humanitycrew

**Report on Mental Health First Response
and Disaster Preparedness:
Literature Review and Recommendations**
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TABLE OF CONTENTS

1.0 Executive Summary

This report was prepared by a Cornell consulting team as part of the Cornell Institute of Public Affairs (CIPA) Public Service Exchange program. We were asked to provide Humanity Crew with an overview of the existing first response mental health intervention practices in crisis zones as well as a review of best practices on preparedness for small communities for four specific types of disasters. In this report, we define a crisis zone as any area that has been affected by a natural or human-made disaster, and the four types of disasters include: flood, earthquake, storm and fire. Our team was also advised to give recommendations about best practices for first response mental health interventions and preparedness programs Humanity Crew should consider. In order to achieve this goal, through consultation with our client, we divided the report into two parts focused on mental health practices in disaster zones and disaster preparedness.

The first part of the report focuses primarily on first aid mental health practices. It begins with an explanation of Psychological First Aid (PFA), followed by an overview of the key findings from the PFA handbooks and a comparison analysis of the four handbooks. Rather than providing a summary of everything included in the handbooks, we focused on information that would be helpful for Humanity Crew, such as methods of delivering PFA to vulnerable populations and key practices endorsed by all or most of the handbooks. Finally, the first part concludes with recommendations on which PFA practices Humanity Crew should consider and would find helpful.

The second part of the report focuses on disaster preparedness. It begins with an overview of preparedness by introducing the Disaster Relief Management framework and global trends on preparedness. This is followed by a section that explains the various mental health

issues that individuals may experience during each of the four disasters as well as strategies to prepare smaller communities for the disasters. The findings are from our analysis of case studies that have been conducted by internationally recognized organizations. Finally, the second part concludes with recommendations on what Humanity Crew should consider and would find helpful when preparing small communities in the context of the four disasters.

1.1 Introduction

Disasters, both man-made and natural, affect not only the physical well-being but also the mental well-being of hundreds of thousands of people each year. Following a disaster, the victims most often experience different degrees of mental disorders, especially depression, anxiety, and Post Traumatic Stress Disorder (PTSD) (Makwana 3). People with PTSD have intense and disturbing thoughts and feelings that are related to the disaster experience, which may last long after the traumatic event has ended (American Psychiatric Association 1). Despite numerous studies showing how detrimental and lasting the aftermath of a disaster can be on an individual's mental well-being, mental health is still a relatively neglected subject compared to physical, social or economic well-being. In many countries, mental health is still a neglected subject and even stigmatized. Because these areas are often developing countries which means it may be harder for individuals to recover financially as well, it is even more imperative that these people receive first aid, as there are findings that show that financial loss can be one of the factors that degrades mental health (Makwana 2).

The importance and need for psychological first response is the essence of Humanity Crew's work. Humanity Crew is an international aid organization based in Israel that specializes in providing first response mental health interventions to refugees and people in crises. It was

established in 2015 by a group of psychiatrists, psychologists, and mental health professionals at the height of the Syrian refugee crisis. Over the past few years, the organization has worked to deploy mental health and psychosocial support to people in crisis zones to improve their well-being and prevent further psychological escalation. Although their mission began with helping refugees in crisis, Humanity Crew aims to expand its scope to serve individuals and communities affected by crises, including man-made and natural disasters. Based on Humanity Crew's evolving mission, this report seeks to provide recommendations for the organization regarding psychological first aid interventions following disasters in general, and preparedness practices following four specific natural disasters (fire, storm, flood, and earthquake). Additionally, in light of COVID-19, the report includes a section on interventions during pandemics.

PART ONE

2.0 PFA and Handbook Analysis

2.1 Defining PFA

Psychological First Aid (PFA), according to the National Child Traumatic Stress Network (NCTSN) and the National Center for PTSD, is an "evidence-informed modular approach to help individuals in the immediate aftermath of disaster and terrorism" (The National Child Traumatic Stress Network, n.d.). Though this type of approach is also called various other names such as mental health first aid or first response mental health intervention, the term "psychological first aid" has been used the most widely by national and international organizations (Shultz, J. M., and Forbes, D., 2013). Since the 2001 National Institute on Mental Health conference on mass violence, psychological first aid has become the mainstay early

intervention approach for disaster survivors in the United States and is also increasingly used in many parts of the world (National Institute of Mental Health, 2002). It is important to note though, that despite its popularity and endorsement, there still remains a lack of evidence for the effectiveness of PFA methods. However, because it is currently the flagship mental health intervention method and is most endorsed by experts, and mentioned in guidelines for disaster survivors, the team found that it would be helpful to focus on PFA methods for Humanity Crew (Shultz and Forbes, 2013).

This report focuses on analyzing PFA guideline handbooks that have been created by three organizations: the World Health Organization (WHO), the National Child Traumatic Stress Network (NCTSN), and the Australian Red Cross (ARC). The criteria that we used to select these handbooks were the national or international recognition of the organizations themselves, the alignment between the purpose of the handbooks and Humanity Crew's mission, the fact that two out of three of the handbooks have been endorsed by more than 20 different organizations, and the in depth research that has been conducted to publish the handbook. The team analyzes and highlights findings that are relevant to Humanity Crew which involve important information to remember when delivering PFA, how each organization suggests delivering PFA, and PFA information particular to vulnerable populations.

Although there is a lack of psychological first aid research available, the team found three PFA program handbooks created by the World Health Organization, Australian Red Cross, and the National Child Traumatic Stress Network, that provide valuable information. These handbooks were selected because the organizations that created them are internationally or nationally recognized, these handbooks are all provided by international organizations that fit

with Humanity Crew's mission. Second, each handbook includes a specific mental health approach for children, elderly, the disabled, and any other vulnerable groups.

2.2 World Health Organization (WHO)

Psychological First Aid: Guide for Field Workers (WHO, 2011) has been used as a PFA guidance in low and middle income countries. Although the handbook uses the terminology, "PFA practitioners," the authors of the handbook make it clear that the PFA guidelines are essentially for any person who is in a position to help those who have been impacted by a disaster and are distressed. Hence, "practitioners" include but are not limited to staff or volunteers who have been called to help in a major disaster, or any community member. The entire handbook contains five chapters, but due to brevity and the purpose of this report, the team focused on analyzing chapter three which discusses how to deliver PFA in emergencies.

First, the handbook emphasizes good communication with people in distress. It provides a list of *Do's and Don'ts* for a PFA practitioner to refer to and understand as they assist disaster victims. For example, the handbook suggests that the PFA practitioner should try to find a quiet place with minimal outside distractions to talk with the victim, but should not pressure the victim to tell them their story. This section also highlights the importance of the practitioner's body language as well as the victim's culture, religion, age, gender, etc. when communicating.

Second, the handbook suggests that the practitioner should make an effort to acquire accurate information about the crisis site before entering it. This includes learning about the crisis event itself, safety and security concerns, and the available services and supports. The handbook provides a list of important preparation questions for each of these three categories so that the practitioner can deliver PFA more effectively and care for one's own safety as well.

Third, the handbook introduces three basic action principles of PFA: *Look, Listen, and Link.* These action principles seem to be a universally held standard for PFA practices that also appear in the other handbooks that we will discuss. "Look" is defined as checking for safety, checking for people with obvious urgent basic needs, and checking for people with serious distress reactions. The handbook also highlights groups of people that are likely to need special attention, which our report refers to as the "vulnerable population." This population includes children and adolescents, people with health or mental disabilities including elderly pregnant women, and people at risk of discrimination or violence such as women or people of certain ethnic groups. "Listen" is defined as approaching people who may need support by asking about their needs and concerns, listening to them, and helping them feel calm. The handbook explains how one can carry these actions out with specific instructions and techniques that practitioners can refer to. "Link" is defined as providing people with basic needs and access to services, helping them cope with problems, giving information, and connecting them with loved ones and social support. Although each situation is unique, the handbook provides suggestions and directions that would help practitioners be better linked to their needs. This part especially emphasizes practical support, because the goal of delivering PFA is that through the one-time PFA intervention, survivors would be given the necessary help to develop their own coping skills to recover in the long term.

Fourth, the handbook briefly discusses how to end help, which would differ based on the context of the crisis, the PFA practitioner's role and situation, and the needs of the people receiving help. Lastly, the chapter concludes with a more elaborate description and explanation for each vulnerable population group and how they can be assisted. The handbook emphasizes

the need to help survivors develop their own abilities to cope, but especially with vulnerable

populations since they are at a greater risk of experiencing psychological distress.

2.3 National Child Traumatic Stress Network (NCTSN)

The NCTSN's mission is to raise the standard of care and increase access to services for

children and families who experience or witness traumatic events. The NCTSN is administered

by the Substance Abuse and Mental Health Services Administration (SAMHSA) and coordinated

by the UCLA-Duke University National Center for Child Traumatic Stress (NCCTS). Although

the audience who is receiving help is more specific in *Psychological First Aid: Field Operations*

Guide (NCTSN, 2006), it nonetheless addresses key PFA guidelines that can be applicable for

Humanity Crew.

This handbook is also developed to give guidelines for PFA providers, which includes

but is not limited to mental health and other disaster response workers who can provide early

assistance. There are four major parts in the handbook and the eight core PFA actions are well

explained in the third part. For the first part, the NCSTN handbook provides basic information

on what to do and what to avoid, and emphasizes guidance on how to work with vulnerable

groups including children, adolescents, older adults and survivors with disabilities. It is

mentioned in the second part that PFA providers should consider their comfort level with this job

and be prepared to engage in appropriate self-care when deciding whether to participate in

disaster response.

There are eight core actions developed in the NCSTN handbook, which are 1) Contact

and Engagement, 2) Safety and Comfort, 3) Stabilization, 4) Information Gathering: Current

Needs and Concerns, 5) Practical Assistance, 6) Connection with Social Supports, 7) Information

on Coping, and 8) Linkage with Collaborative Services (NCTSN, 2006). There are goals and actions for each action for survivors to learn how to respond to disasters step-by-step. Besides, they can refer to these contents based on their needs and concerns.

Reviewing the whole handbook, there are four findings that stand out in this part. First, the NCSTN handbook focuses more on the first response services for children and adolescents. They recognize children and adolescents' vulnerabilities and suggest additional help for them. For example, though children can participate in problem-solving, it suggests offering practical assistance from adults to follow through with children's plans. Also, PFA providers should suggest children and adolescents ask for help from parents or relatives they are close to because they may feel uncomfortable talking with others. Most sections in this part mention special consideration for children and adolescents. Second, it offers specific steps and suggestion samples on each section which are practical for the audience to adapt to real cases. For instance, the handbook provides positive supportive response examples in the "Connection with Social Supports" section. Third, it addressed the importance of dividing questions based on different circumstances. In most PFA settings, PFA providers' ability to gather information will be limited by time, survivors' needs and priorities. They can provide immediate referral, additional services, a follow-up meeting or using components of PFA that may be helpful. The *Survivor Current Needs* and *Psychological First Aid Provider Worksheet* in the handbook could help PFA providers to document basic information and services provided. Finally, the handbook addresses the concern of alcohol and substance using. Also, it especially provides tips for parents to help their children after disasters with different ages, including a) Infants and Toddlers, b) Preschool-Age Children, c) School-Age Children, d) Adolescents. It is obvious that NCSTN expresses their emphasis on family support for children in disaster response.

2.3.1 NCSTN's PFA Mobile App

In our research, we found that NCSTN developed a mobile application named "PFAMobile" for mental health providers and other response workers who provide early assistance to affected children, families, and adults as part of an organized response effort. This approach broadened the channels of conveying PFA. Rather than a replacement for the PFA training handbook, it is used to supplement other resources that trained individuals utilize before, during, and after a disaster response. Organizations can benefit from the mobile app in three dimensions. First, the app would help convey PFA training because there are no restrictions on time or space. Second, it is convenient for the organization to update anything new on the application. Third, it expands the scope of potential audiences. Anyone who may be in need of psychological first aid gets access to this resource at any time.

For example, NCSTN mobile app "PFAMobile" features. Six main parts on the homepage, when people click on the "Learn about the PFA", people can see the "PFA in practice" part. There people will then find audio and transcripts from PFA mentors describing their experiences when adopting PFA. So the PFA providers get intuitive advice on how to apply PFA in real cases.

2.4 The International Federation of Red Cross and Red Crescent Societies (IFRC)

A guide to psychological First Aid for Red Cross and Red Crescent Societies (IFRC, 2018) provides an introduction to PFA, which includes topics such as "what is PFA?" "who can provide PFA?" and "who needs PFA?" The basic action principles *Look, Listen, and Link* are also adopted in this handbook. The organization suggests spending 12 to 14 hours training on

these basic PFA practices (4 to 5 hours for introduction to PFA; 8 to 9 hours for Basic PFA).

After that, the handbook focuses on PFA for children, who have been identified as one of the

vulnerable populations. Moreover, the handbook looks at PFA in groups, which aims to support

staff and volunteers. In the end, a section about monitoring and evaluation for PFA is included.

In the PFA for Children, the handbook highlights that children develop at different rates,

and each age group would have different reactions to crisis or distress. It is also important to

keep in mind that some children may have characteristics of a younger or older age group.

Therefore, the handbook provides detailed information on the children's understanding of and

reactions to crises sorted by four different age groups (birth-2 years, aged 2-6 years, aged 6-12

years, aged 12 -18 years). To fulfill the needs of children in different age groups, besides

following the three basic action principles (*Look, Listen, and Link*) with adjusted and narrowed

guidelines, the handbooks also introduce several well-developed programs aiming to fulfill the

various needs of children. Examples are Child Friendly Spaces (CFS) which protect children by

providing a safe space with supervised activities, Sports and Physical Activity Programs

encouraging children to develop their physical skills, and Life Skills Programs aiming to help

children develop critical mindsets to solve problems. When staying in crisis zones and helping

affected people, staff and volunteers may experience distress and grief. Therefore, the handbook

suggests that support meetings during or after crisis are helpful, or even essential, to staff and

volunteers. Participants not only benefit from gaining peer and social support but also through

being inspired by new strategies to take care of others and themselves. The handbook also

introduces seven components of a PFA support meeting: 1) Welcome and introductions; 2)

Checking how participants are doing; 3) Reviews of actions; 4) Providing information and

psycho-education; 5) Promoting self-care, peer support and positive coping; 6) Linking and

referrals; and 7) Ending the meeting. Furthermore, the facilitator of a meeting should be prepared for different kinds of challenging situations. The handbook has detailed information on handling difficult reactions and disclosures, managing very dominant or quiet participants, or resolving conflicts in the group.

Another distinct value of the handbook is its information on Monitoring and Evaluation (M&E) of PFA which has been absent in the other three selected handbooks. M&E is a continuous systematic program management strategy. It constantly checks how well a project or a program has been implemented and provides useful information for improvement or adjustment for future projects. The present handbook provides examples of the PFA M&E tools developed by the Psychological Support Centre. A capacity assessment questionnaire is used for identifying existing capacities and gaps in providing psychosocial support. The assessment contains questions such as "Are all volunteers trained in psychological first aid?" Participants can choose "completely", "partially", "not at all" or "don't know." A training evaluation for basic PFA aims to improve the training process overall. It looks at the design, content, facilitator and the participants' experiences of programs. The handbook also highlights a case study in the Hong Kong Red Cross, where the branch has developed a detailed training program for several levels of PFA practitioners (PFAiders, PFA leaders, professional volunteers, and in-house clinical psychologists). For instance, a PFAider has an 18-hour PFA course while the PFA leaders need to attend leader courses.

2.5 Australian Red Cross (ARC)

"Psychological First Aid: Supporting People Affected by Disaster in Australia" (Australian Red Cross, 2020) has a purpose of outlining best practice approaches to

psychological first aid (PFA) following a disaster or a traumatic event, so that PFA can be operationalized in Australia. Based on research, field experience, and expert agreements, ARC identifies five key principles that serve as the underpinnings of PFA and should be remembered when providing PFA. The five include: ensuring safety, promoting calm, promoting connectedness, promoting self-efficacy and group efficacy, and instilling hope. These principles are important in delivering more effective psychological first aid, because ensuring safety helps one's negative reactions gradually decrease over time, promoting calm helps prevent one from developing longer term mental health disorders, promoting connectedness increases the opportunities for one to share emotions which has been found helpful across cultures following a traumatic experience, promoting efficacy gives or restores a sense of competency for one to overcome the current difficulties, and lastly, instilling hope allows one to remain more optimistic. Specific examples of how a helper can apply each principle are listed in the appendix.

According to ARC, as a helper remembers the principles, they should use the *Look, Listen, and Link* action principle to guide their actions on the field. Look involves safely entering the emergency situation and identifying as well as prioritizing who needs assistance, Listen involves understanding the needs of the affected people, and Link involves giving them the information and support they need. Although the shape and order of these actions may vary circumstantially and depending on the needs of the people being assisted, they cover the three basic steps that need to be taken in the process of delivering PFA. Specific examples of how a helper can implement each action are listed in the appendix.

2.6 Volunteer Information

When training volunteers to deliver PFA, there are multiple things that should be considered. The essential characteristics that volunteers should have or should remember when interacting with crisis victims are: be approachable, trustworthy, able to stay calm and focused in emergency situations, and good at listening. These characteristics are critical especially because victims are most likely already dealing with psychological impacts from the disaster, and the goal is to provide the best help possible. Because delivering PFA can be emotionally draining, it is also important for the volunteers to know their own limits and care for themselves (A Guide to Psychological First Aid for Red Cross and Red Crescent Societies, 2018).

Volunteer leaders are expected to have more responsibilities including having prior experience with delivering PFA as well as ensuring that volunteers are clear with their roles and expectations. Leaders should also gather as much information as possible about a situation they need to enter and effectively communicate this to the volunteers so they feel less incompetent at the crisis site. Moreover, because of the nature of the disasters volunteers will be entering and how overwhelming psychologically the act of delivering PFA can be for them, it is important for leaders to foster a safe and open atmosphere from when training begins to the end of their volunteering term (IFRC, 2018).

3.0 Comparison Analysis

A comparative analysis (Figure 1) of the four selected handbooks tries to identify the similarities and distinctions among those handbooks. The findings suggest that all handbooks except the NCTSN have adopted the three action principles: *Look, Listen, and Link*. Moreover, all the handbooks contain a section for children's PFA, which indicates that children may be the most vulnerable group when facing a disaster or crisis and require special care. Furthermore, the present handbooks' primary language is English and only the WHO develops handbooks in other languages. Distinctions are found in every handbook. For instance, the NCTSN developed a mobile application called "PFAMobile" for members of the public interested in providing PFA services or practitioners who need immediate guidelines. Overall, the similarities reveal the fundamental elements of PFA handbooks, while the distinctions identify opportunities and provide inspiration for Humanity Crew in future program development.

Handbook Comparison （Figure 1）

Organizations	Similarities	Distinctions
Australian Red Cross (ARC) *2020* *National-wide influence*	a. All except for the NCTSN have adopted the three action principles: *Look, Listen, and Link*	a. Focus more on PFA operation in Australia b. Includes five key principles to facilitate their PFA services. The five key principles include ensuring safety, promoting clam, promoting connectedness, promoting self-efficacy, and group efficacy.
International Federation of Red Cross and Red Crescent Societies (IFRC) *2018* *International influence*	b. All emphasize the importance of considering and adapting one's actions according to the region's culture c. All have entailed PFA practices on children and suggested that practices may be varied by different age groups	a. Supports the child PFA with other IFRC children programs b. Introduces and provides detailed guidelines for Group PFA c. Provides guidelines and assessment examples to monitor and evaluate PFA services
World Health Organization (WHO) *2011* *Endorsed by 23 international agencies*		a. Identifies vulnerable groups other than children, including people with health conditions and people at risk of discrimination or violence. Each group has specific PFA guidance b. Provides pocket guidelines for volunteers to carry around
National Child Traumatic Stress Network (NCTSN) *2006* *National-wide influence*		a. Specified services for children b. Addresses the concern of alcohol and substance use c. Develops a mobile application named "PFAMobile" for PFA practitioners, including PFA guidelines and practice scenarios

4.0 Recommendations

Based on our review and analysis of the PFA methods that have been endorsed and practiced by established and reputable has developed five recommendations for Humanity Crew to consider when creating its first aid guidelines.

1. Include "*Look, Listen, Link"* as a core principle

Most of the handbooks we've analyzed included these three core principles which we believe also summarize the essence of PFA methods. We recommend that Humanity Crew use these principles as the underpinning basis when developing its own guidelines.

2. Include a section for vulnerable populations

We recommend that Humanity Crew include a section devoted to vulnerable groups, which may include children, women, people with disabilities, and the elderly. However, because most of the handbooks emphasize children, and due to the plethora of information already available, we suggest that Humanity Crew may want to focus on a different group such as those with preexisting mental health conditions, which aligns with the resources and mission of Humanity Crew.

3. Emphasize importance of adapting to cultural context and setting aside biases

We recommend that Humanity Crew emphasize the importance of being aware and adapting as well as setting aside biases when PFA deliverers approach survivors at a crisis site.

4. Build Humanity Crew's own Mobile Application (possible partnership)

Although phones or telecommunication services may not be available in every region Humanity Crew goes to help, it could be useful for volunteers to use in their respective regions before going into crisis zones and for easier and faster access of information for people in general. An application also allows for offline services which a website is more limited to. In

order to build the application, Humanity Crew can consider using easily accessible, non-coding required websites to build its own app (https://appinstitute.com/charity-apps/) or partner with organizations such as the Cornell App-Dev, to develop its mobile application.

5. Translate in many versions (Mandarin Chinese, Hindi, Spanish, French, Arabic)

As of now, only WHO has multiple translations provided, with the rest of the handbooks only having English. Because Humanity Crew is an international organizations, looking to go to help regardless of boundaries, translation would be crucial. We suggest focusing on Mandarin Chinese, Hindi, Spanish, French, Arabic languages should be prioritized as they are the most commonly used around the world.

PART TWO

5.0 Disaster Preparedness: Disaster Relief Management

Disaster relief management (Congressional Research Service, 2012) is a systematic process for responding to catastrophic situations. It helps people who suffer from natural or human-made disasters through various approaches, such as risk avoiding, strengthening emergency response, and rebuilding society. The process includes four phases: mitigation, preparedness, response, recovery. These four phases are interdependent. Mitigation focuses on preventing hazards from developing into disasters or weakening the overall effects of disasters. For instance, people who live in flood-prone areas can build houses on poles. Therefore, when a flood comes, people can still manage their lives in orderly manners. Unlike mitigation activities, the preparedness phase emphasizes preparing equipment and procedure for use when a disaster occurs. Shelters, back-up life-line services (e.g., water, power, sewage), and evacuation plans are examples of preparedness. The response phase focuses on the availability and mobilization of the necessary emergency services and first responders (e.g., firefighter, doctors, police, volunteers) in the crisis zone. The recovery phase often emerges after the disaster and when immediate needs are addressed in the response phase. Recovery aims to restore the affected area or community, bringing it back to its previous state. These four phases altogether contribute to circular disaster relief management.

6.0 Global Trends of Disaster Preparedness

The following sections discuss disaster preparedness programs or services from established well-known international NGOs, highlighting the importance of preparedness. It should be noted that these organizations provide grant funding for relief efforts.

6.1 The Sendai Framework and the United Nations Office for Disaster Risk Reduction

The United Nations Office for Disaster Risk Reduction (UNDRR) serves as the UN system's core player and facilitator for reducing risk. The office is responsible for supporting and monitoring the implementation of the Sendai Framework for Disaster Risk Reduction 2015-2030 (UNDRR, 2020). The Sendai Framework focuses on addressing three dimensions of disaster risk: exposure to the hazards, vulnerability and capacity, and hazard's characteristics along with seven global targets (Figure 2). The framework determines the global trends in reducing risk and losses, and preparedness has been highlighted in the framework. The UNDRR recognizes the importance of preparedness and suggests that preparedness is necessary to ensure capacities or resources for effective response and recovery.

The Sendai Framework

Substantial Reductions	Substantial Increases
Reduce global disaster mortality	Increase the number of countries with national and local disaster risk reduction strategies
Reduce the number of affected people globally	Substantially enhance international cooperation in developing countries
Reduce direct economic loss in relations to GDP	Increase the availability of and access to multi-hazard early warning systems
Reduce disaster damage to critical infrastructure and disruption of basic services	

(Figure 2)

6.2 The Tokyo DRM Hub and World Bank

The World Bank is another global leader in disaster risk management (DRM). Its annual disaster risk management investment has increased over time, from US$3.5 billion in FY12 to US$4.6 billion in FY19 (The World Bank Group, 2020). The World Bank Group (WBG) has established various programs to provide its clients with technical and financial support for risk assessment, risk reduction, preparedness, financial protection (e.g., The Global Risk Financing Facility), resilient recovery, and reconstruction. One of the recognized programs is called the World Bank Tokyo DRM Hub (The World Bank Group, 2020). It was founded by Japan in 2006

and later strengthened cooperation with the World Bank in 2011 after the Great East Japan Earthquake and Tsunami. The program includes three priority areas: resilient infrastructure; risk identification, risk reduction, and preparedness; disaster risk finance and insurance (DRFI). One outstanding example of preparedness would be learning from the Japanese experience in Emergency Preparedness and Response (EP&R). This newly developed Knowledge Program aims to enhance the capacity of disaster response forces in developing nations.

7.0 Case Studies: Preparedness for Small Communities During Natural Disasters

This section presents case studies on the International Federation of Red Cross and Red Crescent Societies (IFRC), READY, a campaign initiated by the U.S. government, and Do 1 Thing. The case studies focused on the types of services these organizations provide and how they have been used to enhance small communities' disaster preparedness capacity.

7.1 Context for Case Studies

7.1.1 The International Federation of Red Cross and Red Crescent Societies (IFRC)

The world's largest humanitarian network, IFRC has over 13.7 million volunteers working in 192 National Societies. They provide services before, during, and after disasters and health emergencies, helping vulnerable people to meet the basic needs and improve their lives. Their strength is in their volunteer network, the ability to gather attention for vulnerable people globally, and their community-based expertise. Guided by Strategy 2020 (IFRC, 2020), the

organization continues its mission of *'saving lives and changing minds'* in three areas: 1) disaster response and recovery, 2) development, and 3) promoting social inclusion and peace.

The IFRC has introduced a cyclical approach called Preparedness for Effective Response (PER) to National Societies (NS) strengthening their local preparedness capacities. The PER approach contains five equally important phases. The *Orientation Phase* provides an overview of the PER approach. The *Assessment Phase* examines a nation's response system based on predefined standards. In the *Prioritization & Analysis Phase*, the NS needs to narrow its focus on preparedness and complete a root-cause analysis. After identifying drawbacks that prevent improvement, the NS starts developing a well-defined road-map for its response capacity. This is the *Work-Plan Phase*. After that, the Action & Accountability Phase emerges, where the NS implements plans and monitors progress. Overall, although the PER has been developed for use in national-wide preparedness, its guiding principles and phases can be adopted by Humanity Crew in the development of community-based preparedness programs.

7.1.2 READY

READY is a national public service campaign launched in February 2003 (READY, 2020). The campaign aims to educate and empower the American public to prepare for, respond to, and manage emergencies. It wants to promote preparedness through public involvement. READY's activities are based on four key things: 1) stay informed about different types of emergencies; 2) make a family emergency plan; 3) build an emergency supply kit; 4) get involved in your community to prepare for emergencies. Besides, the campaign has specific sections for children and business.

On the campaign's homepage, a section called *Disasters and Emergencies* lists more than twenty types of natural or human-made disasters. Information sheets for each disaster are available. A more general guide *Are You Ready w*as updated recently. Several other emergency guidelines or informative sheets (e.g., Family Communication Plan Fillable Card, 12 Ways to Prepare) are available in seven different languages including English, Spanish, Simplified or Traditional Chinese, Korean, and Vietnamese. Overall, the READY campaign serves as a helpful example of how to inform and engage the public in preparedness. Moreover, the identified partners of the READY campaign may be Humanity Crew's potential partners.

7.1.3 Do 1 Thing

Do 1 Thing is a non-profit organization that uses a unique step-by-step approach to help the public start preparing for disasters and emergencies. Its goal is to help build disaster-resilient communities. The organization develops a web-based 12 Month preparedness program (Do 1 Thing, 2020). Each month contains a different preparedness topic. For instance, in August the training focuses on encouraging people to get involved in community preparedness. One of the assigned tasks is to connect an isolated individual in the neighborhood. Besides the emergency preparedness program for individuals, the organization also develops an emergency preparedness program for businesses which may help minimize the loss or damage resulting in disasters and maintain a healthy and growing business market. Regarding Humanity Crew, Do 1 Thing's unique approach provides a helpful framework for future program development.

7.2 Flood

The team analyzed a case study on China and how integrated programming and cooperation with local authorities boosted the communities' disaster preparedness in regards to floods. In China, floods have been increasing over the decades, with millions of hectares of farmland getting ruined each year during China's flood season, leading to millions of livelihoods being negatively affected. As a result, poor rural sanitation and unsafe protected water supplies are only some of the health threats after a flood. In order to address the vulnerability of the rural poor communities when exposed to floods, the National Society's Guangxi and Hunan provincial branches developed a community vulnerability reduction (CVR) program which although launched in 2001, over several years have integrated the following: sanitation (construction of toilets), health and hygiene education, water supply, and disaster preparedness (activities that encourage communities to develop locally relevant plans to lessen the impact of the disaster). The program was also implemented by cooperating with local authorities. This meant working closely with the government or village-level authorities by sharing information, and forming a partnership to carry out the program together (IFRC, National Societies Director, n.d.).

The outcomes of the program were successful. Many rural villages in China that had limited access to public infrastructure and basic medical and educational services were able to be supplied with water supply, toilets, and were taught information that helped raise awareness about health and hygiene. The disaster preparedness aspect was also effective because it brought the message across that in order to mitigate the destructive impacts of floods, planning ahead and developing strategies was crucial. However, the integrated approach would require human resources and expertise in many fields which may not be readily available in communities. Moreover, because the community is preparedness-based, like any other preparedness program,

it would require the participation of many community members. If this is not a familiar concept, grassroots participatory programs would be necessary in which members are encouraged and engaged in activities that raise awareness about not only the disaster preparedness aspect, but also how important their individual roles are for this to be effective and keep everyone safe. Additionally, working with local authorities also helped the program gain trust and support from the local governments (IFRC, National Societies Director, n.d.). Although programs related to mitigation or preparedness were initially difficult to grab attention due to the effectiveness of a program not being a tangible product, time and effort to explain the importance and motivate the local authorities led to their help. This resulted in more equipment, increased visibility of the project, and assistance in the implementation of the logistics of the project as well as when funds needed to be matched.

7.3 Storm

For storms, the team analyzed a case study on the Caribbean Island of Dominica. Defined by the United Nations as a Small Island Developing State (SID), Dominica has limited response mechanisms when it comes to natural disasters, and especially storms. This case study focuses on analyzing the efforts of the local Community Disaster Response Teams (CDRT) in Dominica and their responses and practices from previous storms. The case study found the CDRT to be invaluable for collecting data for post-disaster situations and providing assessments to government and non-governmental organizations as well as successfully evacuating people. However, some issues that were observed were poor storage of radio equipment, difficult communication due to the breakdown of national telecommunications, and low motivation by

some response members during post-training where the members attended were generally women (Community Disaster Response Teams in Dominica, n.d.).

When moving forward, and as Humanity Crew plans and develops preparedness programs for storms, it is important to consider access to emergency telecommunications, making sure storage of important equipment such as radios are checked and planned, having a strong communication plan with regular drills and exercises, implementing a balanced recruitment for wider opportunities, and keeping an updated mapping of the community's risks, hazard impacts, and resources (Community Disaster Response Teams in Dominica, n.d.).

7.4 Earthquake

The team analyzed Tehran's case in Iran and approaches for communities to reduce risks before an earthquake happens. Iran is located in the Alpine-Himalayan orogenic belt's active seismic strap and has been continuously affected by many destructive earthquakes (Jafari,M.K. & Amini,H.K., 2005). Due to the lack of construction supervision and improper growth of urban fabrics towards hazard zones, the capital of Iran, Tehran, is one of the most vulnerable urban cities to potential earthquakes (Jafari,M.K. & Amini,H.K., 2005). Thus, it is urgent to implement earthquake risk reduction activities. Localities and neighborhoods play essential roles in risk reduction activities. For instance, in the Bam Earthquake of 2003, most victims were helped by their neighbors and relatives (Mirhashemi,S., Ghanjal,A. & Moharamzad,Y., 2007). Mobilizing communities and residents is an effective way to strengthen people's ability to face potential natural disaster risks. This approach appears consistent with Humanity Crew's existing strategy to help people prepare for disasters with a community-based training program.

One of the best practices in this case is to empower local Community-Based Organizations (CBOs) in disaster risk mitigation and management. Such CBOs in Tehran has a long history and strong roots in the charity field. To better support these local communities, some NGOs worked with CBOs. For example, with the Swiss Agency for Development and Cooperation (SDC) assistance, Tehran Municipality has established Emergency Response Volunteer Groups called DAVAM that works at neighborhood levels in conducting the necessary training to the residents and providing emergency response at the time of earthquakes (Swiss Agency for Development and Cooperation, 2007).

Based on the research conducted in Tehran, there were three challenges for improving community-based disaster risk management. First, the insufficient information and skills in disaster preparedness training led to very few skillful people familiar with the emergency cases. Second, short attention to vulnerability reduction led to less attention to constructing high-quality buildings. Third, low collaboration levels among the community members and local authorities resulted in less reliable relationships with the district government.

From the collaborative approach presented in this case, we determined that the following strategies are useful for community training in disaster risk management.

1. Work with local organizations. Disaster preparedness measures are more effective in the community when implemented with community-based groups such as CBOs, NGOs, and residents' associations.

2. Promote public awareness and disaster preparedness education through disseminating information (using campaigns, seminars, workshops, mass media, etc.) and providing relevant education (school education and social education).

3. Provide information and education by different targeted groups, considering their characteristics, activities, and functions in disaster management. For example, designing various training programs for the staff of CBOs, school students, the general public, vulnerable disaster groups, etc.

4. Work as a bridge between the local people and local government for urban issues. The provincial government can provide information, skills, and finance to the local community, and the local community should inform them about the present conditions of the community in return.

7.5 Fire

The team narrowed its study of the disaster to bushfires and analyzed the 2009 Australian bushfires and the Community Fireguard (CFG) program. Due to climate change, bushfires are becoming a significant public health concern. Significantly, populations in Australia are growing, and cities are expanding into places with more frequent bushfires. In February 2009, the bushfires swept through rural Victoria, Australia, and took 173 lives (National Museum of Australia, 2020).

There are four community-based preparedness groups in Australia, including Community Fireguard (CFG), Community FireSafe Groups, Community FireWise Groups, and Bushfire Ready Action Groups.

Fire preparedness programs vary in different regions and are supported by multilateral organizations. In Australia, fire preparedness programs are approached by multilateral agencies, including the Metropolitan Fire Brigade (Fire Rescue Victoria, 2020), the Department of Sustainability and the Environment, and the Country Fire Authority. The first two agencies are

government-funded and-staffed firefighting services, and the third agency is a volunteer-based firefighting service. These agencies devote several activities such as community education and preparedness programs, including broad media campaigns, awareness-raising using the Internet, print, video, school education, community information sessions, and street meetings in high-risk areas.

In general, fire preparedness is a localized effort and varies significantly by community. For instance, the Community Fireguard (CFG) program assists community groups in becoming self-sufficient (Community Fireguard, 2020). In contrast, other programs have evolved into a more flexible program format. In this case, programs are more malleable, and groups need facilitators to identify how to achieve their goals. In a more flexible approach, facilitators must have a range of skills that enable them to identify a particular group's needs and empower them to take ownership and a sense of common purpose in the program. This is where targeting is critical to maximizing the potential of this approach.

Based on the insights from this case, recommendations for Humanity Crew include:

1. Work with local firefighting services to gain professional support.

2. Recognize that the form of a preparedness program may vary considerably based on the community's characteristics.

7.6 Epidemics and Pandemic

This additional section was added to the report given the world-wide impact of COVID-19. In this section, our team focuses on an IFRC's most updated pandemic preparedness program, the Community Epidemic and Pandemic Preparedness Program (IFRC, 2020), which is decided for community preparedness. IFRC believes that 'epidemics begin and end in

communities,' so informing and empowering the community should be a vital part of epidemics and pandemic preparedness.

The CP3 has five core values: 1) 8 Target Countries, 2) Preparing Communities, 3) Preparing First Responders, 4) Preparing Business and Society, 5) Preparedness tools and Resources. With the *8 Target Countries*, IFRC provides different guidelines to each country based on its needs, priorities, risks, and capacities. Program adaptability should be considered when developing preparedness programs. Moreover, IFRC recognizes that many outbreaks are overlooked until multiple people in the same community become severely ill. IFRC attributes this to communities lacking the knowledge or skills to take preventative action. Therefore, the CP3 tries to ensure that communities have basic information about epidemics and communications mechanisms to ensure information sharing. To attain this goal, IFRC includes a section called Community Engagement and Accountability (CEA) and provides a set of CEA toolkits. For instance, *Guidance on Running a Focus Group* (Tool 5), *Communication Channels* (Tool 8), *Tips on Holding Community Meetings* (Tool 11), and other tools that facilitate community engagement and accountability in preparedness. When designing a program, it should be noted that a community's engagement and accountability account for program effectiveness.

8.0 Recommendations

8.1 General Recommendations

Based on our analysis of the cases, the team has developed four general recommendations for Humanity Crew to consider with regards to disaster preparedness:

1. Identify and cooperate with local organizations

It takes time for an international organization to approach a new training program in local communities. Local organizations such as Community-Based Organizations, NGOs, and government-funded agencies are more familiar with local culture, religion, natural conditions, etc. It is recommended that Humanity Crew work with local organizations when introducing the training program into a small community. In different disasters, cooperation with professional agencies will improve the training program.

2. Implement audience-specific educational training programs

This can be achieved by designing different training programs for different groups of people, including professional employees, school students, the elderly, and other vulnerable groups. For staff in the organization, the training should be professional and staff requirements higher than others. For students in schools, the practice should be more applicable and easy to understand. The training programs should be tailored to the targeted group or audience.

3. Updated Mapping of Risks, Hazard Impacts, and Resources

A digital public information platform, such as a mobile application or a notification system, is an increasingly useful tool. This platform should include 1) the latest community news, 2) threats notification, 3) disaster impacts, and 4) disaster preparedness resources. For example, Cornell Emergency Notification sends notification emails to students and faculties when there are any weather or safety threats. Humanity Crew should consider working with a technology team to develop such an information platform.

4. Recruit volunteers and professionals for wider opportunities

Skillful people who are familiar with emergency cases are needed in preparedness training programs. Thus, the organization should recruit people from diverse backgrounds. Humanity Crew can use social media to attract attention, such as giving a TED Talk about

preparedness or holding weekly sessions in local communities. It is helpful to cooperate with universities to hire professional expertise. For example, Humanity Crew can hire outstanding students or professors from the psychology department to support professional psychology project.

8.2 Specific Recommendations

Based on our research, a Disaster Risk Management program is not limited to mental health preparedness. Here are specific recommendations on each disaster mentioned above for Humanity Crew to adopt to entire programs. Some of these recommendations are long ranged, but they are included for Humanity Crew's partners in future cooperation.

8.2.1 Flood

1. Suggest local communities building an efficient drainage system
2. Protect the natural environment and maintain the natural flood control system (no trees or firewood)
3. Promote flood fighting knowledge
4. Establish a flood fighting team (cooperate with flood fighting organizations)

8.2.2 Storm

1. Reinforce the building (ensure the quality of the building, such as the roof)
2. Establish a windbreak system (such as protecting forests and planting windbreak trees)
3. Set up warning signs in dangerous places (such as next to big trees, billboards and other objects that may fall due to the hurricane)

8.2.3 Earthquake

1. Suggest Building Anti-seismic Facilities Of Houses

To better saving people from earthquakes, Humanity Crew could emphasize the need to build earthquake-resilient buildings. Specifically, reconstruction of dangerous buildings and promotion of the use of anti-seismic materials would help in Earthquake preparedness program.

2. Promote Earthquake Self-help Knowledge

We recommend that communities hold regular sessions on helping people develop skills to better react to earthquakes in different settings. Some methods these information can be spread is through flyers, Humanity Crew's social media pages (Instagram), website, etc.

8.2.4 Fire

1. Strengthen Firefighting Publicity And Education

Lectures on how to use fire and electricity at homes can help people's attention prevent potential fire disasters.

2. Conduct Regular Fire Escape Drills

Besides educational training, practical solutions are essential as well. Regular fire escape drills would prepare the communities with practical experiences.

9.0 Conclusion

This project's goals were 1) providing Humanity Crew with an overview of the existing first response mental health intervention practices in crisis zones, 2) conducting an analysis of the best practices on preparedness for small communities for four specific types of disasters. For the first goal, our team focused on Psychological First Aid (PFA), which has been studied and

widely adopted by well-known international organizations. A comparison analysis was conducted on selected handbooks looking for similarities and distinctions. The identified similarities could serve as the fundamental values or components for universal mental health practices that Humanity Crew wants to work on for the next five years. For the second goal, our team conducted a case study on each required disaster (flood, storm, earthquake, and fire). Throughout our research, we found that there was a lack of mental health preparedness strategies or programs. From international organizations to national-based organizations, disaster preparedness focused more on infrastructure and the economy. "How to prepare people or community for mental issues in disasters?" is still an overlooked and unmet challenge.

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