EDITORIAL

Disaster risk reduction and sustainable development: the role for occupational health

In 2017, the United Nations (UN) General Assembly formally adopted a definition of a disaster as ‘A serious disruption of the functioning of a community or a society at any scale due to hazardous events interacting with conditions of exposure, vulnerability and capacity, leading to one or more of the following: human, material, economic and environmental losses and impacts.’ (p. 13) [1]. In 2015, over 340 disasters affecting 98.6 million people worldwide were identified. These were estimated to have cost the world economy $66.5 billion worth of damage [2]. Is there a solution to address these impacts that affect the UN member states?

In 2015, the UN adopted three interlinking landmark agreements of major significance which are summarized below (Figure 1):

- The Sendai Framework for Disaster Risk Reduction (SFDRR) 2015–2030, initially adopted by 187 UN member states in Sendai, Japan in March 2015, and adopted by the UN General Assembly for all UN member states in June 2015 [3].
- The Sustainable Development Goals (SDGs) 2030 which succeeded the Millennium Development Goals (MDGs), 2000–2015, endorsed by 193 countries in New York, USA in September 2015 at the UN General Assembly [4].
- The Paris Agreement on Climate Change (COP21), ratified by 195 Parties to the UN Framework Convention on Climate Change (UNFCCC), adopted in December 2015 [5].

What role can occupational health (OH) professionals play in delivering these UN landmark agreements? It can be argued that OH practice is key to all stages of a disaster, i.e. prevention, preparation, response and recovery as demonstrated by their role in assessing hazards and risks in workplaces and work practices as well as employees’ fitness for work. As a result, OH professionals are encouraged to engage with the implementation of these international processes pertaining to disaster risk reduction and management at local, national, regional and global levels. This will help ensure the effectiveness of implementing the disaster risk reduction framework and that OH issues are appropriately addressed.

For example, the impact of the Ebola virus disease (EVD) outbreak on work and workers was a stark reminder for health systems, international businesses and organizations of the devastating impact on workers, workplaces, communities and economies of an emerging infectious disease that knows no international borders [6]. Workers in different sectors were affected to varying degrees [6]: it is considered that the highest burden of EVD infection was seen in health workers, especially in West Africa, particularly in Sierra Leone, because of significant exposures to the EVD infection both in community settings and during patient care [7]. Workers in other sectors of the economy

Figure 1. Twenty-five years of international commitments to disaster risk reduction. Reproduced from Launch of the 2015 Global Assessment Report on Disaster Risk Reduction by Andrew Maskrey, 2015, Geneva, Switzerland: UNISDR. Reproduced with permission.
such as extractive industries (i.e. ore mining), transport, retail and hospitality sectors were also affected [8]. Border closures, disrupted transportation, restrictions on travel, quarantines in areas where risk of infection was high and lack of investor confidence resulted in unemployment as well as businesses and companies suspending operations and halting trade [8].

Not only EVD, but also the Zika virus, severe acute respiratory syndrome, pandemic flu and the Middle East respiratory syndrome-related coronavirus demonstrate the devastating human, social and economic impacts of disasters linked to emerging zoonotic and vector-borne infectious diseases.

The SFDRR (2015) is a global strategy and voluntary non-binding agreement for addressing disaster risk and resilience. The framework has 13 guiding principles which primarily aim to address underlying disaster risk factors by strengthening resilience and facilitating inter-sectoral collaboration and partnerships. The key outcome until 2030 is to achieve substantial reduction in disaster risks and losses in lives, livelihoods and heath. This includes all aspects whether economic, physical, social, cultural or environmental for individuals, private sector, communities and countries. Its four priority areas for action include: (i) understanding disaster risk, (ii) strengthening disaster risk governance to manage disaster risk, (iii) investing in disaster risk reduction resilience and (iv) enhancing disaster effective response to ‘Build Back Better’ in recovery, rehabilitation and reconstruction [3].

The seven global targets of the SFDRR (2015) (Table 1) demonstrate a strong emphasis on managing and reducing disaster risks as opposed to only focusing on disaster management [3]. The framework covers both natural and man-made hazards referring to the implementation of an all-hazards approach to managing disaster risk arising from environmental, technological and biological hazards and risks. It also acknowledges that climate change amplifies the risk caused by disasters that are, as a result, increasing in frequency and intensity. This is creating new types of risks that disproportionally affect marginalized communities, households and small- and medium-sized enterprises which incur a high proportion of the losses [3].

The Sendai Framework calls for strengthening resilience at all levels of ‘persons, communities and countries, their livelihoods, health, cultural heritage, socioeconomic assets and ecosystems’ by planning and reducing disaster risk [3] and thus implicitly acknowledges that disaster risk is influenced by the wider political economy context. With over 30 explicit references to health [9], mainly in its core targets and goals, the Sendai Framework emphasizes the strengthening of health resilience and aligns closely with the 2030 Agenda for Sustainable Development [4].

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The Sendai Framework also aligns closely with the International Health Regulations (WHO, 2005) [10] to strengthen the core capacities of countries to prevent, protect against, control and provide a public health response to infectious diseases, food safety, and environmental, chemical and radio-nuclear safety. In doing so, it convincingly advocates for the adoption of policies and actions and developing capacity of health workers, promoting and enhancing the training capacities in the field of disaster medicine and ‘support[ing] the role of public service workers to establish or strengthen coordination and funding mechanisms and procedures for relief assistance and plan and prepare for post-disaster recovery and reconstruction;’ (Paragraph 33e) [3].

How can OH professionals support the implementation of the Sendai Framework?

OH professionals in all settings are well placed to play a key role in disaster and emergency preparedness on the basis of their clinical skills, understanding of the wider workplace context and accessibility to the workforce. