core of systemic cooperation that goes beyond simply information sharing, the current primary focus of existing bilateral and trilateral agreements in North America.

It is necessary to continue developing more agile international cooperation protocols for the entry and exit of rescue, assistance, and health teams; as well as to facilitate access of the necessary supplies to provide humanitarian aid. Regional cooperation would be strengthened by certification mechanisms for first responders from any of the three countries, allowing expedited handling of migration, fiscal, insurance, and diplomatic formalities. Additionally, advance certification would grant aid teams, when activated, prior permission to act under the laws of the other countries, enabling a far more efficient response. Furthermore, this would reinforce the prevention and self-protection culture in all sectors, raising awareness of a joint North American responsibility on the part of government officials, the private sector, mass media, and the public alike across the three countries. The Red Cross could help integrate the efforts to facilitate border entry and exit procedures.

Beyond Bilateral Agreements: Proposal for a Comprehensive North America Emergency Management Compact

The U.S., Mexico, and Canada have each implemented legislative frameworks to manage emergencies domestically. They have also developed bilateral agreements to address specific cross-border emergencies, as well as one trilateral agreement on influenza pandemics in response to H1N1. The individual, national frameworks and other agreements outlined below set the groundwork for further cooperation. We propose that the U.S., Mexico, and Canada carefully review existing emergency management approaches and strengthen bilateral and non-federal (regional and private) cooperation to better address the emerging trends and local impacts of emergencies. Additionally, we suggest an assessment of the necessary components required for a more comprehensive trilateral approach that encompasses management of emerging trends, national-federal resources, and authorities in emergencies. Together, stronger bilateral federal agreements, additional formalized cooperation at the non-federal levels, and a more strategic trilateral approach will form the essential components of a more effective North America Emergency Management Compact.

Baseline National Frameworks for Emergency/Disaster Management

Following is a brief overview of the emergency/disaster management frameworks established by each of the three countries. These, along with the bilateral agreements described below, demonstrate that the U.S., Mexico, and Canada acknowledge and have acted upon the need for a strategic, planned response to North American emergencies. However, measured against the requirements, these arrangements represent a platform upon which further integration of efforts into a more structured and comprehensive North American Emergency Management Compact can take place.

In the United States, the prevailing legislative framework for disaster management is the 1988 Robert T. Stafford Disaster Relief and Emergency Assistance Act. The Stafford Act recognizes the importance of cross-border emergency preparedness between states and neighboring countries. The U.S. Foreign Assistance Act also authorizes FEMA to provide emergency management services and commodities to friendly countries in the event of a disaster.

In Mexico, the prevailing legislation for disaster management stems from the 1986 National System for Civil Protection (SINAPROC), established after the 1985 devastating earthquake in Mexico City. The original focus of SINAPROC was Mexico's planning, response, and recovery capacity. It has since expanded to include a comprehensive disaster risk management system that spans risk identification, prevention, reduction, financing, and post-disaster reconstruction. Under SINAPROC, Mexico also established the Fund for Natural Disasters (FONDEN) in 1996, which served as both the federal government's financial protection strategy against natural disasters and as a vehicle for rapid reconstruction of infrastructure after a natural disaster. The AMLO

administration eliminated the FONDEN in 2021, bestowing emergency response duties on the National Guard.¹

In Canada, the original disaster management framework was established by the 2007 Emergency Management Framework for Canada. The Emergency Management Framework outlines prevention and mitigation, preparedness, response, and recovery components, as well as the principles, governance, and instruments of emergency management. It provides a common approach for federal, provincial, and territorial (FPT) stakeholders regarding emergency management. Canada has continued to revise and improve this original Emergency Management Act.

1. Enhance Bilateral Cooperation

The three countries have several bilateral agreements in place to share resources and provide aid in response to emergencies or disasters. There are several recent examples of good collaboration between sub-sets of the three countries. The coordination of Mexico's and Canada's forest firefighters in putting down the great fires in Ontario in July 2018 is a successful emergency management example. In response to three aid requests by the Canadian Interagency Forest Fire Center (CIFFC), Mexico sent 310 firefighters of the National Forestry Commission of Mexico to help extinguish forest fires in Canada. This represents the largest international mobilization of firefighters in Mexican history.

