

# GLOBAL EMERGENCY RESPONSES

**MWHO**

**THEME GUIDE 2017**

# Introduction to Emergency Responses

Alexis Bracey

*"It is generally accepted among environmental geographers that there is no such thing as a natural disaster. In every phase and aspect of a disaster – causes, vulnerability, preparedness, results and response, and reconstruction – the contours of disaster and the difference between who lives and who dies is to a greater or lesser extent a social calculus."*  
–Neil Smith

The World Health Organization defines the term emergency as a "state, demanding decision and follow-up terms of extraordinary measures".<sup>1</sup> There are a wide array of situations, whether they be man-made or not, that occur that affects and poses a threat to public health on a large scale. These may include natural disasters such as drought, earthquakes and floods, chemical and radiological incidents, the outbreak of infectious diseases, and armed conflict or war. According to the United Nations Office for Disaster Risk Reduction, in 2015, there were 346 reported disasters, 22, 773 people dead and 98.6 million affected as a result of those disasters.<sup>2</sup>

The provision of public health services under emergency situations is complex due to the nature of the emergency (whether it be an infectious disease, natural disaster, or oil spill) already existing health care services and infrastructure in the specified region, and bureaucratic interactions among national and international institutions.

Although emergency situations can have tremendous consequences, "the devastation can be reduced dramatically by effective planning and immediate initiation of the disaster response"<sup>3</sup>. Whether it be responding to an earthquake, similar to the one that devastated Haiti in 2010, dealing with the outbreak of Ebola in West Africa, or even trying to provide healthcare services in a war-zone such as in Syria, it is important to analyze the responses to these crises in order to better respond to similar situations in the future.

The purpose of this theme guide is to introduce the World Health Organization Regional Committees roles in responding to emergency situations to participants, as well as to introduce the various political, social, economic, and geographical factors

that influence the response to emergency situations. The role of technology in emergencies highlights the use of technological devices in responding to humanitarian situations.

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<sup>1</sup> "Definition: emergencies." *World Health Organization*, 16 Dec. 2016.  
<http://www.who.int/hac/about/definitions/en/>

<sup>2</sup> Definition: emergencies. World Health Organization. Last modified: 2017.  
<http://www.who.int/hac/about/definitions/en/>

<sup>3</sup> Andrews, Russell J. and Leonidas M. Quintana. "Unpredictable, Unpreventable, and Impersonal Medicine: Global Disaster Response in the 21<sup>st</sup> Century." *The EPMA Journal* 6, no. 2 (2015).

[https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4320615/pdf/13167\\_2014\\_Article\\_24.pdf](https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4320615/pdf/13167_2014_Article_24.pdf)

## Mason WHO 2017 Theme Team Executive Summaries

Alexis Bracey

### AMERICAS REGIONAL EXECUTIVE SUMMARY

The Americas region has a complex history of emergency situations ranging from natural disasters to the outbreak of infectious diseases. Some of the most recent emergencies have been the 2010 earthquake that devastated Haiti, the 2010 Deepwater Horizon oil spill in the Gulf of Mexico, and the 2015-16 Zika virus epidemic. Responses to emergency situations differ by country to country due to various socio-economic and political factors.

### AFRICA REGIONAL COMMITTEE EXECUTIVE SUMMARY

According to the Food and Agriculture Organization of the United Nations, every year the countries of Eastern and Central Africa, which include Burundi, Central African Republic, Eritrea, Kenya, Tanzania, and Uganda to name just a few, experience the highest number of natural and human-induced disasters in all of Africa.<sup>4</sup> Droughts, floods, livestock diseases, and civil conflicts impact people's livelihood.<sup>5</sup> In addition to having to deal with crises relating to climate change and the environment, the 2014-2016 Ebola virus disease outbreak in West Africa generated a tremendous amount of panic, loss, and grief.

### EASTERN MEDITERRANEAN COMMITTEE EXECUTIVE SUMMARY

The Eastern Mediterranean Region is comprised of a variety of countries, from Egypt and Sudan in North Africa to Afghanistan and Pakistan in South Asia. Unfortunately, political instability and the outbreak of war is almost always a source of situations that require emergency responses. Without resolving the political conflicts in the region, and without the proper governance from member states to provide for their populations, the public health situation in this region will not improve.

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<sup>4</sup> "East and Central Africa," *Food and Agriculture Organization of the United Nations*, accessed February 7, 2017. <http://www.fao.org/emergencies/regions/east-and-central-africa/en>

<sup>5</sup> Ibid.

<sup>6</sup> "Climate Change Impacts Southeast Asia." *United Nations Convention to Combat Desertification*., accessed February 7, 2017. <https://www.ifad.org/documents/10180/41587621-d96e-4aed-8b22-e714bcecd58e>

## SOUTHEAST ASIA AND WESTERN PACIFIC COMMITTEE EXECUTIVE SUMMARY

The Southeast Asia and Western Pacific Regions collectively contain 48 member states. The Southeast Asia region, in particular, is annually affected by climate extremes which includes floods, droughts, and tropical cyclones.<sup>6</sup> The effects of climate change are likely to include a lack of clean water, impaired nutrition, and the increased incidence of infectious diseases.<sup>7</sup>

### SPECIALIZED COMMITTEE ON THE ROLE OF TECHNOLOGY IN EMERGENCY RESPONSES

As we live in an increasingly interconnected world where people are able to connect to each other via various types of technological devices, health technology can help facilitate information and improve services in the aftermath of global emergencies. Greater cooperation and data sharing between organizations that utilize technology in the aftermath of disasters can improve humanitarian efforts.

<sup>7</sup> "Climate change." *World Health Organization Western Pacific Region*, accessed February 7, 2017. [http://www.wpro.who.int/topics/climate\\_change/en/](http://www.wpro.who.int/topics/climate_change/en/)



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# AMERICAS

## REGIONAL COMMITTEE

### AMERICAS REGIONAL EXECUTIVE SUMMARY

*Contributing Authors: Sumaiyah Ali and Kristianne Rulona*

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# Mason WHO 2017 Americas Regional Committee

## BACKGROUND OF THE AMERICAS REGIONAL COMMITTEE

In 1870, the Americas region experienced an outbreak of yellow fever that killed more than 20,000 people. After this outbreak, the need for disease control and a response tactic to emergency situations became apparent. The Pan American Health Organization (PAHO), a section of the World Health Organization, was created in 1902. The mission of this organization is "to lead strategic collaborative efforts among Member States and other partners to promote equity in health, to combat disease, and to improve the quality of, and lengthen, the lives of the peoples of the Americas."<sup>8</sup>

The countries represented in this region are Canada, Cuba, United States of America, Antigua and Barbuda, Argentina, Bahamas, Barbados, Belize, Brazil, Chile, Colombia, Costa Rica, Dominica, Dominican Republic, El Salvador, Grenada, Guyana, Honduras, Jamaica, Mexico, Panama, Paraguay, Saint Kitts and Nevis, Saint Lucia, Saint Vincent and the Grenadines, Suriname, Trinidad and Tobago, Uruguay, Bolivarian Republic of Venezuela, Bolivia, Ecuador, Guatemala, Haiti, Nicaragua and Peru.<sup>9</sup> All of these countries are known as member states. Additionally, there are observer states and participating states. Observer states, such as Spain and Portugal, are nations who have a vested interest in the public health of the region of the Americas but cannot vote on matters. Participating states, France, the United Kingdom, and the Netherlands, have the same status as member states but are not eligible to serve on the Executive Council.



*Countries in the WHO Region of the Americas<sup>10</sup>*

The PAHO region is made up of three governing bodies: The Pan American Sanitary Conference, The Directing Council, and the Executive Committee. The Pan American Sanitary Conference is held every five years. This conference serves as the "supreme governing authority" of the PAHO, and is typically held in Washington D.C.<sup>11</sup>

According to the basic documents of the Pan American Health Organization Eighteenth Edition, each member state is responsible for reporting the state of their public health in intervals of no more than two weeks<sup>12</sup>.

## BACKGROUND ON EMERGENCY RESPONSES IN THE AMERICAS

Before considering how emergency situations are responded to in this region, it is important to first analyze the types of emergency situations that the region faces. The Central America and Caribbean Region (CAC) is one of the most hazard-prone areas in the world, largely due to location<sup>13</sup>. Along with natural hazards, heavy populated areas, poverty, and unemployment can increase the risk to natural disasters and climate change.<sup>14</sup> This is shown in Figure 1 below.

<sup>8</sup> PAHO/WHO, "PAHO WHO | About the Pan American Health Organization (PAHO)." Pan American Health Organization / World Health Organization. Accessed January 15, 2017. [http://www.paho.org/hq/index.php?option=com\\_content&view=article&id=91&Itemid=220&lang=en#story](http://www.paho.org/hq/index.php?option=com_content&view=article&id=91&Itemid=220&lang=en#story).

<sup>9</sup> "Region of the Americas." WHO. Accessed January 16, 2017. [http://www.who.int/choice/demography/american\\_region/en/](http://www.who.int/choice/demography/american_region/en/).

<sup>10</sup> "Map of countries in the WHO Region of the Americas." Digital image. World Health Organization. Accessed February 15, 2017. <http://www.who.int/about/regions/amro/en/>

<sup>11</sup> Pan American Health Organization, "Basic Documents of the Pan American Health Organization," (Washington, D.C.: PAHO, 2012). 3

<sup>12</sup> Ibid.

<sup>13</sup> Charveriat, Celine. "Natural Disasters in Latin America and the Caribbean: An Overview of Risk." Inter-American Development Bank, October 2000. Page 36

<sup>14</sup> Ibid.,35



Figure 1. Natural disasters by country, with population density, from 1900-2007 (*Mapping Vulnerability to Disasters in Latin America and the Caribbean, 1900-2007*)<sup>15</sup>

Natural disasters affect the region in various ways. The first is in terms of fatalities. Statistics show that natural disasters [in Latin America] have caused an estimated 226,000 fatalities, which is a total of 7,500 per year<sup>16</sup>.

When looking at the emergency responses of Latin America when disaster strikes, it is important to keep in mind the vulnerabilities that these countries already face. In a report focusing on trends in Latin America and the Caribbean, the United Nations Human Settlements Programme predicts that “by the year 2050, 90% of Latin America’s population will be towns and cities.” “Poorly regulated construction and land use practices” especially in the islands of Saint Lucia and Grenada,

<sup>15</sup> Maynard-Ford, Miriam C., Emily C. Phillips, and Peter G. Chirico. “Mapping Vulnerability to Disasters in Latin America and the Caribbean, 1900-2007.” USGS, 2008.

<sup>16</sup> Ibid.,9

<sup>17</sup> Ibid.,

<sup>18</sup> Ibid.,90

<sup>19</sup> Fagen, Patricia Weiss. “Natural disasters in Latin America and the Caribbean: national, regional and international interactions.” Humanitarian Policy Group, 2008

<sup>20</sup> Ibid., 5

<sup>21</sup> Ibid., 5

continues to be one of the “biggest contributors to risk.”<sup>17</sup> Some countries, such as Chile, Peru, and Colombia have emergency funds and disaster-prevention policies in place. However these funds are “still used by [Latin American] governments as political bargaining chips to reward their supporters and opponents.”<sup>18</sup> Governments in the Latin American and Caribbean region have been reluctant in the past to allocate their own resources to long-term prevention plans.<sup>19</sup> Cuba has exhausted efforts in preparing the public for disaster risk, but still seeks international funds for recovery projects<sup>20</sup>. Colombia, one of the more wealthier countries in Latin America, has a high-rated system in place for disasters.<sup>21</sup>

## CASE STUDIES

### 2010 EARTHQUAKE IN HAITI

On January 12, 2010, Haiti “experienced the largest urban natural catastrophe in recorded history when a massive earthquake crippled the country, killing 200,000, injuring 300,000 more and displacing 2.3 million people”<sup>22</sup>

There were two relief phases following the earthquake. The first was “immediate life-saving phase,” which lasted for about two weeks and activities included search and rescue and emergency trauma care.<sup>23</sup> The second phase focused on “post-operative care, rehabilitation, primary health care for displaced populations, and welfare (food, water, and shelter.”<sup>24</sup>

Haiti has been categorized as a “Republic of Non-governmental Organizations (NGO’s)” because of the proliferation of non-governmental organizations whose work often undermines the Haitian government.<sup>25</sup> In fact, “estimates of the number of non-governmental organizations who were operating in Haiti prior to the earthquake range from 3,000 to

<sup>22</sup> Daniel O’Connor, Kara Brisson-Boivin and Suzan Ilcon. “Governing failure: development, aid and audit in Haiti.” *Conflict, Security & Development*, 2014. <http://www.tandfonline.com/doi/pdf/10.1080/14678802.2014.923150?needAccess=true>

<sup>23</sup> De Ville de Goyet, Claude , Juan Pablo Sarmiento, and Francois Gruenwald. “Health response to the earthquake in Haiti January 2010 | Lessons to be learned for the next massive sudden-onset disaster.” Pan American Health Organization, 2011. Page 54.

<sup>24</sup> Ibid.

<sup>25</sup> Kristoff, Madeline and Liz Panarelli. “Haiti: A Republic of NGOs?” *United States Institute of Peace*. April 26, 2010. <http://www.usip.org/sites/default/files/PB%2023%20Haiti%20a%20Republic%20of%20NGOs.pdf>

10,000.”<sup>26</sup> A consequence of this “NGO-ization” was that the NGO’s followed their own priorities, therefore excluding Haitians out of the decision-making process.<sup>27</sup>

## ZIKA VIRUS

According to the Center for Disease Control and Prevention, the Zika virus disease is a virus that is spread to people primarily through the bite of an infected mosquito.<sup>28</sup> Those infected show mild symptoms such as fever, skin rashes, conjunctivitis, muscle and joint pain, malaise or headaches.<sup>29</sup> The Zika virus rapidly spread throughout the Americas in 2016 after its original appearance in Brazil<sup>30</sup>. Over eighty expert missions were deployed to member states to respond to this epidemic, however about “75 countries...now report evidence of mosquito-borne Zika local transmission.”<sup>31</sup> The WHO’s Emergency Committee declared that the Zika virus is no longer in emergency phase, and is now considered a long-term public health challenge, due to the involvement of the technical support provided by PAHO.<sup>32</sup>

Technical support includes Zika surveillance and control and controlling mosquito vectors of Zika virus through the use of mosquito nets and widespread community education on the diseases.<sup>33</sup>

## ACTORS AND STAKEHOLDERS

### UNITED NATIONS AGENCIES

Many actors and stakeholders have participated in emergency response efforts in the Americas. These include United Nations agencies, non-governmental organizations, and host governments. The United Nations Office for the Coordination of Humanitarian Affairs (UNOCHA) “is the part of the United Nations Secretariat responsible for bringing together humanitarian actors to ensure a coherent response to emergencies.”<sup>34</sup> OCHA also ensures there is a framework within which each actor can contribute to the overall response effort.”<sup>35</sup> In October 2016, UNOCHA reported on the emergency flooding caused by heavy rains in 17 municipalities of Choco, Colombia.<sup>36</sup> Additionally, UNOCHA responded to and reported Hurricane Matthew relief efforts in Haiti during September and October of 2016.<sup>37</sup>

The United Nations Children’s Fund (UNICEF) “strives to have 100% of all countries in its region equipped with an effective preparedness response system”<sup>38</sup>, with the aim of covering “all the bases that impact child survival before, during and after an emergency”.<sup>39</sup> The Americas region is no exception: since the region is already prone to natural disasters, “the impact of climate change is an additional threat, further endangering the lives of children and families”<sup>40</sup>. During the Mexican hurricane season of 2007, two category five hurricanes, Dean and Felix, caused the worst flooding Mexico had seen in over 50 years.<sup>41</sup> Forest fires in Paraguay, the threat of volcanic eruptions in Ecuador and Colombia, and earthquakes in Chile and Peru “still

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<sup>26</sup> Ibid

<sup>27</sup> Klarreich, Kathie and Linda Polmon. “The NGO Republic of Haiti.” *The Nation*. October 31, 2012. <https://www.thenation.com/article/ngo-republic-haiti/>

<sup>28</sup> Questions about Zika.” *Center for Disease Control and Prevention*. October 17, 2016. <https://www.cdc.gov/zika/about/questions.html>

<sup>29</sup> PAHO/WHO. “PAHO WHO | 2016: the year Zika evolved from an emergency into a long-term public health challenge.” Pan American Health Organization / World Health Organization. December 29, 2016. [http://www.paho.org/hq/index.php?option=com\\_content&view=article&id=12861%3A2016-zika-evolved-from-emergency-into-long-term-public-health-challenge&Itemid=1926&lang=en](http://www.paho.org/hq/index.php?option=com_content&view=article&id=12861%3A2016-zika-evolved-from-emergency-into-long-term-public-health-challenge&Itemid=1926&lang=en)

<sup>30</sup> Ibid.

<sup>31</sup> Ibid.

<sup>32</sup> Ibid.

<sup>33</sup> Ibid.

<sup>34</sup> “Where We Work,” *United Nations Office for the Coordination of Humanitarian Affairs (UNOCHA)*, accessed January 21, 2017,

<http://www.unocha.org/where-we-work/all-countries>

<sup>35</sup> “Who We Are,” *UNOCHA*, accessed January 21, 2017, <http://www.unocha.org/about-us/who-we-are>.

<sup>36</sup> “Flash Update No. 1: Flood emergency in 17 municipalities of Chocó,” *Humanitarian Response*, accessed January 21, 2017, <https://www.humanitarianresponse.info/es/operations/colombia/document/flash-update-no-1-emergencia-por-inundaciones-en-17-municipios-de-choc%C3%B3>.

<sup>37</sup> “Haiti Flash Appeal 2016,” *Humanitarian Response*, accessed January 21, 2017, <https://www.humanitarianresponse.info/en/programme-cycle/space/document/haiti-flash-appeal-2016-en-fr>

<sup>38</sup> “Emergencies,” *UNICEF America Latina y el Caribe*, accessed January 21, 2017, [https://www.unicef.org/lac/english\\_9824.html](https://www.unicef.org/lac/english_9824.html)

<sup>39</sup> Ibid.

<sup>40</sup> Ibid.

<sup>41</sup> Ibid.

cause severe hardships for the most vulnerable<sup>42</sup> despite government efforts.

The United Nations Environment Program (UNEP), as a part of its advocacy for the global environment, seeks to prepare partners for crisis, intervene after crises to identify acute environmental risks, and to support efforts by peacekeeping and humanitarian actors to reduce their environmental footprint.<sup>43</sup> Since the Americas, and more specifically Latin America, are so prone to environmental emergencies in the form of industrial and technological accidents, as well as natural disasters, UNEP exists to respond effectively and help the region “recover quickly and sustainably”.<sup>44</sup> UNEP has a strong presence in Haiti, where they work with the government and stakeholders in order “to achieve sustainable environmental development”<sup>45</sup>, particularly after the devastating effects of Hurricane Matthew.

### NON-GOVERNMENTAL ORGANIZATIONS (NGOS)

Medecins Sans Frontieres, commonly known as MSF or Doctors Without Borders, is an NGO that provides medical aid in areas of “armed conflicts, epidemics, natural disasters, and other crisis situations”.<sup>46</sup> Their services range from “basic vaccination campaigns, to maternal and pediatric care, to fighting neglected diseases, to complex surgery”.<sup>47</sup> In addition, MSF also “advocates for affordable, high-quality medicines for the world’s poorest people”.<sup>48</sup> Most recently, MSF has worked in Haiti following Hurricane Matthew, in Honduras during armed conflict<sup>49</sup>, and in Ecuador following the 7.8 magnitude earthquake that hit in April of 2016.<sup>50</sup>

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<sup>42</sup> Ibid.

<sup>43</sup> “About UNEP/ROLAC,” *United Nations Environment Programme*, accessed January 21, 2017, <http://www.pnuma.org/english/AboutUNEP.php>.

<sup>44</sup> “Disasters and Conflicts: Haiti,” *UN Environment*, accessed January 21, 2017, <http://web.unep.org/disastersandconflicts/where-we-work/haiti>

<sup>45</sup> Ibid.

<sup>46</sup> “Where We Work,” *Medicins Sans Frontieres*, accessed January 21, 2017, <http://www.doctorswithoutborders.org/our-work/countries>

<sup>47</sup> “Medical Issues,” *Medicins Sans Frontieres*, accessed January 21, 2017, <http://www.doctorswithoutborders.org/our-work/medical-issues>

<sup>48</sup> Ibid.

<sup>49</sup> “Honduras,” *Medicins Sans Frontieres*, accessed January 21, 2017, <http://www.doctorswithoutborders.org/country-region/honduras>.

<sup>50</sup> “Earthquake in Ecuador: ‘People are Very Scared. Many Have Had to Leave Their Homes,’” *Medicins Sans Frontieres*, accessed January 21, 2017, <http://www.doctorswithoutborders.org/article/earthquake-ecuador->

## STRATEGIES TO IMPROVE EMERGENCY RESPONSES

In support of their own trained disaster experts, “governments in the region can and should invest more of their own resources in disaster management”.<sup>51</sup> Disaster response personnel and officials with technical responsibilities should not be dependent on political affiliation; “their salaries should be paid within fixed ministerial budgets”.<sup>52</sup> In this case, disaster response and management units are still primarily seen as “military responsibilities”.<sup>53</sup> Civilian leadership of these positions should be encouraged.<sup>54</sup>

Since the conditions of the Americas region make women and children particularly vulnerable, UNICEF has “goals of immediately reaching 500,000 women and children affected by disasters or socio-political developments. It will also work to prevent or reduce emergency risks for the 1 million most vulnerable and poorest children in the region”.<sup>55</sup> The Americas and the Caribbean Regional Office (TACRO) “will build capacities to support nutrition surveillance, timely detection and response to severe and moderate acute malnutrition cases”,<sup>56</sup> as well as “promote the prevention of undernutrition through community-based approaches, with a specific focus on Guatemala, Peru and the Plurinational State of Bolivia and increased activities in Brazil, Colombia, the Dominican Republic, Ecuador, Honduras, Nicaragua and Uruguay”.<sup>57</sup> Furthermore, TACRO has planned to “work with relevant government bodies and partners to support emergency response and reduce disaster risk”<sup>58</sup> in order to “ensure accessibility to education in emergency situations”<sup>59</sup> in the Americas.

[%E2%80%9Cpeople-are-very-scared-many-have-had-leave-their-homes%E2%80%9D](#)

<sup>51</sup> Patricia Weiss Fagen, *Natural Disasters in Latin America and the Caribbean: National, Regional and International Interactions: A Regional Case Study on the Role of the Affected State in Humanitarian Action* (Overseas Development Institute: Humanitarian Policy Group, 2008), 26, [http://reliefweb.int/sites/reliefweb.int/files/resources/D4B04197663A2846492575FD001D9715-Full\\_Report.pdf](http://reliefweb.int/sites/reliefweb.int/files/resources/D4B04197663A2846492575FD001D9715-Full_Report.pdf).

<sup>52</sup> Ibid.

<sup>53</sup> Ibid.

<sup>54</sup> Ibid.

<sup>55</sup> “Latin America and the Caribbean,” *UNICEF.org*, 2011, [https://www.unicef.org/hac2011/files/HAC2011\\_4pager\\_TACRO.pdf](https://www.unicef.org/hac2011/files/HAC2011_4pager_TACRO.pdf).

<sup>56</sup> Ibid.

<sup>57</sup> Ibid.

<sup>58</sup> Ibid.

<sup>59</sup> Ibid.

Because 80 percent of the Latin America and the Caribbean (LAC) region's population resides in cities, regional actions should focus on "improving urban planning, infrastructure and building safety, reinforcing drainage systems to reduce flooding, storm and health threats, installing early warning systems, conducting public preparedness drills, [and] adopting measures to adapt to the increasing impact of climate change".<sup>60</sup> These measures must be put in place in order to reinforce a mindset of proactivity instead of reactivity.

## CONCLUSION

The Americas, particularly the Central American and Caribbean (CAC) region, is particularly prone to hazardous weather conditions due to location, lending itself to frequent landslides, volcanoes, tropical storms, floods, earthquakes, and climate variations. Heightening the risk of natural disaster and climate change are the heavily populated urban areas and the poverty that looms overhead. The aftermath of such disasters perpetuates a cycle of poverty, following the systematic decrease in income following a disaster that caused massive amounts of destruction. Fortunately, many United Nations agencies and non-governmental organizations such as Medecins Sans Frontieres are involved in front-line efforts to provide humanitarian aid to those who suffer through these disasters, as well as facilitate efforts to receive asylum seekers. However, no humanitarian aid effort will ever be without its flaws; therefore, with every new attempt, care must be taken to refine the allocation of funds, goals, and responsibilities.

## ADDITIONAL RESOURCES

Disaster Risk Management in Latin America and the Caribbean Region: Global Facility for Disaster Reduction and Recovery Country Notes by the World Bank  
<http://dipecholac.net/docs/files/521-drm-lac-countryprograms.pdf>

UNICEF--Latin America and the Caribbean  
<https://www.unicef.org/appeals/lacro.html>

Emergency Risk Management for Health Overview by the World Health Organization  
[http://www.who.int/hac/techguidance/preparedness/risk\\_management\\_overview\\_17may2013.pdf?ua=1](http://www.who.int/hac/techguidance/preparedness/risk_management_overview_17may2013.pdf?ua=1)

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<sup>60</sup> "Latin America: Putting Disaster Preparedness on the Radar Screen," *The World Bank*, accessed January 21, 2017, <http://www.worldbank.org/en/news/feature/2012/10/09/desastres-naturales-america-latina-crecimiento-riesgo>.



# EASTERN MEDITERRANEAN REGIONAL COMMITTEE

## EASTERN MEDITERRANEAN COMMITTEE EXECUTIVE SUMMARY

*Contributing Authors: Arman Yashar Khojandi, Zahra Hamidaddin*

The Eastern Mediterranean Region is comprised of a variety of countries, from Egypt and Sudan in North Africa to Afghanistan and Pakistan in South Asia. Unfortunately, political instability and the outbreak of war is almost always a source of situations that require emergency responses. Without resolving the political conflicts in the region, and without the proper governance from member states to provide for their populations, the public health situation in this region will not improve.



## Mason WHO 2017 Eastern Mediterranean Regional Committee

### BACKGROUND OF THE EASTERN MEDITERRANEAN COMMITTEE

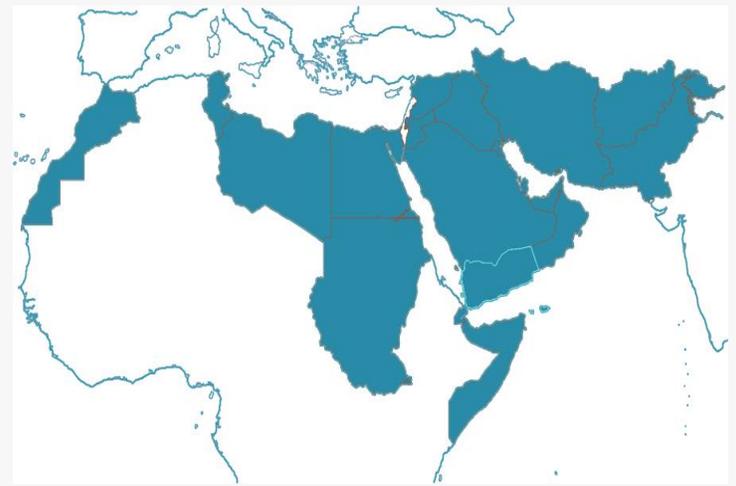
The Eastern Mediterranean (EM) region consists of the nations Morocco, Tunisia, Libya, Egypt, Sudan, Somalia, Djibouti, Jordan, Saudi Arabia, Yemen, Oman, UAE, Qatar, Oman, Bahrain, Kuwait, Iraq, Syria, Lebanon, Iran, Afghanistan, and Pakistan.<sup>61</sup> It originally consisted of East African, and West Asian/Eurasian countries, some of which no longer exist, until Greece and Turkey formally joined the European region.<sup>62</sup>

Former members include Ethiopia and Algeria, both of which were moved to the African region in 1977 and 1984, while Morocco transferred to EM from Europe in 1986.<sup>63</sup> The final geographic anomaly is Israel (1949), which was moved to Europe in 1985 due to geopolitical tensions and difficulty cooperating with surrounding Arab countries.<sup>64</sup> Palestine is also a WHO member, and the organization has been vocal about health issues therein, particularly in occupied Palestine, and it has incorporated these concerns into its 2016 Humanitarian Response Plan.<sup>65</sup>

Representing all 21 Member States and the occupied Palestine territory, The EM regional committee meets once a year in early October to create policies that relate directly to the pressing issues of the region, which includes matters relating to the public health situation of any or all of the nations represented within this council.<sup>66</sup> Authoritative final decisions, however, are passed and implemented by the World Health Assembly, in conjunction with the Executive Board.<sup>67</sup> The committee also tenders advice to the wider WHO committee on larger, international health matters that can have a greater provincial influence. In regards to health planning strategies, the EM regional committee focuses on five areas:

strengthening health systems, maternal and child health, non-communicable diseases, communicable diseases, and emergency preparedness and response.<sup>68</sup>

The countries of the region can be categorized into three groups based on population health outcomes, health system performance and level of health expenditure. Group 1 comprises of countries of higher socioeconomic status, which has helped with the progression of these countries' development.<sup>69</sup> Group 2 comprises of mostly middle-income countries that have advanced in the development of an extensive medical infrastructure but still struggle with resource constraints.<sup>70</sup> The third group includes the countries that face major political instability, conflicts, and development challenges that have impacted their ability to improve the public health situation in the area.<sup>71</sup> In this guide, we will be focusing on the countries that comprise group 3.



*Map of countries in the WHO Eastern Mediterranean Region<sup>72</sup>*

Disease and war pose the greatest health threats to Eastern Mediterranean societies. Given the abundance of conflict in the

<sup>61</sup> "Where is the Middle East? WHO 2005" Carolina Center for the Study of the Middle East and Muslim Civilizations. Accessed January 20, 2017. <http://www.unc.edu/mideast/where/who-2005.shtml>.

<sup>62</sup> Ibid.

<sup>63</sup> Ibid.

<sup>64</sup> Ibid.

<sup>65</sup> "The occupied Palestinian territory." World Health Organization. 2017. Accessed January 20, 2017. <http://www.who.int/hac/crises/international/wbgs/en/>

<sup>66</sup> "Governance." WHO EMRO | Governance | About WHO. 2017. Accessed January 20, 2017. <http://www.emro.who.int/about-who/governance/>

<sup>67</sup> Ibid.

<sup>68</sup> "WHO EMRO | Strategic directions | About WHO." World Health Organization Regional Office for the Eastern Mediterranean. 2017. Accessed January 20, 2017. <http://www.emro.who.int/about-who/strategic-directions/>.

<sup>69</sup> WHO EMRO | Countries | Health education and promotion." WHO EMRO . February 2017. Accessed February 02, 2017. <http://www.emro.who.int/health-education/countries/>.

<sup>70</sup> Ibid.

<sup>71</sup> Ibid.

<sup>72</sup> "Map of countries in the WHO Eastern Mediterranean Region." Digital image. World Health Organization Regional Office for the Eastern Mediterranean. Accessed February 15, 2017. [http://applications.emro.who.int/web\\_tbs/](http://applications.emro.who.int/web_tbs/)

region, this survey focuses mainly on the most pressing cases: Iraq and Syria. Due to length restrictions, the complex history of the Libyan uprising will not be discussed. These countries share certain cultural and political similarities, such as involvement in the Arab Spring- a series of violent and nonviolent anti-government protests, demonstrations, and civil wars across the Middle East that started in December of 2010-, that have contributed to the unique situation therein. The focal point of disease in the EM region is a survey of HIV virus transmission and its deleterious effect on the deteriorating social conditions already present in several member states.

Because of the taboo topics that are often associated with HIV/AIDS, namely illicit sexuality and drug use, HIV prevention and education are not commonplace, thus hindering health responses and increasing prevalence.<sup>73</sup> This is particularly an issue for men having sex with men (MSM), one of the key affected populations in all parts of the world, and particularly the Eastern Mediterranean region.<sup>74</sup> In Egypt, Morocco, Pakistan, Sudan, Tunisia, and Yemen HIV+ MSM is near 10%. Tunisia suffered a marked increase from 5% to 13% of MSM being HIV+ by 2011.<sup>75</sup> Jordan, Lebanon, and Syria are also in the midst of HIV epidemics. Intravenous (IV) drug use accounts for approximately 90% of HIV cases in Libya, while also being the major cause of HIV transmission in Afghanistan, Pakistan, and Iran. IV drug use is popular in Oman and Bahrain, and similarly, it is rising in Egypt and Morocco.<sup>76</sup>

Instability and chaos caused by the Arab Spring has clearly incapacitated and often destroyed public health services, making the procurement and distribution of antiretroviral medications (ARV) extremely difficult.<sup>77</sup> Given the general prognosis of HIV/AIDS, successful treatment requires early diagnosis and action, lest HIV-positive individuals progress to

AIDS. At such a stage, patients are severely immunocompromised, and being unable to adequately fight diseases, they quickly fall prey to one of many opportunistic infections characteristic of HIV infection.<sup>78</sup>

## WARS

The horrific humanitarian situation in Iraq is best understood within the context of the conflicts that have ravaged its territory for the greater part of three decades. The earliest conflict of magnitude was the Iran-Iraq War (1980-1988), which left between 1 and 1.25 million dead, and directly affected 5 million Iraqi nationals.<sup>79</sup> After only a brief respite, the First Gulf War ensured stagnation of Iraq's societal restoration. Most recently, however, the Iraq War and ensuing conflict (2003- ) has left Iraqi society mired in devastation.

In the Iran-Iraq war, regular shelling razed border provinces on both sides, though Iraq's major Southern cities felt the greatest impact, as their infrastructure was annihilated.<sup>80</sup> The situation in Iraq was compounded by reduced intellectual capital due to emigration of much of the professional class. Male civilian enlistment further deprived civilian populations of professional services and facilities.<sup>81</sup>

During and thereafter, the humanitarian response was underwhelming and appalling. The West and aid organizations stood idly by as Iraq used chemical weapons on civilian centers in Iran in the middle and near the end of the war.<sup>82</sup> Humanitarian concerns spurred the short-lived Oil-for-Food Programme, which was barely effective, and fundamentally flawed, as it did not resolve the root issue while also creating black markets, corruption, and abuse/manipulation of political power at the expense of innocent civilians.<sup>83</sup>

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73 "WHO EMRO | WHO provides lifesaving HIV medicines in Benghazi, Libya | Libya-news | Libya." WHO EMRO. Accessed January 20, 2017. <http://www.emro.who.int/ly/libya-news/who-response-providing-lifesaving-hiv-medicines-in-benghazi-libya.html>.

74 "HIV and AIDS in the Middle East & North Africa (MENA)." AVERT. December 19, 2016. Accessed January 20, 2017. <http://www.avert.org/professionals/hiv-around-world/middle-east-north-africa-men>

75 Ibid.

76 Ibid.

77 "WHO EMRO | WHO provides lifesaving HIV medicines in Benghazi, Libya | Libya-news | Libya." WHO EMRO. Accessed January 20, 2017. <http://www.emro.who.int/ly/libya-news/who-response-providing-lifesaving-hiv-medicines-in-benghazi-libya.html>

78 "Opportunistic Infections." AIDS.gov. November 16, 2016. Accessed January 20, 2017. <https://www.aids.gov/hiv-aids-basics/staying-healthy-with-hiv-aids/potential-related-health-problems/opportunistic-infections/>.

79 Kurzman, Charles. "Death Tolls of the Iran-Iraq War – Charles Kurzman." Death Tolls of the Iran-Iraq War – Charles Kurzman. October 31, 2013. Accessed January 20, 2017. <http://kurzman.unc.edu/death-tolls-of-the-iran-iraq-war/>.

80 Al Samaraie, Nasir Ahmed. "Humanitarian Implications of the Wars in Iraq." International Review of the Red Cross 89, no. 868 (December 2007): 929-42. [https://www.icrc.org/eng/assets/files/other/irrc-868\\_samaraie.pdf](https://www.icrc.org/eng/assets/files/other/irrc-868_samaraie.pdf).

81 Ibid.

82 Wright, Robin. "Iran Still Haunted By Chemical Weapons Attacks." Time. January 20, 2014. Accessed January 20, 2017. <http://world.time.com/2014/01/20/iran-still-haunted-and-influenced-by-chemical-weapons-attacks/>

83 Al Samaraie, Nasir Ahmed. "Humanitarian Implications of the Wars in Iraq." International Review of the Red Cross 89, no. 868 (December 2007): 929-42. [https://www.icrc.org/eng/assets/files/other/irrc-868\\_samaraie.pdf](https://www.icrc.org/eng/assets/files/other/irrc-868_samaraie.pdf)

After the short Gulf War, sanctions and embargoes followed the failed invasion of Kuwait by Iraq- led by the Baathist dictator Saddam Hussein who wanted to expand Iraq's influence in the Middle East. Together with further infrastructure damage, this severely reduced quality of life (destroyed power plants, oil refineries, communications and transport networks, and sewage treatment plants).<sup>84</sup> As a result, hundreds of thousands of people (including children) died of malnutrition and lack of health services/basic health facilities. Hospitals were understaffed and under-equipped (paucity of X-ray, lung, and heart machines).<sup>85</sup> The Iraq War of recent times caused between 109,032 and 650,726 casualties, not including those after 2011.<sup>86</sup> Still reeling from the devastation of previous wars, Iraq has experienced even more human suffering, health crises, and infrastructural damage in this continued conflict. Serious, potentially irreparable damage has been inflicted to education systems.<sup>87</sup>

Once the best country in the region health-wise, Iraq now has some of the worst rates of disease. Diarrhea, measles, respiratory infections, malaria and malnutrition affect 30% of children under five, contributing to an extreme issue of childhood mortality.<sup>88</sup> One in ten children suffer from a chronic disease, and 50% of children are malnourished; One million are crippled and disabled (a 30% increase since 2003).<sup>89</sup> Drug abuse has doubled in Baghdad and tripled in the south of Iraq, among men and women of all ages; Meanwhile, only 8,000 physicians remain of Iraq's 32,000 physicians registered with the main medical syndicate before the war.<sup>90</sup> The economic considerations are also frightening: approximately 60% of Iraqis are unemployed.<sup>91</sup> Around one-third live at or below the poverty line, with 5% of citizens living in extreme poverty; 69% of Iraqis are affected by the inability to obtain food.<sup>92</sup>

It will evidently take decades to repair Iraq's critically

impaired infrastructure, economy and employment, intellectual capital, and education and health systems—if they are to be repaired at all. Currently, there appears little political impetus from most interested parties to resolve the issue. Meanwhile, the continued terrorism and oppression of innocent civilians after 30 years of conflict has left the Iraqi psyche scarred and on the precipice of extinction. It is important to note this survey does not even analyze specific adverse effects on women, and internally displaced populations.

The Syrian civil uprising that began in 2011 has transformed into a full scale civil war that is still going on today has caused hundreds of thousands casualties. Though the exact numbers are hard to quantify, sources vary between suggesting 250,000 to over 470,000 casualties.<sup>93</sup> Moreover, this conflict has left 6.5 million Syrians internally displaced and over 4.3 million have sought refuge in various countries throughout the globe.<sup>94</sup> Perhaps most shocking is the warfare strategy implemented by both the regime's military forces and antigovernment groups; both sides have frequently and purposefully attacked medical facilities. As of December 2015, 57% of 113 public hospitals and 51% of 1,783 public health centers were deemed either partially functioning (because of shortage of staff, equipment, medicine or building damage) or closed down.<sup>95</sup> Furthermore, since 2014 there have been at least 160 killed and hundreds imprisoned, which has caused the emigration of an estimated 80,000 doctors.<sup>96</sup> This conflict has also resulted in only 10% of pharmaceutical needs being now locally produced, compared to the 90% that used to be locally produced prior to the start of the war.

A shattered medical infrastructure, along with a lack of medical experts and health care workers, allowed for the destruction of immunization programs and ultimately caused the spread of many previously unwanted illnesses. Measles,

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<sup>84</sup> Ibid.

<sup>85</sup> Ibid.

<sup>86</sup> Sheridan, Kerry. "Iraq Death Toll Reaches 500,000 Since Start Of U.S.-Led Invasion, New Study Says." *The World Post*. October 15, 2013. Accessed January 20, 2017. [http://www.huffingtonpost.com/2013/10/15/iraq-death-toll\\_n\\_4102855.html](http://www.huffingtonpost.com/2013/10/15/iraq-death-toll_n_4102855.html)

<sup>87</sup> Al Samaraie, Nasir Ahmed. "Humanitarian Implications of the Wars in Iraq." *International Review of the Red Cross* 89, no. 868 (December 2007): 929-42. [https://www.icrc.org/eng/assets/files/other/irrc-868\\_samaraie.pdf](https://www.icrc.org/eng/assets/files/other/irrc-868_samaraie.pdf)

<sup>88</sup> Ibid.

<sup>89</sup> Ibid.

<sup>90</sup> Ibid.

<sup>91</sup> Ibid.

<sup>92</sup> Ibid.

<sup>93</sup> Boghani, Priyanka. "Frontline." PBS. February 11, 2016. Accessed January 20, 2017. <http://www.pbs.org/wgbh/frontline/article/a-staggering-new-death-toll-for-syrias-war-470000/>

<sup>94</sup> Al Ward, Nada, and Faisal Yousaf. WHO. Report. World Health Organization, World Health Organization. December 2015. Accessed January 20, 2017. [http://www.emro.who.int/images/stories/syria/Revised\\_WHO\\_SitRep\\_December2015.pdf?ua=1](http://www.emro.who.int/images/stories/syria/Revised_WHO_SitRep_December2015.pdf?ua=1)

<sup>95</sup> Sharara, Sima L., and Souha S. Kanj. "War and Infectious Diseases: Challenges of the Syrian Civil War." *PLoS Pathogens*. November 2014. Accessed January 20, 2017. <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4231133/#ppat.1004438-StoneBrown1>

<sup>96</sup> Ibid.

hepatitis A, leishmaniasis, poliomyelitis, meningitis, and scabies are some of the many serious illnesses that have spread through vulnerable populations in Syria and the various Syrian refugee camps.<sup>97</sup> And, after being previously eradicated in Syria, the symptoms of the most feared disease of the 20th century began appearing in hundreds of children across the country after the Arab Spring.<sup>98</sup> The Polio outbreak of 2013 in Syria was more evidence that the war has destroyed the country's health infrastructure and that greater action needed to be taken to ensure improved emergency response.

As can be seen in the cases mentioned above, conflict will inevitably cause the worsening of both physical and mental states of the civilians affected by it, including mental distress, malnutrition, and the impending outbreak of communicable diseases. With the reduction of national and personal security and limited access to food, clean water, shelter and medicines and health services, the need for emergency responses reaches a capacity that can no longer be supported.<sup>99</sup>

## ACTORS AND STAKEHOLDERS

### FOREIGN NATIONS AND ORGANIZATIONAL AGENCIES

The major actors and stakeholders for the EM region outside of member states are none other than the current superpowers: United States of America, Russia, and China. Organizational bodies such as the Organization of Islamic Cooperation have also had a great impact on the status of the region's health and emergency preparedness situation.

Foremost in influence is the United States, which has exerted military and political influence in the EM, directly or via proxy, since the World Wars. The CIA made clear after World War II of the importance of controlling the vast oil and natural resource troves in the Eastern Mediterranean, as a means of maintaining Western European standard of living.<sup>100</sup>The US currently

<sup>97</sup>Ibid.

<sup>98</sup> Whewell, Tim. "Polio in Syria: An outbreak that threatens the Middle East." BBC News. March 26, 2014. Accessed January 20, 2017. <http://www.bbc.com/news/magazine-26734465>.

<sup>99</sup> WHO. Report no. HQ/PEC/ERM/ERX/2015.5/HRP. Department for Emergency Risk Management and Humanitarian Response, World Health Organization. 2015. Accessed January 20, 2017. [http://www.who.int/hac/who\\_humanitarian\\_response\\_plans2015.pdf](http://www.who.int/hac/who_humanitarian_response_plans2015.pdf)

<sup>100</sup> The Importance of Iranian and Middle East Oil to Western Europe. PDF. Langley, VA: Central Intelligence Agency, August 07, 2013. [https://www.cia.gov/library/readingroom/docs/DOC\\_0005807658.pdf](https://www.cia.gov/library/readingroom/docs/DOC_0005807658.pdf)

<sup>101</sup> "Sykes-Picot Agreement." Encyclopædia Britannica. May 31, 2016. Accessed January 20, 2017. <https://www.britannica.com/event/Sykes-Picot-Agreement>

influences Saudi Arabia, Jordan, Iraq, Kuwait, and other Gulf States, as well as parts of Somalia, Libya, Afghanistan, most of which are in the midst of conflicts in which the US plays a prominent role.