In the case of cooperation with the United States, there are additional recent examples. In 2017, Mexico offered aid to the government of the state of Texas after Harvey, a category four hurricane, hit the state in August. Reciprocally, Mexico received aid from the United States Agency for International Development (USAID), the Office of Foreign Disaster Assistance (OFDA) and the United States Northern Command (NORTHCOM) after the earthquake in Mexico on September 19, 2017, in the form of aid brigades and donations. In October of that same year – and despite still dealing with its own reconstruction in several states following the earthquake – the Mexican government worked jointly with parts of the Federal Emergency Management Agency (FEMA) to provide aid after Hurricane Maria struck Puerto Rico. In that vein, Mexico sent a brigade of specialists to support efforts to restore the electricity on the Caribbean island.

These successes demonstrate the effectiveness of strategic bilateral agreements. A critical element of any prospective North American Emergency Management Compact is to build on the existing bilateral approaches by strengthening existing accords that work and expanding in areas where additional coordination on emergency/disaster response is needed. Below is an overview of some of the bilateral agreements between the U.S. and Canada and between the U.S. and Mexico, followed by recommendations for areas that require additional coverage.

U.S.-CANADA

The U.S.-Canadian border is the longest international boundary between two countries. Approximately 75 percent of Canada's population (and 12 percent of the U.S. population) lives

¹ "Sin intermediaciones": AMLO explicó el manejo de desastres de su Gobierno ante desaparición del Fonden," *InfoBae*, September 9, 2021, <https://www.infobae.com/america/mexico/2021/09/09/sin-intermediaciones-amlo-explico-el-manejo-de-desastres-de-su-gobierno-ante-desaparicion-del-fonden/>

within 100 miles of the border. Approximately 400,000 people cross the border every day for business, pleasure, or to maintain family ties. This border, often referred to as the world's longest undefended border, has significantly hardened post September 11, 2001, creating challenges for cross-border disaster assistance.

The concept of mutual aid between Canada and the United States developed organically over time, responding to increased needs. However, it evolved more formally in the late 1940s and early 1950s when the U.S. was concerned about a possible nuclear attack from the Soviet Union. In 1950, through Executive Order (EO) 10, 186, President Truman established the Federal Civil Defense Administration, encouraging the Agency to negotiate agreements or compacts for mutual aid across state lines including with provinces or similar subdivisions of a foreign country. EO 10, 186 is recognized as a relationship turning point between the U.S. federal government and states in emergency preparedness. This incentivized governmental units, beneath the federal level, into entering foreign mutual aid agreements with counterpart jurisdictions.

Over the past decade, under the heading of “civil defense” or “civil emergency planning,” Canada and the United States have continued to expand their cooperation on a broad range of topics. The two governments began formal collaboration in these areas with the signing of a 1986 agreement on Cooperation in Comprehensive Civil Emergency Planning and Management. Of even greater importance was its successor accord, the 2008 Agreement between the Government of Canada and the Government of the United States of America on Emergency Management Cooperation. Applicable bilateral agreements are compiled in The Compendium of U.S.-Canada Emergency Management Assistance Mechanisms (“U.S.-Canada Compendium”), itself a product of a Working Group established by the 2008 Canada-U.S. Agreement. Of over thirty documents included in the U.S.- Canada Compendium, over 75 percent of these arrangements were only established after 2006 (in the post-9/11 and post-Katrina era). Their subject matter ranges from emergency management assistance, wildfire preparedness and response, critical infrastructure, search and rescue, cyber security, and more.

According to research conducted by the American Red Cross, U.S. and Canadian stakeholders highlighted the following bilateral frameworks as instrumental to cross-border disaster assistance.

The three regional and three bilateral compacts or agreements highlighted above provide a framework that allows frequent movements of emergency personnel and equipment (regular firefighting crews, forest fire fighting personnel and equipment, ambulances, medical personnel etc.) between border communities and beyond. Two of the three existing bilateral agreements focus on facilitating the cooperation in managing and moving personnel and equipment during emergencies. The 1982 Canada-U.S. Reciprocal Forest Fighting Arrangement and Operational Plan (updated in 2017) is crucial in supporting the well-regarded history of cooperation in firefighting between the Canadian Interagency Forest Fire Centre (CIFCC) and the U.S. National Interagency Coordination Center (NICC). The other is the Framework for the Movement of Goods and People referenced above, a welcomed bilateral federal mutual aid accord designed to support pre-existing arrangements between states and local communities north and south of the border.

Agreement	Synopsis
1982 Canada/United States Reciprocal Forest Fire Fighting Arrangement and Operational Plan (Updated 2017)	This arrangement facilitates cooperation between the Canadian Interagency Forest Fire Centre (CIFFC) and the US National Interagency Coordination Center (NICC) related to equipment, personnel, and aircraft as “needed across the international boundary.”
2008 Agreement between the Government of Canada and the Government of the United States of America on Emergency Management Cooperation	This milestone agreement between the two countries structures nearly daily, on-going cooperation between the respective governments related to mutual interests in emergency management.
2009 Canada-United States Framework for the Movement of Goods and People Across the Border During and Following an Emergency (and Maritime Annex) and Plan for the Movement of People and Goods During and Following an Emergency (Canada, Revised 2014)	The Framework comes into effect if there is a “significant border disruption” as a result of “(a) An attack or threat of attack to the United States or Canada by terrorists; (b) A natural or manmade incident, including a pandemic or other health incident, that impacts large numbers of citizens and/or affects Critical Infrastructure and Key Resources of national interest to one or both countries; or (c) Federal, State, Local, Provincial, Territorial or U.S. Tribal Governments request national-level assistance through existing procedures”

In developing a North American Emergency Management Compact, the U.S. and Canada should continue regular reviews of existing bilateral agreements to determine whether to update them in response to changing trends and needs around emergencies and disasters. Simultaneously, they should identify opportunities to integrate agreements whenever possible to reduce redundancies and enhance the capability for multi-faceted response. This is especially critical as evolving emergencies and disasters now have more widespread effects.

U.S.-MEXICO

The Mexican-U.S. border region is defined as 100 kilometers north and south of the international boundary. As of June 2020, within this zone there are approximately 12 million people – a population that is expected to double by 2025. The lawful flows between the two countries are massive in the USMCA post-NAFTA era. The United States is the primary source of foreign direct investment in Mexico. Merchandise trade between the U.S. and Mexico is colloquially valued at “one million dollars a minute.” (U.S.-Canada trade is even slightly more substantial.) There are approximately one million legal border crossings daily, making the Mexican-U.S. border one of the most traveled borders worldwide.

The U.S. and Mexico are also significantly affected by the increase in occurrence, severity, and duration of natural disasters. As these trends manifest themselves, authorities are more and more constrained in their capacity to respond and more and more reliant on other levels of government, including cross-border jurisdictions. As the 2016 forest fires in Fort McMurray, Alberta, and the 2017 sequence of hurricanes that hit the southern United States demonstrated, even a well-resourced federal capacity may be strained when hit by multiple events in a short time frame. The

need for international cooperation and the ability to exchange surge capacity when required has been dramatically by these multiple simultaneous disaster events that continue to grow in frequency and severity.

While not as extensive in number or as deep in legal obligation as the bilateral arrangements between Canada and the United States, there are several emergency management related frameworks in place between Mexico and the United States. These exist primarily within the environmental, industrial, and public health sectors. Most are limited to information exchanges focusing on preparedness, information sharing during events having a simultaneous impact upon both countries and technical/scientific cooperation.

According to research conducted by the American Red Cross, U.S. and Mexican stakeholders highlighted the following bilateral frameworks as important to cross-border disaster assistance:

Agreement	Synopsis
1983 Agreement on Cooperation for the Protection and Improvement of the Environment in the Border Area (La Paz Agreement)	While heavily oriented toward environmental protection protocols covering the border area, this agreement also contains provisions related to joint contingency planning and emergency response following a pollution-based disaster in the identified zone. One of La Paz’s more recent implementing mechanisms, Border 2020, strongly emphasizes local border community cooperation following a hazardous substance release.
1999 Wildfire Protection Agreement Between the Department of Agriculture and the Department of the Interior of the United States of America and the Secretariat of Environment Natural Resources and Fisheries of the United Mexican States for the Common Border (updated in 2003).	This agreement creates explicit commitments around cross-border assistance during wildfire events. The agreement enables wildfire protection resources originating in the territory of one country to cross the border to suppress wildfires up to 10 miles on each side of the United States-Mexican border.
2011 Agreement between the Government of the United States of America and the Government of the United States of Mexico on Emergency Management Cooperation in Cases of Natural Disasters and Accidents.	This pact focuses primarily on establishing channels of communication through a binational, high-level Working Group to address issues in this sector. Cooperation mechanisms set out in matters of analysis, prevention, attention, and risk mitigation.

The most important achievements through the 2011 agreement on emergency management cooperation are undoubtedly those related to the collaboration with the United States Northern Command (NORTHCOM), the Federal Emergency Management Agency (FEMA), the United States Geological Survey (USGS), and the Environmental Protection Agency with its counterpart agencies in Civil Protection across the Government of Mexico. Accordingly, discussions and cooperation with United States authorities have been strengthened in matters of training courses, creation of cross-border protocols, equipment to emergency corps from different entities, and analysis of experiences and lessons learned following emergencies. The “Border 2020” program represents the continuity of the binational effort between Mexico and the United States aiming to address the challenges in the environment and public health in the border region. Furthermore, the

search and rescue corps in Mexico, the U.S., and Canada have shown determination not only to help the victim population in emergencies, but also to share their knowledge and experience for prevention and response across all regions in the three countries.

The primary area for growth in bilateral cooperation between the U.S. and Mexico – as bilaterally between Canada and the United States – is moving beyond predominantly sharing information to more systemic operational cooperation. The majority of the bilateral agreements focus on exchanging knowledge during an emergency and lessons learned after emergencies. However, they incorporate less of the concrete plans and protocols necessary for comprehensive coordination during an emergency. The U.S. and Mexico, at both the federal and non-federal levels, must improve their bilateral cooperation to include formalized systemic cooperation that encompasses the strategies and obligations for a coordinated response to emergencies and disasters.

2. Strengthen Non-Federal Coordination

As the second challenge identified above, there are relative benefits to cooperation at levels other than federal agreements. This can include both regional and local efforts as well as non-governmental cooperation. Regional cooperation provides a rapid and streamlined avenue among states, provinces, and other non-federal levels of government. Implementation of emergency/disaster response typically occurs at state and local levels, therefore ensuring regional agreements for cooperation are in place to enable more effective emergency management overall. Non-governmental coordination among private entities has proven to be successful in the past (detailed further below) and is an important element of efficient emergency management. Especially in response to the changing nature of emergencies, non-governmental organizations are an increasingly necessary component of emergency management. If, for example, infrastructure is damaged due to natural disaster or a cyberattack, private utility companies or service providers are required to help mitigate and resolve the issue. The successes of non-federal coordination that are highlighted below emphasize the need for stronger regional and non-governmental coordination as a key element of a North American Emergency Management Compact.

REGIONAL COOPERATION

The presence of three sub-national agreements between Canada and the U.S. that cover the three main regions of the border (i.e., Atlantic Northeast, Great Lakes and Pacific Northwest), has brought some systemic governance to mutual assistance between neighboring states and provinces/territories. They are closely aligned with the existing Governors-Premiers Conferences/Associations (i.e., the Conference of New England Governors and Eastern Canadian Premiers, the Great Lakes and St. Lawrence Governors and Premiers Conference, and the Western Premiers and the Western Governors' Association), offering an opportunity to enhance political leadership on mutual interest issues. While their proximity, history of cooperation, and established trust are assets, the regional focus and associated jurisdiction has also at times limited their ability to act because cross-border control authority is federal. While mutual aid in emergency situations has historically benefited from border facilitation, Quebec firefighters experienced a delay at the U.S. border while a fire was raging in 2007 at the Anchorage Inn Restaurant. This was a historical landmark in Rouses Point, New York, a town with limited firefighting capability. This was a case study, among others, that contributed to the 2009 adoption of a Canada-U.S. Framework,

facilitating the movement of Goods and People across the border during and following an emergency.