The United Kingdom, along with Russia and France, also share a role in the genesis of the current situation in the Levant area via post-WWI power-sharing agreements: the Sykes-Picot Agreement (1916) redrew territories formerly held by the Ottoman Empire through ethnic and sectarian lines to the benefit of all three entities--a root of the current conflict.<sup>101</sup> Similarly, the Balfour Declaration (1917) laid the foundation for the destruction of Mandatory Palestine in favor of a Zionist Jewish State, present-day Israel, the implementation of which is the direct cause of the continued, half century Arab-Israeli conflict.<sup>102</sup>

USSR/Russia has had centuries-long conflict with and influence over Iran, Afghanistan, Pakistan (then India), and Syria. Contemporary Russia currently influences Iran, Syria, Egypt, and parts of Afghanistan. In particular, its shared influence with the United States in Afghanistan has been a source of conflict since the Cold War. Unfortunately, the creation and funding of the Mujahideen by the United States in its well-meaning attempt to undermine Soviet interests in Afghanistan led to the formation of today's Taliban.<sup>103,104</sup>

China had until recently played a very minor role in Eastern Mediterranean affairs. Aside from deep, assured relations with Pakistan since the 1950s, China avoided wading westward to regions historically influenced by Russia and Western countries. It has, however, indicated interest in economic and infrastructure development in several EM countries as part of its "One Belt and One Road" (OBOR) strategy in international relations.<sup>105</sup> As such, it is one of a rare few countries wanting to restore economic and health infrastructure in war-torn or underdeveloped EM nations without being militarily involved.

<sup>102</sup> "Balfour Declaration: Text of the Declaration." Jewish Virtual Library. Accessed January 20, 2017. <http://www.jewishvirtuallibrary.org/jsource/History/balfour.html>.

<sup>103</sup> Prados, John. "Notes on the CIA's Secret War in Afghanistan." *The Journal of American History* 89, no. 2 (2002): 466-71. doi:10.2307/3092167

<sup>104</sup> Laub, Zachary. "The Taliban in Afghanistan." CFR Backgrounders. July 04, 2014. Accessed January 20, 2017. <http://www.cfr.org/afghanistan/taliban-afghanistan/p10551>

<sup>105</sup> Li, Xue, and Yuwen Zheng. "The Future of China's Diplomacy in the Middle East." *The Diplomat*. July 29, 2016. Accessed January 20, 2017. <http://thediplomat.com/2016/07/the-future-of-chinas-diplomacy-in-the-middle-east/>

With so many mutual member countries as EMRO, the Organization of Islamic Cooperation (OIC) has taken measures in an attempt to improve the dire health situation of this region's nations as well. The OIC recognizes the impact that health can have on the overall development of its member countries, therefore they have developed a health vision plan that aims to promote access to health care, enhance the prevention and treatment of diseases, and engage religious and cultural leaders in health advocacy programs.<sup>106</sup> One of their more recent and effective calls to actions has been their collaboration with the Global Polio Eradication Initiative (GPEI) to enhance the polio eradication work programs that have taken place in many member countries, including Syria.<sup>107</sup> With these programs and others like it showing such great promise, the need for external actors such as the OIC to interfere and play a greater role in this region's emergency preparedness is reinforced and strengthened.

## NON-GOVERNMENTAL ORGANIZATIONS AND PRIVATE FOUNDATIONS

Non-governmental organizations have attempted to mitigate the fallout of the aforementioned conflicts and epidemics in the Eastern Mediterranean, with limited and often minimal success. Médecins Sans Frontières (MSF, Doctors Without Borders) has played a significant role in providing treatment and aid in conflict-ridden regions—even at the epicenters of fighting. MSF is present in 14 EM member states, providing critically needed treatment, medicine, and aid.<sup>108</sup> Being near the front lines has resulted in damage to their facilities and the death of many affiliated doctors and workers, often in accidental airstrikes.<sup>109,110</sup>

The social injustices and humanitarian issues that have risen from these crises has caught the attention of some of the other most infamous human rights groups and non-governmental organizations, such as the International Committee of the Red

Cross (ICRC), Human Rights Watch (HRW), and Amnesty International. These groups and many others have worked hard to provide the support and assistance needed in the region to regain stability. Though they have been involved in the region for years in an attempt to carry out their duties, both HRW and Amnesty have been criticized for not providing enough resources and support to the region, despite having two of the largest budgets when compared to other NGO's.<sup>111</sup> However, their lack of aid can also be attributed to the worsening conditions of war that has made the ability for these groups to carry out their mission and provide support extremely dangerous and often impossible.

## HOST GOVERNMENTS

The governments in this region often place greater focus on other sectors for the growth of their nations, neglecting the health sector and overlooking the importance of emergency response readiness. The EM region has one of the lowest budgets for health expenditure, with only 3.08% of GDP in Middle East and Northern Africa allocated for this sector.<sup>112</sup> Without the recognition of the significance of improving the health sector and increasing the expenditure for it, emergency response and preparedness cannot be seen as a plausible reality for this region. Unfortunately, the lack of government expenditure can also be attributed to the severity of other issues that are on the rise (such as the myriad of political crises) that often take precedent for immediate action.

## STRATEGIES TO IMPROVE EMERGENCY RESPONSES

The Eastern Mediterranean Regional Office (EMRO) has placed great emphasis on the need for change and improvement; emergency preparedness is one of the five areas

<sup>106</sup> "OIC STRATEGIC HEALTH PROGRAMME OF ACTION 2014-2023 (OIC-SHPA)." OIC. 2014. Accessed February 2, 2017. [http://www.bing.com/cr?IG=7C77AF09BB0342378A603D967B60BE88&CID=0B73B66C690261A6138DBC7168336024&rd=1&h=4MsAwwTWbm\\_jyBQkiD6uf07wHsm8h-G5dAFeU8WrnQ&v=1&r=http%3a%2f%2fsesric.org%2ffiles%2foic-shpa%2fdraft-eng.pdf&p=DevEx.5080.1](http://www.bing.com/cr?IG=7C77AF09BB0342378A603D967B60BE88&CID=0B73B66C690261A6138DBC7168336024&rd=1&h=4MsAwwTWbm_jyBQkiD6uf07wHsm8h-G5dAFeU8WrnQ&v=1&r=http%3a%2f%2fsesric.org%2ffiles%2foic-shpa%2fdraft-eng.pdf&p=DevEx.5080.1).

<sup>107</sup> Ibid.

<sup>108</sup> "Médecins Sans Frontières (MSF) in the Middle East and North Africa." Médecins Sans Frontières (MSF) in the Middle East and North Africa - Médecins Sans Frontières (MSF). 2017. Accessed January 20, 2017. <http://msf-me.org/en/mission/in-the-field/voice-from-the-field/mdcins-sans-frontieres-msf-in-the-middle-east-and-north-africa.html>.

<sup>109</sup> "Kunduz Hospital Airstrike." Médecins Sans Frontières (MSF) International. October 3, 2016. Accessed January 20, 2017. <http://www.msf.org/en/taxonomy/term/2486>

<sup>110</sup> "MSF hospital in Yemen hit by airstrike." News from Al Jazeera. August 15, 2016. Accessed January 20, 2017. <http://www.aljazeera.com/news/2016/08/yemen-war-msf-hospital-hit-air-strike-160815165003150.html>.

<sup>111</sup> Steinberg, Gerald M. "International NGOs, the Arab Upheaval, and Human Rights: Examining NGO Resource Allocation." *Northwestern Journal of International Human Rights* 11, no. 1 (October 2012): 124-49. October 2012. Accessed January 20, 2017. <http://scholarlycommons.law.northwestern.edu/cgi/viewcontent.cgi?article=1158&context=njihr>

<sup>112</sup> "Health expenditure - public (% of GDP) in Middle East and North Africa." Trading Economics. Accessed January 21, 2017. <http://www.tradingeconomics.com/middle-east-and-north-africa/health-expenditure-public-percent-of-gdp-wb-data.html>.

that EMRO focuses on to improve their strategic health planning (The other four are: strengthening of health systems, maternal, reproductive and child health and nutrition, non-communicable diseases, and communicable diseases).<sup>113</sup> Advances have been made in public health emergency response, such as the successful combating of malaria and increasing the rate of routine immunization against vaccine-preventable diseases to above 85%. However, the deteriorating political stability of the region has also caused a plethora of shortcomings. Nearly a third of male deaths in the age group 15 to 59 years were injury-related, 40 % of which were attributed to war and violence in the region.<sup>114</sup>

## CONCLUSION

Though EMRO has taken great strides in an attempt to implement strategies to improve emergency preparedness in the region, the negative impact of the political instability and wars on these nations' medical infrastructure makes it nearly impossible to execute these plans in a positive and productive manner that can actually create change and allow for improvement. The different stakeholders that are involved often place a great strain for the region. Many foreign governments have played a role in the deteriorating stability of the region, and many host governments have not taken the appropriate action to stop the instability from rampaging and to improve the emergency response and public health of their respective countries. Without resolving the military and political conflicts in the region, and without the proper governing from the member states to provide for their populations and end marginalization of certain demographics, we will not be able to improve the public health situation that has so critically affected so many parts of this region.

## ADDITIONAL RESOURCES

Responding to Priority Health Challenges in the Arab World by  
Ala Alwan

Polio in Syria by Ala Alwan and R. Bruce Aylward

War and Infectious Diseases: Challenges of the Syrian Civil War  
by Sima L. Sharara and Souha S. Kanj

<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4231133/#ppat.1004438-StoneBrown1>

WHO. Report no. EM/RC61/INF.DOC.6. Regional Office for the Eastern Mediterranean, World Health Organization. August 2014. Accessed January 20, 2017.

[http://applications.emro.who.int/docs/RC\\_technical\\_p](http://applications.emro.who.int/docs/RC_technical_p)

[apers\\_2014\\_info\\_doc\\_6\\_15425\\_EN.pdf?ua=1&ua=1.](#)

"HIV and AIDS in the Middle East & North Africa (MENA)."  
[http://www.avert.org/professionals/hiv-around-world/middle-east-north-africa-mena.](http://www.avert.org/professionals/hiv-around-world/middle-east-north-africa-mena)

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<sup>113</sup> "WHO EMRO | Strategic directions | About WHO." World Health Organization Regional Office for the Eastern Mediterranean. 2017. Accessed January 20, 2017. <http://www.emro.who.int/about-who/strategic-directions/>.

<sup>114</sup> WHO. Report no. EM/RC61/INF.DOC.6. Regional Office for the Eastern Mediterranean, World Health Organization. August 2014. Accessed January 20, 2017.



# AFRICA

## REGIONAL COMMITTEE

### AFRICA REGIONAL COMMITTEE EXECUTIVE SUMMARY

*Contributing Authors: Esraa Mahran, Ashley Hurst, Alexis Bracey*

According to the Food and Agriculture Organization of the United Nations, every year the countries of Eastern and Central Africa, which include Burundi, Central African Republic, Eritrea, Kenya, Tanzania, and Uganda to name just a few, experience the highest number of natural and human-induced disasters in all of Africa.<sup>1</sup> Droughts, floods, livestock diseases, and civil conflicts impact the ability of people's sustenance.<sup>1</sup> In addition to having to deal with crises relating to climate change and the environment, the 2014-2016 Ebola virus disease outbreak in West Africa generated a tremendous amount of panic, loss, and grief.



## Mason WHO 2017 Africa Regional Committee

### INTRODUCTION TO THE AFRICA REGIONAL COMMITTEE

Located in Brazzaville, Republic of Congo the World Health Organization (WHO) regional committee for Africa is the main governing body of the WHO African region.<sup>115</sup> As one of the six regions of the WHO, the WHO African region is “responsible for preparing regional policies and programs and supervising the activities of the regional office”.<sup>116</sup>

The WHO African Region is comprised of 47 countries.<sup>117</sup> They are: Algeria, Angola, Benin, Botswana, Burkina Faso, Burundi, Cameroon, Cape Verde, Central African Republic, Chad, Comoros, Congo, Cote d’Ivoire, Democratic Republic of Congo, Equatorial Guinea, Ethiopia, Eritrea, Gabon, Gambia, Ghana, Guinea, Guinea-Bissau, Kenya, Lesotho, Liberia, Madagascar, Malawi, Mali, Mauritania, Mauritius, Mozambique, Namibia, Niger, Nigeria, Rwanda, Sao Tome and Principe, Senegal, Seychelles, Sierra Leone, South Africa, South Sudan, Togo, Uganda, United Republic of Tanzania, Zambia, and Zimbabwe.



Countries marked in yellow on the map are outside the WHO African Region.<sup>118</sup>

For centuries, African countries have faced devastating experiences which include imperialism, slavery, poverty, diseases, natural disasters, and colonialism, all of which have contributed to Africa’s instability and vulnerability.<sup>119</sup> Global climate change contributes to increased temperature, air pollution, food and water-borne diseases, rising sea levels, and the spread of infectious diseases, which impact the economic and political development of Africa.<sup>120</sup>

Although the majority of Africa’s problems have been attributed to factors that are beyond one’s control “the problems have been aggravated by human choices and the political incompetence and unwillingness of the ruling elites in Africa to take responsibility”.<sup>121</sup> Furthermore, in Africa’s quest for development, focus has primarily centered upon economic aspects, neglecting all social, cultural, moral, intellectual, and political aspects.<sup>122</sup>

<sup>115</sup> “Regional Committee for Africa.” *World Health Organization*.

<sup>116</sup> *Ibid.*

<sup>117</sup> *Ibid.*

<sup>118</sup> “Map of Countries in the WHO African Region.” Digital image. World Health Organization Regional Office for Africa. Accessed February 15, 2017. <http://www.afro.who.int/en/countries.html>

<sup>119</sup> Tosam, and Richard Achia Mbih, *Climate change, health, and sustainable development in Africa*, (New York, Springer, 2014).

<sup>120</sup> *Ibid.*

<sup>121</sup> *Ibid.*

<sup>122</sup> *Ibid.*

The environment also plays a role in influencing public health emergencies. By limiting the capacity of marine environments to absorb extra carbon dioxide found within the environment, deforestation has contributed to greenhouse warming.<sup>123</sup> "In most African states there is an excessive dependence on, and unsustainable exploitation of forest resources which place much pressure on the environment resulting in environmental degradation (affecting the ecosystem, natural resources, and biodiversity) and heightening global warming with attendant effects—storms, fires, and severe droughts and floods, which interrupt the supply of safe drinking water, food, health services and economic activities".<sup>124</sup> Increased temperatures and air pollution result in an increase of both food and water-borne diseases and respiratory infections.<sup>125</sup> Climate change depletes individual's sources of food, shelter, medication, and income which contribute to poor nutrition, heavy financial losses, less working hours, and exposure to infectious diseases.<sup>126</sup>

## BACKGROUND ON EMERGENCY RESPONSES IN AFRICA

Climate change was once exclusively a subject of science. Now, the effects of climate change are associated with politics, society, culture, religion, health, and the economy.<sup>127</sup> The continent experiences extreme weather and natural hazards due to climate change.<sup>128</sup> Many of these natural hazards occur in a given region frequently, which could give scientists the chance to predict the events before they occur.<sup>129</sup>

The climatic events in a region often coincide with epidemics. For example, in Mozambique, outbreaks of cholera have been linked directly to the climate; studies show that the number of cases always peaks during the hot, rainy season, which typically occurs after heavy flooding.<sup>130</sup>

People affected by climate change adapt their lifestyle to the climate they experience frequently.<sup>131</sup> For instance, individuals living near the Zambezi River, which stretches from the Indian Ocean and travels across Mozambique, Zambia, Zimbabwe, Angola, and Namibia, have developed their own means of risk-reduction.<sup>132</sup> Houses are primarily built with grass and wood as opposed to bricks, because these materials are obtained with no investment. There is no risk in losing money if the home were destroyed away by floods.<sup>133</sup>

As mentioned earlier, colonialism, war, and the abuse of governmental power have occurred in some African countries throughout history and has contributed to an increase in disease, poverty, and malnutrition.<sup>134</sup> According to Emmanuel Oladipo Ojo, even during crisis and poverty, "African ruling elites have corruptly enriched themselves. Consequently, half of the continent's 54 countries are home to an active conflict or a recently ended one."<sup>135</sup> This type of leadership discourages civilians from supporting or trusting the government during times of crisis.

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<sup>123</sup> Ibid. .

<sup>124</sup> "Africa Regional Strategy for Disaster Risk Reduction." *Disaster Risk Reduction for Sustainable Development in Africa* (2004).

<sup>125</sup> Ibid.

<sup>126</sup> Ibid.

<sup>127</sup> Artur, Luis, and Dorothea Hilhorst. "Everyday realities of climate change adaptation in Mozambique." *Global Environmental Change* 22, no. 2 (2012): 530.

<sup>128</sup> Tosam, Mbih Jerome, and Richard Achia Mbih. "Climate change, health, and sustainable development in Africa." *Environment, Development and Sustainability* 17, no. 4 (2014): 788.

<sup>129</sup> "Disasters in Africa: The Case for Legal Preparedness." *International Federation of Red Cross and Red Crescent Societies*. (2011)

<sup>130</sup> Tosam, Mbih Jerome, and Richard Achia Mbih. "Climate change, health, and sustainable development in Africa." *Environment, Development and Sustainability* 17, no. 4 (2014): 789.

<sup>131</sup> Artur, Luis, and Dorothea Hilhorst. "Everyday realities of climate change adaptation in Mozambique." *Global Environmental Change* 22, no. 2 (2012): 533.

<sup>132</sup> Ibid.

<sup>133</sup> Ibid.

<sup>134</sup> Emmanuel Oladipo Ojo. "Underdevelopment in Africa: Theories and Facts." *The Journal of Social, Political and Economic Studies* 41, no. 1 (Spring 2016): 101.

<sup>135</sup> Ibid., 100.

## CASE STUDIES

### 2014-2016 EBOLA OUTBREAK IN WEST AFRICA

According to the World Health Organization, the Ebola virus “causes an acute, serious illness which is often fatal if left untreated.”<sup>136</sup> In March 2014, the largest outbreak of Ebola occurred in West Africa, primarily affecting Liberia, Sierra Leone and Guinea.<sup>137</sup> As of April 13, 2016, there have been 28,652 cases, which includes suspected, probable, and confirmed cases, and 11,325 deaths in relation to this virus.<sup>138</sup>

The Ebola virus disease first occurred in 1976, in what is now Nzara, South Sudan and Yambuku, Democratic Republic of Congo.<sup>139</sup> Ebola spreads through human-to-human transmission through the direct contact with the blood, secretions, organs, or other bodily fluids of infected persons or through surfaces or materials contaminated by those fluids.<sup>140</sup>

Early responses to the Ebola outbreak relied primarily on the efforts of local health workers who often had little to no support from the government.<sup>141</sup> Although the Sierra Leonean, Guinean, and Liberian governments did activate emergency response plans, the responses were inadequate due to the government’s lack of experience and coordination in handling the epidemic.<sup>142</sup> Other issues that affected the response to the epidemic were the difficulty in identifying cases, the death of healthcare workers who were not adequately protected and were thus more prone to contracting the disease as well and

militarized responses, which had the effect of alienating communities.<sup>143</sup> In a more broader sense, the Trans-Atlantic Slave Trade, colonialism, structural adjustment policies, civil wars, and foreign aid also affected the way that the Ebola response was perceived from civilians in Sierra Leone, Guinea, and Liberia as well as shaped the government's responses as well.<sup>144</sup>

### MOZAMBIQUE

Droughts, floods, cyclones, and other natural disasters have occurred in Mozambique. Many of these occurrences have destroyed communities, taken lives, and increased the risk of diseases and other health issues.<sup>145</sup> After the devastating floods of 2001, the Mozambican government funded \$5 million in preparation for the next flood.<sup>146</sup> When the next floods came in 2007, the government had a developed plan for flood-response. As the waters of the Zambezi River began to rise early in February of 2007, the government broadcasted a state of emergency. The government ordered mandatory evacuation of the inhabitants of the Zambezi floodplains, the wetland region surrounding the Zambezi river.<sup>147</sup> Many people disregarded the orders to evacuate in fear of being separated from family or losing their property.<sup>148</sup> By February 7, the army drove out the people of Zambezi by force. This forced evacuation was not easily done, and many people living in the floodplains believed they could have taken care of themselves and their family without the government’s help.<sup>149</sup> Conclusively,

<sup>136</sup> Ebola virus disease. *World Health Organization*. January 2016. <http://www.who.int/mediacentre/factsheets/fs103/en/>

<sup>137</sup> 2014-2016 Ebola Outbreak in West Africa. *Centers for Disease Control and Prevention*. March 31, 2016. <https://www.cdc.gov/vhf/ebola/outbreaks/2014-west-africa/>

<sup>138</sup> Ibid.

<sup>139</sup> Ebola virus disease. *World Health Organization*. January 2016. <http://www.who.int/mediacentre/factsheets/fs103/en/>

<sup>140</sup> Ibid.

<sup>141</sup> Benton, Adia, and Kim Yi Dionne. “International Political Economy and the 2014 West African Ebola Outbreak.” *African Studies Review*, no. 58 (2015): 229.

<sup>142</sup> Ibid.

<sup>143</sup> Benton, Adia. “More resources are needed: Ebola exhausts health care systems.” *The Nordic Africa Institute*. 2014. <http://nai.diva-portal.org/smash/get/diva2:740759/FULLTEXT02.pdf>

<sup>144</sup> Benton, Adia, and Kim Yi Dionne. “International Political Economy and the 2014 West African Ebola Outbreak.” *African Studies Review*, no. 58 (2015): 229.

<sup>145</sup> Artur, Luis, and Dorothea Hilhorst. “Everyday realities of climate change adaptation in Mozambique.” *Global Environmental Change* 22, no. 2 (2012): 530.

<sup>146</sup> Ibid., 533.

<sup>147</sup> Ibid.

<sup>148</sup> Ibid.

<sup>149</sup> Ibid.

the disaster-risk prevention methods of the community was not tantamount to the prevention designed by the government, which made the situation all the more difficult.

## ACTORS AND STAKEHOLDERS

### UNITED NATIONS AGENCIES

The work of United Nations agencies is crucial in preparing and restoring countries after natural disasters. During emergencies, the World Health Organization (WHO) helps guide the affected nation. WHO has established four roles to fulfill during a response: leadership, information, technical expertise and core services.<sup>150</sup>

During a country-level response, the country-level team in charge of fulfilling the four roles is known as the Emergency Response Team (ERT).

The Global Emergency Management Team (GEMT) established in 2011 evaluates the emergency response work that was carried out by WHO.<sup>151</sup> The GEMT consists of relevant headquarters and the regional office directors and delegates.

### NON-GOVERNMENTAL ORGANIZATIONS AND PRIVATE FOUNDATIONS:

Non-governmental organizations (NGO's) and private foundations can act as carriers between governments and UN agencies. The New Partnership for African Development (NEPAD) work to eradicate poverty. Poverty increases risk for disaster and by working towards eradicating poverty, NEPAD helps reduce the threats to individual health and community development that arise from political and environmental emergencies.<sup>152</sup>

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<sup>150</sup> "Emergency Response Framework." World Health Organization. 2013: 27.

<sup>151</sup> Ibid., 29.

<sup>152</sup> Union, African. "Africa Regional Strategy for Disaster Risk Reduction." Disaster Risk Reduction for Sustainable Development in Africa (2004): 3.

<sup>153</sup> "Disasters in Africa: The Case for Legal Preparedness." International Federation of Red Cross and Red Crescent Societies. (2011): 3.

## HOST GOVERNMENTS

Host governments must establish stronger disaster laws in order to prepare themselves and prepare communities for upcoming natural disasters.<sup>153</sup> Good disaster laws not only assign proper funding for relief missions, but also divide responsibility between agencies and the government, and help prevent social behavior that may increase disaster risk.<sup>154</sup> Governments are also responsible for empowering individuals and local organizations to reduce their individual risk to disaster.

Missions and programs that involve preventing damage before a disaster occurs have been proven to be more effective than missions that are in response to a disaster.<sup>155</sup> Taking preparatory action for a disaster reduces the impact and devastation it has on civilians.

The host government must establish suitable levels of regulation that will not inhibit relief efforts. Under-regulation evidently impacts the disaster-region negatively because organizations are not guided properly through the efforts. Contrastingly, too much regulation can also hinder the progress of risk-reduction.<sup>156</sup> Governments should use existing international policies as guides to their own framework for disaster efforts.<sup>157</sup>

## LOCAL COMMUNITIES

Efforts for disaster relief can be hindered on the local level by certain social laws and behaviors, especially if the response of the government is not parallel to the response of the community. For instance, the rescue mission of people from

<sup>154</sup> Ibid., 4.

<sup>155</sup> Ibid., 5.

<sup>156</sup> "Disasters in Africa: The Case for Legal Preparedness." International Federation of Red Cross and Red Crescent Societies. (2011): 10.

<sup>157</sup> Ibid.

the Zambezi floodplains in Mozambique in 2007 was made difficult by those who refused to evacuate<sup>158</sup>

During natural disasters, communities often turn to their local leaders for guidance.<sup>159</sup> For example, in Mozambique, the church guides many individuals, often expressing that such events cannot be predicted by science.<sup>160</sup> Some churches also preach that such chaotic events are signs of the end of the world, and that the people must promptly turn to the church for guidance. According to Luis Artur and Dorothea Hilhorst, “both variations diffuse social tension and strengthen the church’s grasp of people. They do not recognize potentials for mitigation and adaptation to climate change.”<sup>161</sup>

Some individuals would rather stay during a disaster to avoid losing family, their home, crops, and other valuables.<sup>162</sup> For instance, the families living in the Zambezi floodplains preferred to escape the flood by canoes rather than by government helicopters because they were reassured that they would stay together, and they had greater flexibility over what they could bring with them.<sup>163</sup>

Social behavior can make rescue missions more difficult. Some individuals refuse to be rescued because they see more honor in rescuing others; often putting themselves in danger in the process.<sup>164</sup> This ideology influenced a number of local chiefs to choose to be evacuated last.<sup>165</sup> Such self-sacrifice, although seemingly brave, can inspire a number of other community members to also refuse evacuation. It is important

to motivate leaders to evacuate early during emergencies so that they may set an example for the rest of the community.

## STRATEGIES TO IMPROVE EMERGENCY RESPONSES

In order to completely eradicate emergencies such as epidemics, natural disasters, and climate change, there are a number of strategies that can be implemented to improve emergency responses. Improvement of emergency responses begins with the improvement of the identification and assessment of disaster risks.<sup>166</sup> This can be accomplished through improving the quality of the data on disaster risks and by improving the “identification, assessment, and monitoring of hazards, vulnerabilities, and capacities.”<sup>167</sup>

In order to increase and maintain the commitment to disaster risk reduction, political leaders and investors must be aware of the importance and benefits of investing in disaster risk reduction.<sup>168</sup> This strategy requires a cost-benefit analysis of investment in reducing disaster risks by increasing resource allocation for disaster risk reduction and emphasizing advocacy for political commitment.<sup>169</sup>

In efforts to improve public awareness of disaster risk reduction and enhance knowledge management, access to information must increase, information dissemination and communication must be improved, and the role of the media must be expanded.<sup>170</sup>

Governance of disaster risk reduction institutions must be improved by increasing legislation, programs, and public

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<sup>158</sup> Artur, Luis, and Dorothea Hilhorst. “Everyday realities of climate change adaptation in Mozambique.” *Global Environmental Change* 22, no. 2 (2012): 533.

<sup>159</sup> Ibid.

<sup>160</sup> Ibid, 532.

<sup>161</sup> Ibid.

<sup>162</sup> Ibid., 534.

<sup>163</sup> Ibid.

<sup>164</sup> Artur, Luis, and Dorothea Hilhorst. “Everyday realities of climate change adaptation in Mozambique.” *Global Environmental Change* 22, no. 2 (2012): 534.

<sup>165</sup> Ibid.

<sup>166</sup> “Regional Committee for Africa.” *World Health Organization*.

<sup>167</sup> Union, African. “Africa Regional Strategy for Disaster Risk Reduction.” *Disaster Risk Reduction for Sustainable Development in Africa (2004)*: 9-14.

<sup>168</sup> Ibid., 9.

<sup>169</sup> Ibid., 9.

<sup>170</sup> Ibid., 12.

participation in coordinating disaster risk reduction interventions. Across different governmental platforms, terms and policies must be streamlined, strengthening the decentralization of disaster risk reduction interventions.<sup>171</sup> Furthermore, disaster risk reduction initiatives should be integrated into emergency response management.<sup>172</sup> In order to do so, the regional committee must “advocate the inclusion of disaster risk reduction in development strategies at local, national, subregional, and regional levels” in addition to disseminating “guidelines for integrating disaster risk reduction in development planning and activities.”<sup>173</sup>

Reducing the impact of disasters requires cooperation within the government, bridging the gap between local and national law, which in turn promotes community action. Governments are unable to function and succeed independently, thus their laws should be reflective of this. The International Federation of Red Cross and Red Crescent Societies (IFRC) states that, “In the long run, we will not be successful in reducing the impact of disasters if our laws merely distribute responsibilities among dedicated agencies and expert groups”.<sup>174</sup>

In order to empower local communities to reduce their vulnerability to disasters, South Africa adopted the Disaster Management Act in 2002.<sup>175</sup> The aim of this legislation is to “ensure a uniform and integrated approach to disaster management and disaster risk reduction across all spheres of government, while involving all relevant stakeholders”.<sup>176</sup> Although this legislation has not received the success its supporters would like to see at this time, it is recognized as the most advanced African legislation.<sup>177</sup>

## CONCLUSION

The nations of Africa have endured and continue to undergo political, social, economic, and environmental issues. Considering the relevant regional, geographical, social, political and economic situations of a nation are essential when formulating policies because these factors can each play a major role in the endurance and outcome of a strategy. The collaboration between the UN agencies, NGO’s, governments, and local communities, is essential during emergencies both to lessen the damage and to improve the conditions after the emergency. Promoting risk-reduction before an emergency, followed by an efficient response strategy, are tasks to be done at national and local levels; doing so could save lives.

## ADDITIONAL RESOURCES

Africa’s Decade of Change: Reflections on 10 years of NEPAD  
Reducing Vulnerability to Climate Variability in Southern Africa:  
The Growing Role of Climate Information by Maxx  
Dilley  
Disaster Risk Reduction in Southern Africa: Hot rhetoric-cold  
reality by Alisa Holloway Global and Domestic Legal  
Preparedness and Response: 2014 Ebola Outbreak

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<sup>171</sup> Union, African. “Africa Regional Strategy for Disaster Risk Reduction.” *Disaster Risk Reduction for Sustainable Development in Africa* (2004):13.

<sup>172</sup> Ibid., 14.

<sup>173</sup> Ibid.

<sup>174</sup> “Disasters in Africa: The case for legal preparedness.” *International Federation of Red Cross and Red Crescent Societies*, (2011): 5.

<sup>175</sup> Ibid., 6.

<sup>176</sup> Ibid.

<sup>177</sup> Ibid.



# SOUTHEAST ASIAN/WESTERN PACIFIC REGIONAL COMMITTEE

## SOUTHEAST ASIA AND WESTERN PACIFIC COMMITTEE EXECUTIVE SUMMARY

*Contributing Authors: Ayya Abdel-Kader, Madeline Treiber*

The Southeast Asia and Western Pacific Regions collectively contain 48 member states. The Southeast Asia region, in particular, is annually affected by climate extremes which includes floods, droughts, and tropical cyclones.<sup>1</sup> The effects of climate change are likely to include a lack of clean water, impaired nutrition, and the increased incidence of infectious diseases.<sup>1</sup>



## Mason WHO 2017 Southeast Asia and Western Pacific Regional Committee

### BACKGROUND ON THE SOUTHEAST ASIA AND WESTERN PACIFIC COMMITTEE

The Southeast Asia and Western Pacific regions are separate in the World Health Organization. However, as will be demonstrated, the two regions are similar enough that it makes sense to group them together when discussing how to address health in the area. It is first important to know how the regions came to be formed. The Southeast Asia region (SEARO) was one of six original committees when the World Health Organization (WHO) was created in 1948. The region consisted of Afghanistan, Burma, Sri Lanka, India, and Thailand. Indonesia and Nepal joined the region in 1950 and 1953, respectively. The Mongolian People's Republic joined in 1962, but switched to the Western Pacific region (WPRO) in 1995. Maldives joined in 1965, and four years later, Afghanistan transferred to the Eastern Mediterranean region for geographical continuity and political reasons. The People's Republic of Bangladesh joined the region in 1972. The Democratic People's Republic of Korea joined in 1973. The WHO is the first United Nations-sanctioned organization the country joined. The Kingdom of Bhutan joined in 1982 and the Republic of Timor Leste was added in 2003 to form the current 11-member region that currently represents the SEARO. Dr. Poonam Khetrpal Singh of India is currently the regional director of the Southeast Asia region. She is the first woman to hold this position.<sup>178</sup>

The Western Pacific region (WPRO) was also one of the original regions when the WHO was formed, but the office was not opened until 1951. The WPRO, spanning 37 nations and areas, is home to more than one-fourth of the world's population.<sup>179</sup> The region stretches from China in the north and

west to New Zealand in the south to French Polynesia in the east. When the region was designed in 1948, it included Australia, China, Indochina, Indonesia, Japan, Korea, New Zealand, the Philippines, and the Malay Peninsula. The Republic of Vietnam and Kingdoms of Cambodia and Laos were designated for the SEARO, but chose to join the WPRO when it was opened. Manila, Philippines was chosen as the first official site of regional office, which was inaugurated in 1958. Currently, the Regional Director is Dr. Shin Young-Soo of the Republic of Korea.<sup>180</sup>

The following countries are members of the SEARO: Bangladesh, Bhutan, The Democratic People's Republic of Korea, India, Indonesia, Maldives, Myanmar, Nepal, Sri Lanka, Thailand, and Timor-Leste.<sup>181</sup> The following countries are members of the WPRO: American Samoa, Australia, Brunei Darussalam, Cambodia, China, Cook Islands, Fiji, French Polynesia, Guam, Hong Kong (China), Japan, Kiribati, the Lao People's Democratic Republic, Macao (China), Malaysia, the Marshall Islands, the Federated States of Micronesia, Mongolia, Nauru, New Caledonia, New Zealand, Niue, the Commonwealth of the Northern Mariana Islands, Palau, Papua New Guinea, the Philippines, the Pitcairn Islands, the Republic of Korea, Samoa, Singapore, Solomon Islands, Tokelau, Tonga, Tuvalu, Vanuatu, Vietnam, and Wallis and Futuna.<sup>182</sup>

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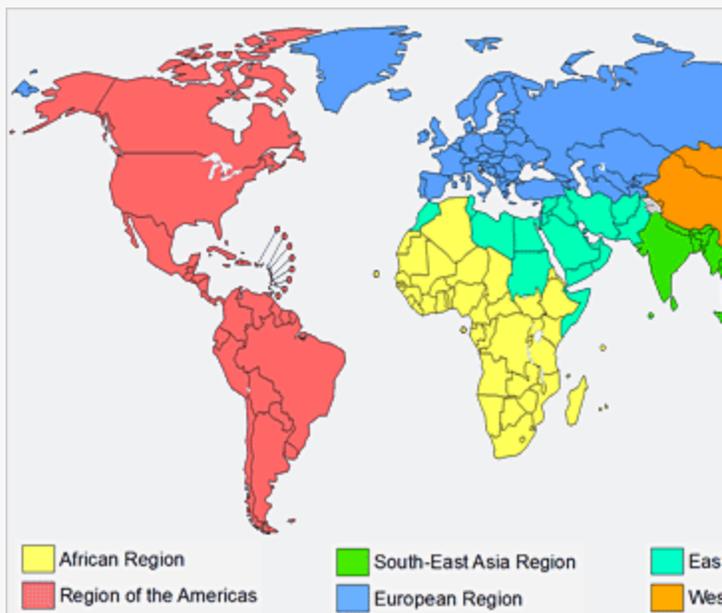
<sup>178</sup> "WHO in South-East Asia." *World Health Organization*, accessed January 30, 2017, <http://www.searo.who.int/about/history/en/>

<sup>179</sup> "WHO in the Western Pacific." *World Health Organization Western Pacific Committee*. [http://www.wpro.who.int/about/in\\_brief/en/](http://www.wpro.who.int/about/in_brief/en/)

<sup>180</sup> "WHO in Western Pacific." *World Health Organization*, accessed January 30, 2017, [http://www.wpro.who.int/about/in\\_brief/en/](http://www.wpro.who.int/about/in_brief/en/)

<sup>181</sup> "WHO in South-East Asia." *World Health Organization*, accessed January 30, 2017, <http://www.searo.who.int/about/history/en/>

<sup>182</sup> "Countries and Areas." *World Health Organization*, accessed January 30, 2017, <http://www.wpro.who.int/countries/en/>



*The Southeast Asia and Western Pacific Regions are displayed in green and orange respectively on the map.<sup>183</sup>*

The Southeast Asian region has been a major trade route since ancient times which in turn brought economic, social and political diversity in the region—a diversity that has flourished the area in the past has become a burden in the present.<sup>184</sup> Therefore, the struggles of reaching mutual solutions to solve regional problems continues to be a problem in the region.

The Southeast Asia region is located between the countries of China and India as well as along the Asian continental arches and is made up of ten countries which make up the Association of Southeast Asian Nations (ASEAN) and comprises over 600 million people: Brunei, Cambodia, Indonesia, Laos, Malaysia, Myanmar (Burma), the Philippines, Singapore, Thailand and Vietnam. About 43% of the region's population resides in

<sup>183</sup> "Map of WHO Regional Offices." Digital image. World Health Organization. Accessed February 15, 2017. <http://www.who.int/about/regions/en/>

<sup>184</sup> Jamal Hashim et al., "Health and Healthcare Systems in Southeast Asia," *United Nations University*, 2012, <https://unu.edu/publications/articles/health-and-healthcare-systems-in-southeast-asia.html>.

<sup>185</sup> Ibid.

<sup>186</sup> Ibid.

<sup>187</sup> Ibid.

<sup>188</sup> Ibid.

urban areas, however, variations do exist among countries.<sup>185</sup><sup>186</sup> For example, only 15% of Cambodia's population lives in urban areas as opposed to a 100% of population occupancy in Singapore.<sup>187</sup> Population density also varies from 27 people per square kilometer in Laos to 7,022 people per square kilometer in Singapore.<sup>188</sup> Urbanization is yet to increase in the region and the slum population is expected to increase as well.<sup>189</sup> Despite that about a quarter of the slum population live in difficult conditions, the general level of living conditions in slum areas in the region exceeds other slum areas in different regions.<sup>190</sup>

The region has increased its general life expectancy, however, several countries lag behind due to political conflicts and a poor health infrastructure such as Cambodia.<sup>191</sup> Cambodia's political conflict, for example, is between the government and the opposition; the government executes arrests against protesters while Cambodian land is continually seized under the leadership of its government.<sup>192</sup> Other reasons include the arrest of the homeless, drug users, as well as the restriction on rehabilitation centers that are geared toward providing treatment for drug users.<sup>193</sup>

The Southeast Asia and Western Pacific region enjoys a wide geographic diversity that includes islands, mountains, extensive coastlines, forests, deltaic plains and deserts.<sup>194</sup> Climate is driven by monsoon variability and snow cover dynamics, which impact both the frequency and severity of natural disasters like

<sup>189</sup> Ibid.

<sup>190</sup> Ibid.

<sup>191</sup> Ibid.

<sup>192</sup> "Cambodia: Events of 2015," Human Rights Watch, 2017, <https://www.hrw.org/world-report/2016/country-chapters/cambodia>.

<sup>193</sup> Cambodia: Events of 2015, 2017.

<sup>194</sup> "Overview of Natural Disasters and their Impacts in Asia and the Pacific," *Economic Social Commission for Asia and the Pacific*, 2014, [http://www.unescap.org/sites/default/files/Technical%20paper-Overview%20of%20natural%20hazards%20and%20their%20impacts\\_final.pdf](http://www.unescap.org/sites/default/files/Technical%20paper-Overview%20of%20natural%20hazards%20and%20their%20impacts_final.pdf).

floods and droughts.<sup>195</sup> According to the Economic and Social Commission for Asia and the Pacific (ESCAP) (2014), “In the past decade alone, a person living in Southeast Asia and the Western Pacific was twice as likely to be affected by a natural disaster as a person living in Africa, almost six times as likely as someone from Latin America and the Caribbean, and 30 times more likely to suffer from a disaster than someone living in North America or Europe.<sup>196</sup> ESCAP also gives an account of the frequencies of natural disasters in the region, “From 1970 to 2014, the world reported a total of 11,985 natural disaster events, of which 5,139 (or 42.9%) took place in Asia and the Pacific.<sup>197</sup> Floods and storms were the most frequent in the region, accounting for 64% of the total number of such events reported between 1970 and 2014.<sup>198</sup> This was followed by earthquakes and tsunamis (12%) and landslides (6.9%).”<sup>199</sup>

According to the Economic and Social Commission for Asia and the Pacific, over 2 million people have died from natural disasters between 1970 and 2014 forming a percentage of 56.6% of all global fatalities.<sup>200</sup> Despite the infrequent occurrence of earthquakes and tsunamis in the Southeast Asia and Pacific region, they were the main causes of deaths.<sup>201</sup> This can be contributed to poor population disbursement and a rapid increase in urbanization which adds to the losses of any disaster.<sup>202</sup> In fact, the population of the region has nearly doubled over the period 1970-2014 and highly valuable economic assets are forcibly placed in high-risk areas due to a

lack of “adequate space” and vulnerable populations such as the poor are the most likely to be affected when a disaster hits.<sup>203</sup> Climate change is considered to be a factor in the increase or disruption in natural disaster frequency in the area.<sup>204</sup>

The Southeastern and Western Pacific region is known to be a hotspot for emerging infectious disease even though several aspects of the ever-changing region like urbanization and agricultural intensification are agents for reducing the risk for infectious diseases.<sup>205</sup>

Countries in the region like Cambodia and Thailand have successfully fought infectious diseases and are on the path to eradication of some of these diseases, such as malaria.<sup>206</sup> Malaria was endemic to 10 out of 37 countries of the region and was responsible for 221,384 confirmed cases and 635 deaths in 2011.<sup>207</sup> Malaria incidence rate and malaria mortality decreased by 46% and 73% consecutively, however, progress varied among countries.<sup>208</sup> Nine out of ten countries have adopted malaria elimination strategies.<sup>209</sup> Despite this apparent success, gaps remain in the health infrastructure of many countries in regards to assessing risks of emerging infectious disease.<sup>210</sup> Gaps include adequate services being delivered to populations and the quality of health care.<sup>211</sup>

There is a lack of planning and management in the region to prioritize the allocation of resources as well as a

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<sup>195</sup> Ibid.

<sup>196</sup> Ibid.

<sup>197</sup> Ibid.

<sup>198</sup> Ibid.

<sup>199</sup> Ibid.

<sup>200</sup> Ibid.

<sup>201</sup> Ibid.

<sup>202</sup> Ibid.

<sup>203</sup> Ibid.

<sup>204</sup> Ibid.

<sup>205</sup> Ibid.

<sup>206</sup> “Malaria factsheet (WPRO),” *World Health Organization*, 2014, <http://www.wpro.who.int/mvp/topics/malaria/en/>.

<sup>207</sup> Ibid.

<sup>208</sup> Ibid.

<sup>209</sup> Ibid.

<sup>210</sup> Horby, Peter W., Dirk Pfeiffer, and Hitoshi Oshitani. “Prospects for Emerging Infections in East and Southeast Asia 10 years after Severe Acute Respiratory Syndrome.” *Centers for Disease Control and Prevention*, June 2013. [https://www.wnc.cdc.gov/eid/article/19/6/12-1783\\_article](https://www.wnc.cdc.gov/eid/article/19/6/12-1783_article)

<sup>211</sup> Ibid.

lack of focus in data collection and analysis.<sup>212</sup>

## BACKGROUND ON EMERGENCY RESPONSES IN THE SOUTHEAST ASIA AND WESTERN PACIFIC REGION

Because the Southeast Asia and Western Pacific region is geographically contiguous, meaning the region shares a geographical border, it is important that their health systems are in tune with one another.<sup>213</sup>

According to the World Health Organization, the health systems in the region, as in any region, are influenced by income and education, gender, lifestyle, human rights, food security, and governance.<sup>214</sup> These key factors are not promising in several of the countries in the region, which means the outlook for emergency responses and general health care is grim. Poor people in the area use lower-cost and less effective medical care, and as a result, are not as healthy as their wealthier counterparts. There is also a decentralization of health funding in these poorer countries.<sup>215</sup> Women have less access to medical care and receive less timely diagnoses, and since women represent about half of the population, this is problematic.<sup>216</sup> Furthermore, these poor areas often lack the resources and funds necessary to provide preventive care, which is now seen as an effective and important measure to improve health. Although many impoverished people in the region understand that their living conditions are unhealthy, they do not have the resources to move or buy necessary food and medical services. However, it should be noted that in some

of the poorer areas in the SEARO and WPRO, health is improving because the available resources and funding are strictly focused on bettering the social factors that affect health, including education and adult literacy, water and sanitation, health promotion, and food security.<sup>217</sup> It is well-known that national economies in the region are heterogenous.<sup>218</sup> It is less-known that income distribution is not equal within most countries, either.<sup>219</sup> That is to say that, even in middle-level countries, income distribution is not equal.<sup>220</sup>

There are about 3 million new tuberculosis (TB) cases and 600,000 TB deaths annually in the SEARO.<sup>221</sup> Poor populations in the region are less likely to access TB care and complete TB treatment and more likely to get TB and incur impoverishing payments.<sup>222</sup> People suffering from the disease stop eating well, sell assets, borrow money, remove children from school, and leave their families to cope with TB.<sup>223</sup> This has negative effects on the overall health of impoverished people in the region and depletes the medical community of resources that could be used to prepare for emergency responses. Education is also a factor that affects regional health. There is evidence for individual and societal health benefits as a result of education, especially for girls. Of the countries in the SEARO and WPRO, 59% have at least a 90% adult literacy rate, but several countries have more illiterate adults than literate.<sup>224</sup>

Poor communities do not have political power to protest

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<sup>212</sup> Indrani Gupta and Pradeep Guin, "Communicable diseases in the South-East Asia Region of the World Health Organization: towards a more effective response," *World Health Organization*, 2010, <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC2828785/>.

<sup>213</sup> "Social Determinants of Health." *World Health Organization*, accessed January 20, 2017, [http://www.wpro.who.int/health\\_research/documents/dhs\\_hr\\_health\\_in\\_asia\\_and\\_the\\_pacific\\_07\\_chapter\\_2\\_social\\_determinants\\_of\\_health.pdf?ua=1](http://www.wpro.who.int/health_research/documents/dhs_hr_health_in_asia_and_the_pacific_07_chapter_2_social_determinants_of_health.pdf?ua=1)

<sup>214</sup> "According to the World Health Organization,..." the citation is "Social Determinants of Health." *World Health Organization*, accessed January 20, 2017, [http://www.wpro.who.int/health\\_research/documents/dhs\\_hr\\_health\\_in\\_asia\\_and\\_the\\_pacific\\_07\\_chapter\\_2\\_social\\_determinants\\_of\\_health.pdf?ua=1](http://www.wpro.who.int/health_research/documents/dhs_hr_health_in_asia_and_the_pacific_07_chapter_2_social_determinants_of_health.pdf?ua=1).

<sup>215</sup> Ibid.

<sup>216</sup> Ibid.

<sup>217</sup> Ibid.

<sup>218</sup> Ibid.

<sup>219</sup> Ibid.

<sup>220</sup> Ibid.

<sup>221</sup> "Social Determinants of Health." *World Health Organization*, accessed January 20, 2017, [http://www.wpro.who.int/health\\_research/documents/dhs\\_hr\\_health\\_in\\_asia\\_and\\_the\\_pacific\\_07\\_chapter\\_2\\_social\\_determinants\\_of\\_health.pdf?ua=1](http://www.wpro.who.int/health_research/documents/dhs_hr_health_in_asia_and_the_pacific_07_chapter_2_social_determinants_of_health.pdf?ua=1).

<sup>222</sup> Ibid.

<sup>223</sup> Ibid.

<sup>224</sup> Ibid.

for better services.<sup>225</sup> There is not a lot of political commitment on the part of the governments in the region, especially for women's rights. The region needs better health workforce planning and management. Experts call for political cooperation with non-governmental organizations, private sectors, civilians to improve healthcare, since no organization can make the situation better without the cooperation of the others.<sup>226</sup> Governments need to develop disaster response plans and responses to disease outbreaks.<sup>227</sup>

There are several tools that are being used to gather and share information in the region.<sup>228</sup> For example, the The Indonesian Scenario Assessment for Emergency (InaSAFE) which is used in Vietnam and is currently being expanded to the Philippines is a cost-effective information gathering that is also used to share information.<sup>229</sup> It also gathers information like vulnerable populations and infrastructure; this tool has been used in the 2011-2012 emergency planning "Jakarta exercise". Another tool that is being used is The Pacific Catastrophe Risk Assessment and Financing Initiative (PCRAFI) which is a geospatial informational database for the Pacific region that includes risk assessments for 15 countries in the region about potential losses from natural disasters.<sup>230</sup> The information that is gathered is then shared with policy makers which they can use to make policies regarding "post-disaster needs assessments".<sup>231</sup>

## ACTORS AND STAKEHOLDERS

### GOVERNMENTAL ORGANIZATIONS

The government in Bangkok, Thailand built a sandbag wall that spanned six kilometers in November of 2011 to prevent high-tidal flooding (this was done as a means of prevention or pre-emergency preparedness).<sup>232</sup> Countries like India, Indonesia, Maldives, Sri Lanka, and Thailand have established emergency preparedness measures as a result of the devastating effects of the Indian tsunami in 2004 which killed over 200,000 people.<sup>233</sup> For example, Indonesia established a mass emergency alert system for safe and timely evacuation of populations during the 2012 earthquake; this quick response ensured appropriate government action and limited loss from the disaster.<sup>234</sup>

### NON-GOVERNMENTAL ORGANIZATIONS

#### THE RED CROSS

The Red Cross works to educate communities on disaster risks and through campaigns, informal and participatory learning as well as formal (school-based) learning.<sup>235</sup> The main goal of the Red Cross in the region is to build safer communities to minimize loss.<sup>236</sup> Needs of affected populations are met by technical support and financial aid.<sup>237</sup> The Red Cross has provided relief to Japan and Vietnam from

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<sup>225</sup> Social Determinants of Health." *World Health Organization*, accessed January 20, 2017, [http://www.wpro.who.int/health\\_research/documents/dhs\\_hr\\_health\\_in\\_asia\\_and\\_the\\_pacific\\_07\\_chapter\\_2\\_social\\_determinants\\_of\\_health.pdf?ua=1](http://www.wpro.who.int/health_research/documents/dhs_hr_health_in_asia_and_the_pacific_07_chapter_2_social_determinants_of_health.pdf?ua=1).

<sup>226</sup> Ibid.

<sup>227</sup> Ibid.

<sup>228</sup> Ibid.

<sup>229</sup> Ibid.

<sup>230</sup> Ibid.

<sup>231</sup> Ibid.

<sup>232</sup> Jacqueline Torti, "Floods in Southeast Asia: A health priority," *Journal of Global Health*, 2012, <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3529313/>.

<sup>233</sup> "Strengthening emergency preparedness, response capacities can save lives in mega disasters like tsunami," *World Health Organization*, 2014, <http://www.searo.who.int/mediacentre/releases/2014/pr1590/en/>.

<sup>234</sup> Ibid.

<sup>235</sup> "Asia," *American Red Cross*, 2017. <http://www.redcross.org/what-we-do/international-services/where-we-help/asia>.

<sup>236</sup> Ibid.

<sup>237</sup> Ibid.

earthquakes, tsunamis, and floods.<sup>238</sup> The Red Cross also provides training for regional disaster response teams in the case of a lack of Red Cross presence when a disaster strikes. It has provided training for teams in the following countries: Indonesia, Kiribati, Liberia, Malaysia, New Zealand, Papua New Guinea, Philippines, Samoa, Sierra Leone, Solomon Islands, Sri Lanka, Tonga, Tuvalu and Vanuatu.<sup>239</sup>

## UNITED NATIONS INTERNATIONAL CHILDREN'S EMERGENCY FUND

The United Nations International Children's Emergency Fund (UNICEF) office in the Southeast Asian and Pacific region is one of seven offices around the globe that help to assist children and vulnerable populations in need.<sup>240</sup> The UNICEF office works closely with governments of countries affected by disasters as well as vulnerable populations such as children and those in need.<sup>241</sup> UNICEF works to protect vulnerable populations' rights during humanitarian crises as well deliver assistance in areas like sanitation and hygiene (WASH), nutrition, education and child protection.<sup>242</sup> UNICEF also participated in policy making and technological innovations (such as cash transfers for vulnerable populations that are subjected to recurrent disasters in the Southeast Asia and Western Pacific region).<sup>243</sup>

More specifically, UNICEF has helped develop programs in the following areas: child protection and early child development, health and nutrition, HIV, water and sanitation, and social policy and emergency preparedness with the help of specialists stationed in the UNICEF office in Bangkok who oversee planning and evaluation and financial

management.<sup>244</sup> The UNICEF office also serves as an intermediate between countries in the region and intergovernmental entities such as other United Nations agencies, civil society organizations, bilateral and multilateral institutions (such as the Association of Southeast Asian Nations (ASEAN) and the Pacific Islands Forum (PIF), as well as donors who support the work UNICEF does.<sup>245</sup>

## THE EAST ASIA AND THE PACIFIC DISASTER RISK MANAGEMENT TEAM

The East Asia and Pacific Disaster Risk Management (EAPDRM) team responds to disaster through a pre and post strategy.<sup>246</sup> The Disaster Risk Management team supports projects in countries in the region such as Indonesia, the Philippines, Vietnam, and in the Pacific Island Countries through an assessment of both the structural and non-structural risk management measures used for floods.<sup>247</sup> The team also focuses on improving the drainage systems in order to effectively handle disaster both before and after a disaster.<sup>248</sup> In addition, the team engages citizens in mock procedures that they would follow in the case of a disaster and interacts with practitioners and professionals to help the public.<sup>249</sup> As for the post disaster response, the World Bank assists with community building at the communal level which has proven to be more cost-effective than other strategies.<sup>250</sup>

EAPDRM has a list of priorities that direct its interventions. They are risk identification, risk reduction, emergency preparedness, financial resilience, and sustainable recovery and

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<sup>238</sup> Ibid.

<sup>239</sup> Strengthening emergency preparedness, *American Red Cross*, 2014. <http://www.redcross.org/what-we-do/international-services/where-we-help/asia/strengthening-regional-disaster-response>.

<sup>240</sup> East Asia and the Pacific," *United Nations International Children's Emergency Fund*, 2016, <https://www.unicef.org/eapro/about.html>.

<sup>241</sup> Ibid.

<sup>242</sup> Ibid.

<sup>243</sup> Ibid.

<sup>244</sup> Ibid.

<sup>245</sup> Ibid.

<sup>246</sup> Disaster risk management

<sup>247</sup> Ibid.

<sup>248</sup> Ibid.

<sup>249</sup> Ibid.

<sup>250</sup> Ibid.

reconstruction.<sup>251</sup> EAPDRM works to reduce poverty as a strategy to mitigate disaster aftermaths by transforming vulnerable populations into strong, capable populations.<sup>252</sup> EAPDRM provides vulnerable populations with basic needs while providing them with safe development as well as community-based engagement interventions.<sup>253</sup>

## CONCLUSION

The Southeast Asia and Western Pacific region is an incredibly diverse region in aspects such as population, economics, weather patterns, and emergency response between countries. Health outcomes such as combating infectious diseases like malaria has been successful overall in the region, however, there is much to be done. One key mission is to devise a plan to standardize progress in every country in the region to achieve better health in the region as a whole.

## ADDITIONAL SOURCES

On the Geopolitical Economy of Violence in Southeast Asia by Eric Paul  
[https://sydney.edu.au/arts/peace\\_conflict/docs/working\\_papers/Erik%20Paul%20%20Geopolitical%20Economy%20South%20East%20Asia.pdf](https://sydney.edu.au/arts/peace_conflict/docs/working_papers/Erik%20Paul%20%20Geopolitical%20Economy%20South%20East%20Asia.pdf)

Health in Asia and the Pacific by the World Health Organization  
[http://www.wpro.who.int/health\\_research/documents/Health\\_in\\_Asia\\_and\\_the\\_Pacific/en/](http://www.wpro.who.int/health_research/documents/Health_in_Asia_and_the_Pacific/en/)

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<sup>251</sup> “Disaster Risk Management Overview,” *The World Bank*, 2014, <http://www.worldbank.org/en/topic/disasterriskmanagement/overview>.

<sup>252</sup> Ibid.

<sup>253</sup> Ibid.



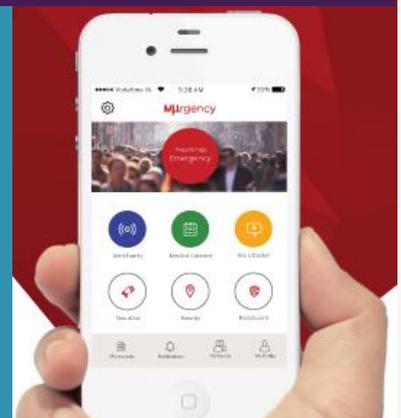
# SPECIALIZED

## COMMITTEE: ROLE IN TECHNOLOGY IN RESPONSES

### SPECIALIZED COMMITTEE ON THE ROLE OF TECHNOLOGY IN EMERGENCY RESPONSES

*Contributing Authors: Tyler Figenbaum, Sanjoli Agarwal*

As we live in an increasingly interconnected world where people are able to connect to each other via various types of technological devices, health technology can help facilitate information and improve services in the aftermath of global emergencies. Greater cooperation and data sharing between organizations that utilize technology in the aftermath of disasters can improve humanitarian efforts.



## Mason WHO 2017 Specialized Committee: The Role of Technology in Emergency Responses

### INTRODUCTION TO THE ROLE OF TECHNOLOGY IN EMERGENCY RESPONSES

Health technology, including informational resources provided by the government or professional relief organizations to make emergency response more efficient, is vital in collecting, analyzing, distributing, and acting on information that can aid emergency responders, as noted by Van de Walle and Turoff in "Emergency Response Systems: Emerging Trends and Technologies."<sup>254</sup> The accuracy and timely information that is a result of these technologies is considered to be "as crucial as rapid and coherent coordination among responding organizations," as Van de Walle and Turoff state<sup>255</sup>. According to the United Nations, the need for good communication has led to numerous technologies that focus on improving the lives of those affected by emergencies<sup>256</sup>. The most efficient systems are those that can decrease response time, meet the needs of the victims and responders, and benefit the affected populations<sup>257</sup>.

When it comes to emergency responses, there are usually four major areas of activity in which technology is needed. These four areas are information management, coordination, capacity building and knowledge sharing, and access to education in emergencies<sup>258</sup>. The relevant actors that either create or are affected by the technologies include decision makers, first responders, and scientific and technology

communities, or those who conduct research and design technology that can aid in preventing future emergencies. Usually research, academic, volunteer, and technical communities are involved in creating and assessing emergency response systems, such as OpenStreetMap, Sahana, and CrisisMappers<sup>259</sup>. These communities often try to approach problems in ways that challenge the status quo, such as using open interfaces that allow for collaboration and data to be shared. For instance, the global positioning service (GPS) data from one party could be combined with collected short message service (SMS) messages from another party and can then be translated by a third party to create a plotted map of messages<sup>260</sup>. As the United Nations has previously stated, "volunteer and technical communities also need to adapt to a reality where they are providing valuable services to an international system of crisis response and affected populations, and therefore must be reliable, consistent, and sustainable."<sup>261</sup> Once technology has been created and sufficiently tested, practitioner communities (members of the health community who actively engage in the field of emergency-related activities) and emergency responders (those who have the proper training to immediately assist those affected by emergency situations)<sup>262</sup> can carry out emergency responses using response systems. However, sometimes limitations exist in current technology and need to be expanded upon to be as efficient as possible. Public Safety Answering Points (PSAPs), which are facilities in which 911 calls are received at or may be transferred to<sup>263</sup>, may contain technical constraints in using mobile devices, understanding

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<sup>254</sup> Bartel Van de Walle and Murray Turoff, "Emergency Response Information Systems: Emerging Trends and Technologies," *Communications of the ACM*, March 1, 2007, 29.

<sup>255</sup> *Ibid.*, 30

<sup>256</sup> United Nations Foundation UN Office for the Coordination of Humanitarian Affairs, *Disaster Relief 2.0: The Future of Information Sharing in Humanitarian Emergencies*, by John Crowley and Jennifer Chan (n.p., 2011), 10.

<sup>257</sup> Van de Walle and Turoff, "Emergency Response," 30.

<sup>258</sup> Barbara Barry and Landon Newby, "Use of Technology in Emergency and Post-Crisis Situations," *Global Education Cluster Working Group and IIEP-UNESCO*, January 2017, 3.

<sup>259</sup> United Nations Foundation UN Office for the Coordination of Humanitarian Affairs, *Disaster Relief*, 9.

<sup>260</sup> *Ibid.*, 13

<sup>261</sup> *Ibid.*

<sup>262</sup> The National Institute for Occupational Safety and Health (NIOSH), "Emergency Preparedness and Response Resources," Centers for Disease Control and Prevention, <https://www.cdc.gov/niosh/emres/>

<sup>263</sup> Public Safety and Homeland Security, "911 Master PSAP Registry," Federal Communications Commission, <https://www.fcc.gov/general/9-1-1-master-psap-registry>

callers in hysteria, language barriers, background noise, and an inability to precisely describe the location of affected populations- all of which contribute to difficulty in dispatching information<sup>264</sup>.

The role of decision makers in this process, individuals whose experience in emergency operations require direct interaction with information communications technology (ICT), is to create a layout of possible opportunities and existing roadblocks to make improvements. Decision makers may also include individuals that engage with the members of the technological community and may eventually share the revised framework to private-industry or nongovernmental stakeholders<sup>265</sup>.

The necessity of user requirements is often the overall theme of newer technologies that are currently being developed. A lack of formal resources can lead to slow responses, ineffective relief, and dependence of volunteer-created websites for instructions and information<sup>266</sup>. Because of delays caused by this lack of resources, researchers and practitioners in emergency management have found the need for more efficient emergency response systems. This has led to the use of technology in evaluating and creating better systems that focus more on what the user of the technology may need<sup>267</sup>.

## CURRENT AVAILABLE TECHNOLOGIES USED IN EMERGENCY RESPONSES

Much of the current technology that is being developed takes human interaction, communication and collaboration, emergency reporting, and mobile phone use into consideration. The first "group communication-oriented crisis

management system," called EMISARI, was created in the 1970s<sup>268</sup> to function based on the activities of the researchers that would ultimately use the data that EMISARI collects<sup>269</sup> about federal crises in the United States<sup>270</sup>. Since EMISARI, several technologies have been developed in order to improve all phases of emergency preparedness: planning, training, response, recovery, and assessment<sup>271</sup>. These types of technology are meant to include human-computer interactions and focus more on human factors, with the goal of effective and efficient interaction.

Keeping in mind that human roles in responses should not be ignored, according to Carver and Turoff in "Emergency Response Information Systems: Emerging Trends and Technologies" by Van de Walle and Turoff, "a user-centered systemic approach with a major emphasis on user requirements driving technological developments as a result of lessons learned" should be created<sup>272</sup>. This means that a system of this sort would be made to function based on the needs and requirements of the user, who can assess what additional technological developments are needed for the system based on prior outcomes of emergency responses. By working with other people and other systems to share information in emergency situations, they can be better managed, negative effects may decrease, and victims can be appropriately supported<sup>273</sup>. French and Turoff expand on Carver's and Turoff's idea by discussing Decision Support Systems<sup>274</sup>.

In fact, two possible areas of research for increasing the efficiency of data acquisition, as proposed by Fiedrich and Burghardt, are agent-based Decision Support Systems (DSS) (in

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<sup>264</sup> Michael A. Erskine and Will Pepper, "Enhancing Emergency Response Management Using Emergency Description Information Technology (EDIT): A Design Science Approach," *International Journal of Electronic Government Research* 11, no. 2 (2015): 52.

<sup>265</sup> United Nations Foundation UN Office for the Coordination of Humanitarian Affairs, *Disaster Relief*, 14.

<sup>266</sup> Van de Walle and Turoff, "Emergency Response," 29.

<sup>267</sup> *Ibid.*, 30

<sup>268</sup> *Ibid.*

<sup>269</sup> Rod L. Renner et al., "EMISARI: A Management Information System Designed to Aid and Involve People," in *Information Systems*, ed. Julius T. Tou (n.p.: Springer US, 1974), 263.

<sup>270</sup> Van de Walle and Turoff, "Emergency Response," 30.

<sup>271</sup> *Ibid.*

<sup>272</sup> Van de Walle and Turoff, "Emergency Response," 30.

<sup>273</sup> *Ibid.*

<sup>274</sup> *Ibid.*, 31

order to support disaster managers on various levels”) and agent-based simulation systems (“which allow the creation of realistic post-disaster environments”)275. French and Turoff discuss the issue of the scarce deployment of collaborative DSS systems, and suggest that DSS technology should integrate communication and visualization aids, such as those derived from simulations, to understand the events occurring. If this type of combined technology were to be developed, Feidrich and Burghardt believe that data could be received in a more timely manner, information could be more easily processed, appropriate decisions of how to act based on the information could be made, and action or response could be quickly coordinated276.

In order to solve this issue of a lack of collaborative DSS systems, Information and Communication Technologies (ICTs) involve both internet and mobile communications277. One ICT, called Emergency Description Information Technology (EDIT)278, is a mobile expert system that optimizes emergency reporting and contains safety-reporting technology. EDIT is designed to collect the necessary information from populations in emergency situations279 with the ultimate goal being to improve communications and the reporting of emergency information280. EDIT utilizes three main steps when functioning. The first being that the affected person’s mobile phone will be used to transmit the location of the victim through the Global Positioning System. A series of “yes or no” questions about the situation that become increasingly more specific will then be asked in order to guide first responders. All of the collected information will be sent to the nearest relay station, and finally,

the appropriate regional emergency number will be dialed281. The benefit of EDIT is that this technology does not involve voice communications and can ease language barriers issues, as well as immediately provide automatic responses without the need of a dispatcher282. However, EDIT has not yet been tested or simulated on actual emergencies283.

Similarly, smartphone internet access and applications that can be used for collecting data are also being looked into as a method of increasing efficient communications between all parties involved in an emergency284. For example, social media and mobile technology were first used in the aftermath of the 7.0 magnitude earthquake that struck Haiti in 2010285. Short Message Service (SMS), or text, messages for data collection and communication were also found to be invaluable in informing and educating beneficiary communities about emergency preparedness, as well as in receiving information from emergency victims about their situations286. One company, Souktel, created a technology called “AidLink” in order to connect aid agencies with people who need help. AidLink is an SMS service which allows aid agencies to send and receive alerts and surveys to targeted communities and each other via text messages. AidLink is used in Palestine, Iraq, and South Sudan287.

Another type of technology relies on satellite mapping. Satellite mapping is used worldwide by geospatial information experts to plot changed terrain, and the work is usually done through OpenStreetMap, a mapping software288. Mapping and GIS software for print-based maps can include ArcGIS and

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275 Ibid.

276 Ibid.

277 United Nations Foundation UN Office for the Coordination of Humanitarian Affairs, *Disaster Relief*, 10.

278 Erskine and Pepper, “Enhancing Emergency,” 52.

279 Ibid., 58.

280 Ibid., 56.

281 Ibid., 59.

282 Ibid., 60.

283 Ibid., 61.

284 Barry and Newby, “Use of Technology,” 3.

285 United Nations Foundation UN Office for the Coordination of Humanitarian Affairs, *Disaster Relief*, 8.

286 Barry and Newby, “Use of Technology,” 4.

287 Ibid., 5.

288 United Nations Foundation UN Office for the Coordination of Humanitarian Affairs, *Disaster Relief*, 8.

QGIS, depending on the needs of the user. Developers use this GIS mapping software to create traditional, print-based maps to be used by education stakeholders in the field. Often, this technology requires a computer, the software, and baseline maps. When interactive mapping is involved, Google Maps, Google Earth, and OpenStreetMap can also be used<sup>289</sup>.

## AREAS FOR IMPROVING THE USE OF TECHNOLOGY IN EMERGENCY RESPONSES

Although the current technology for emergency responses has been successful in the past, it is continuously evolving to the needs of those affected. In order to improve the use of technology in emergency responses, there needs to be a sense of interconnectivity between all the stakeholders involved. This will encourage a free flow of data during disaster response between different organizations. Since emergency responses should not be a competitive environment, sharing information should benefit all of those negatively impacted by the emergency situation.<sup>290</sup> It is unacceptable to delay in collecting situation reports and phone calls from those involved in the emergency. Fortunately, the technology used to aid emergency response is trending towards a future that will have agencies exchanging critical data in an open and real-time manner, making the information available to those whose lives rely on it.<sup>291</sup>

Based on research conducted by the United Nations (UN) Foundation on the information management challenges in Haiti, there are two main problems to be solved.<sup>292</sup> First, the focus of the report is on data standards and flows. The UN Foundation perceives three issues related to data standards that have emerged from research on the Common Operational

Dataset (COD). The CODs “are critical datasets that are used to support the work of humanitarian actors across multiple sectors. They are considered a de facto standard for the humanitarian community and should represent the best-available datasets for each theme.”<sup>293</sup> The three issues that emerged are:

1. How to ensure the integration of information systems that the different volunteer and technical communities are using and the various data standards that are being used;
2. How to establish which organization is in charge of each data set, and a set of rules and policies each organization will follow to allow for the exchange of data flows within the group; and
3. How to describe the specific data objects that are referenced within the Common Operational Dataset.<sup>294</sup>

Although these issues all have their own set of problems, the Common Operational Dataset is still important. In order to be successful, the COD needs to have strict guidance as well as uniform terminology. This will ensure that there is a hierarchy that determines which organizations are in charge of each data set and that no matter where in the country the disaster occurs there will be a uniform way to describe data objects. This hierarchy will also solve the issue of different data standards being utilized by various volunteer and technical communities by developing one data standard. This will take time to implement all over the world, but the effort will ultimately bring success when there is a mutually agreed upon method of information that is being shared.

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<sup>289</sup> Barry and Newby, “Use of Technology,” 10.

<sup>290</sup> Eric Holdman, “Technology Plays in Increasing Role in Emergency Management,” *Emergency Management*, published June 24, 2014.

<sup>291</sup> Ibid.

<sup>292</sup> “Disaster Relief 2.0 Report,” *United Nations Foundation*, accessed January 18, 2017, <http://www.unfoundation.org/assets/pdf/disaster-relief-20-report.pdf>

<sup>293</sup> “Data: Humanitarian Data Exchange,” *Humanitarian Response*, accessed January 01, 2017, <https://www.humanitarianresponse.info/applications/data/terms-use>

<sup>294</sup> “Disaster Relief 2.0 Report,” *United Nations Foundation*, accessed January 18, 2017, <http://www.unfoundation.org/assets/pdf/disaster-relief-20-report.pdf>

The second problem that the UN Foundation pinpointed is workflows and support decisions. The UN Foundation discusses how there have been strong worries “about the fragmentation of crisis information management systems.”<sup>295</sup> The cause of this issue, the UN found, is the use of one of the dominant analytical methods, which is to divide complex problems into even smaller parts, which in theory will provide an answer to each small part and will be pieced together in the end like a puzzle.<sup>296</sup> However, there are no instructions on how to put these puzzle pieces together, causing fragmentation. The UN Foundation poses a possible solution to the problem of fragmentation, which entails improving information sharing abilities between all agencies involved.<sup>297</sup> Another solution to this problem is located in a technology program called Emergency Description Information Technology (EDIT).

The purpose of EDIT is to improve communications between involved agencies and improve the reporting of emergency information to those whose lives depend on it.<sup>298</sup> EDIT is a product that can be implemented worldwide, as it faces no language barriers because it uses a computer language familiar to all types of computers and this ability will allow users across the globe to be able to simply communicate with emergency response teams.<sup>299</sup> The problem with EDIT though, is that it has not been tested yet.<sup>300</sup> If EDIT is successful during simulation testing, then it should be implemented in high risk areas, which are areas susceptible to hurricanes, reoccurring earthquakes, or frequent wildfires for it to be tested in an actual emergency. Improving EDIT is contingent on disseminating the product all over the world.

Overall, in order to improve the use of technology in emergency responses, there needs to be more funding and testing in the future. This will allow research teams to

experiment with new technologies as well as improve current technologies such as EDIT.

## ACTORS AND STAKEHOLDERS

The main organizations involved with producing technology used in emergency responses are the United Nations International Children’s Emergency Fund (UNICEF), World Health Organization (WHO), Department of Homeland Security (DHS), Federal Emergency Management Agency (FEMA), and the American Red Cross. This list includes some of the highest rated non-profit organizations and government agencies that work together to bring necessary resources to those in need.

By working together, these organizations have been able to produce mobile applications, emergency response systems, and organizing volunteer groups. If these groups along with other organizations continue to test and research emergency response effectiveness, then eventually, in an ideal world response to natural disasters will always be swift and effective.

## CONCLUSION

As countries and communities continue to deal with natural disasters and emergency situations, there are several organizations such as non-profit and government agencies that are trying to lessen the burden for those impacted. This is a high-priority issue, because if disaster strikes a community, then resources must be allocated to that location. However, if the impacted community has no means of communication with emergency response teams, then the necessary resources can not be sent. This is why improving the use of technology in emergency responses is imperative in order for these communities to survive in an emergency situation. The current improvements in technology have allowed for much more efficient emergency response management. However, the

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<sup>295</sup> “Disaster Relief 2.0 Report,” *United Nations Foundation*, accessed January 18, 2017, <http://www.unfoundation.org/assets/pdf/disaster-relief-20-report.pdf>

<sup>296</sup> *Ibid.*

<sup>297</sup> *Ibid.*

<sup>298</sup> Erskine and Pepper, “Enhancing Emergency,” 58.

<sup>299</sup> *Ibid.*, 60.

<sup>300</sup> *Ibid.*, 61.

world still has much to improve upon, including creating a way for off-the-grid communities to communicate with teams that can help.

## ADDITIONAL RESOURCES

Data: Humanitarian Data Exchange

<https://www.humanitarianresponse.info/applications/data/terms-use>.

Global Trends in Satellite-Based Emergency Mapping

by Stefan Voigt, Fabio Giulio-Tonolo, Josh Lyons, Jan Kučera, et. al.

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