Additionally, there are three sub-national agreements between U.S. states and Canadian provinces that provide mutual assistance in emergency and disaster management. While these compacts are at the provincial-state level, federal authorities still control border crossings.

Agreement	Synopsis
1996 Pacific Northwest Emergency Management Arrangement	MOU between British Columbia and the Yukon plus Alaska, Idaho, Oregon, and Washington.
2000 International Emergency Management Assistance Compact	MOU between New Brunswick, Newfoundland and Labrador, Nova Scotia, Prince Edward Island and Quebec plus Connecticut, Maine, Massachusetts, New Hampshire, Rhode Island, and Vermont.
2013 Northern Emergency Management Assistance Compact	MOU between Alberta, Manitoba, Ontario and Saskatchewan plus Illinois, Indiana, Ohio, Michigan, Minnesota, Montana, New York, North Dakota, Pennsylvania, and Wisconsin.

In addition to international agreements, there are also local agreements between adjoining jurisdictions in Mexico and the United States to address local needs. Fire suppression resources are available to respond to neighboring jurisdictions as a result. During severe forest fires, the United States has stepped in to assist Mexico with equipment, such as specialized resources for infrared photography and photo interpretation. Regarding regional crisis management collaboration, California and Mexico unveiled the California Mexico Memorandum of Understanding (MOU) in 2014. This MOU serves to enhance cooperation on a variety of subjects such as public health and climate change. Working together with Mexican and U.S. federal partners, Cal OES created the Wildfire Workgroup to further the goals of preparing and coordinating efforts for wildfire emergencies along the California-Mexico border region.

Furthermore, the draft Border 2020 Program is the most recently updated environmental program implemented under the 1983 La Paz Agreement. This draft draws on the current Border 2012 Environmental Program and has been updated to reflect current events within the last eight years. The newest version will emphasize regional, bottom-up approaches for decision making, priority setting, and project implementation to address the environmental and public health problems in the border region (GNEB 2010).

NON-GOVERNMENTAL COOPERATION

The degree of integration of the power grid and the importance of Canada as an electricity supplier to the U.S. has also led to what is probably the most mature and systemic mutual aid cooperation. This takes place between private entities and allows regularly Canadian utility company crews to restore power after storms in the United States and vice versa. What originated as individual arrangements or punctual contacts between companies during natural disasters evolved in 2007 with the creation of the Northeast Mutual Assistance Group (NEMAG). NEMAG is a group of

New England and Canadian electric utilities that, during emergencies, combine their efforts to facilitate the sharing of crews among their members. NEMAG now serves as the regional coordinator for resource allocation among electric utilities in the northeast region during power restoration following storms. It is now common to see Canadian utilities companies restoring power across New England after storms. In September 2017, the U.S. capacity was taxed following a succession of hurricanes. Drawing on NEMAG's ability to respond, hydro workers from several eastern Canadian provinces worked for numerous weeks in Florida and Georgia to restore power after Hurricane Irma. This was similar to how their New England colleagues had assisted Quebec utility companies following the unprecedented Ice Storm that struck Quebec and Eastern Ontario in 1998. In fact, many Canadian power companies now maintain retired employees trained and certified to serve as surge capacity, a major preparedness asset to disasters both in Canada and as mutual aid to the U.S.

During the 2003 North Eastern Blackout, tree branches that had initially entered in contact with power lines led to a series of cascading computer control failures which affected key economic and public safety sectors. Following this event, the two countries felt the need to cooperate further in prevention and resilience of the power grid. In a commitment that emerged from the March 2016, "U.S.- Canada Joint Statement on Climate, Energy, and Arctic Leadership" issued by U.S. President Barack Obama and Canadian Prime Minister Justin Trudeau, the two countries pledged to enhance efforts to "develop a joint U.S.-Canadian strategy for strengthening the security and resilience of the North American electricity grid [and to] work together to strengthen the security and resilience of the electric grid, including against the growing threat from cyber-attacks and climate change impacts". The three high-level goals of this strategy are:

1. Protect Today's Electric Grid and Enhance Preparedness
2. Manage Contingencies and Enhance Response and Recovery Efforts
3. Build a More Secure and Resilient Future Electric Grid.

Systemic efforts in prevention to protect the grid are also well served by organizations like the North American Electric Reliability Corporation (NERC), a non-profit international regulatory authority whose mission is to assure the effective and efficient reduction of risks to the reliability and security of the grid. NERC is the electric reliability organization (ERO) for North America (Canada, USA and the northern portion of Baja California, Mexico), a jurisdiction serving over 334 million people.

The 1982 Canada/U.S. Reciprocal Forest Firefighting Arrangement and Operation Plan, updated in 2017, is another framework that recognizes and supports the cooperation developed between nongovernmental entities. Namely, the Canadian Forest Fire Centre (CIFFC) and the U.S. National Interagency Coordination Center (NICC) facilitate the movement of personnel, equipment, and aircraft as required. There is a long tradition of mutual aid in fighting forest fires between Canada and the U.S. with crews moving both ways in response to needs and capacity to respond. In recent years, with raging forest fires often striking both Canada and the U.S., Mexican firefighters have also become a welcomed surge capacity.

3. Develop a Comprehensive Trilateral Approach

While geographical proximity makes “Canada and the U.S.” and “Mexico and the U.S.” more natural partners in immediate emergency responses, the growing bilateral political relationship between Mexico and Canada has accompanied further economic integration under NAFTA (now USMCA). This was instrumental in the support that Canada brought to Mexico during what is now known as the pandemic H1N1/09 virus. In mid-April 2009, through surveillance, health authorities worldwide realized that an H1N1 influenza virus had the potential to become a pandemic. This new virus detected in humans that spread quickly around the world initially hit Mexico. The Public Health Agency of Canada’s and its renowned National Microbiology Laboratory in Winnipeg extended capacity to test specimens in Mexico. In addition to providing capacity, it allowed Canada to be the first country to characterize the entire genomic sequence of the pandemic H1N1 influenza virus. This made significant contribution to international scientific understanding of this novel strain and the development of a vaccine that prevented further propagation.

The H1N1 case study illustrates the mutual interests to work together bilaterally in preventing, monitoring, and responding to pandemics and other public health concerns. Enhancing cooperation on public health makes sense given the importance of tourism flows between the two countries. Mexico hosts about 2 million Canadian visitors on a yearly basis, the second largest source of visitors after the U.S. Canada welcomes about 400,000 Mexican visitors per year, the fifth source of visitors (tied with Germany). Officials tell us that the daily tactical cooperation on communicable diseases has made substantial progress in recent years, allowing frequent contacts on individual cases of concern (e.g. measles, T.B. etc.) to prevent contamination.

On the broader emergency cooperation, Canada, and Mexico in the context of their bilateral Joint Action Plan 2014-2016 Plan also signed a MOU on a dialogue on public safety. This MOU is relatively recent and broad in scope. Given geographical reality, the areas where the two countries might wish to focus their dialogue under this MOU may be forest firefighting, public health/communicable diseases, and seismic risks. Recent history has already shown the benefits regarding fighting forest fires.

Learning from the H1N1 experience, Canada, Mexico, and the U.S., following a commitment made at the North American Leaders Summit (NALS) held in Guadalajara in 2009, adopted the 2012 North American Plan for Animal and Pandemic Influenza. This expanded upon the existing 2007 North American Plan for Avian Flu and Pandemic Influenza. The 2012 Canada, Mexico, and U.S. North American Plan for Animal and Pandemic Influenza is the only trilateral agreement on emergency management adopted in the aftermath of the H1N1 pandemic, allowing better preparedness and management of large-scale influenza outbreaks (human or animal) that impact the continent. Our understanding is that Mexico works very actively with Canada and the U.S. on international U.N./World Health Organization (WHO) sponsored initiatives and International Health Regulations. Despite the lessons learned from the 2009 H1N1 pandemic and the 2012 trilateral plan referenced above, there has been no recent trilateral exercises to prepare for a pandemic.

Since March of 2020, the global spread of the COVID-19 outbreak continues to have a profound impact on health systems and millions of people across the world. The response has been varied in North America with lack of adequate testing and contact tracing for the virus in both the United

States and Mexico. Canada has managed to contain the spread more effectively but has also been hit hard by the pandemic. Despite U.S. agreements with its North American partners to limit all non-essential travel across borders, Canada seems to be the only one of the three nations that has enforced strict border regulations.

The COVID-19 pandemic has further emphasized the need for trilateral collaboration in response to emerging disasters. According to research conducted by the Wilson Center, there has been a lack of coordination regarding the supply chain of crucial Personal Protection Equipment (PPE). In their publication *Pandemics and Beyond: The Potential for U.S.-Mexico Cooperation in Public Health*, authors Duncan Wood and Andrew I. Rudman conclude that “a critical problem thus far has been the lack of key medical supplies such as masks and testing kits for medical services, as well as hand sanitizer, disinfectant wipes, and thermometers for the general public. A coordinated manufacturing response among the North American neighbors would greatly facilitate the supply chain across the region.” Pandemics historically occur every 30-35 years *on average*; however, it is now increasingly clear that we must be prepared for the next global health emergency that will inevitably occur.

On the non-governmental front, the Canadian, U.S., and Mexican entities of the Red Cross are concerned about the increased occurrence, duration, and severity of disasters and entered into a trilateral agreement. The agreement is very practical and includes protocols to guide responses during emergencies and yearly exchanges of personnel with the aim to facilitate cooperation when disasters strike. Collaboration on humanitarian aid, particularly with Canada, has been strengthened in the last six years. The United States, Mexico, Canada, and the Red Cross have held a greater number of meetings on this matter, especially strengthening the aid for wildfire emergencies. In this context, Mexico is willing to continue advancing cooperation with the United States and Canada in disaster risk management to ensure better practices that benefit all North Americans.

Although there are essential conditions for efficient emergency cooperation, it is important to consolidate a trilateral cooperation agreement that builds on the existing areas of cooperation between U.S.-Mexico, U.S.-Canada, and Canada-Mexico. The coordination of Red Cross across all three countries and the North American Plan for Animal and Pandemic Influenza, which will likely require significant review and revision with lessons learned from COVID-19, set the stage for a more comprehensive trilateral agreement. Such an agreement requires not only information-sharing, but also systemic cooperation including certifications for quick personnel support across borders. Additionally, it should include plans and protocols for streamlined collaboration to tackle the increasingly widespread and intense emergencies of today and tomorrow. A stronger trilateral agreement is a necessary component of a well-rounded and effective North American Emergency Management Compact.

Conclusion: A Multi-Faceted North American Emergency Management Compact

The very nature of a shared continent between the U.S., Mexico, and Canada, as well as emerging climate and other emergency trends, necessitate trilateral coordination to share experiences, training, and technologies. In examining the need for a North American compact, we have analyzed the needs that justify such an initiative and reviewed the existing bilateral and trilateral cooperation experiences between the three governments. It was also helpful to observe non-

government bilateral and trilateral cooperation experiences such as forest fires fighting, the electric grid, and a trilateral agreement adopted by the Red Cross. Recent experiences and comments by both government and non-government actors have highlighted how proximity influences the need and justification for mutual assistance in emergency management. This explains why mutual aid initially developed organically between border communities and regions, hence the regional compacts in place. Furthermore, it demonstrates the need and the maturity level of the required cooperation may vary between Northern U.S. and Canada and Southern U.S. and Mexico. However, in dealing with issues that may be more hemispheric like a pandemic surveillance and emergency response, a solid trilateral and exercised plan makes more sense.

We know that disasters have no borders. The effects of climate change are evident and global. Hence, it is important to continue strengthening trilateral cooperation mechanisms, to generate more agile protocols for disaster response, and to avoid the increasing construction of risks in our countries. In this context, in venturing toward a trilateral compact, the three countries would benefit if the instrument left room for bilateral specificity (Canada-U.S. and U.S.-Mexico) and devoted trilateral attention in areas where the risks are more common to the three, such as the integrated power grid, forest fires, seismic risks, and pandemics and other communicable diseases.

The ultimate goal of a North American Trilateral Compact is to strengthen and consolidate cooperation in the North American Region on Disaster Risk Management. The U.S., Canada, and Mexico have the opportunity to serve as a global reference point of collaborative resilience in the face of natural disasters and demographic growth. Always keeping in mind that To Prevent is To Live.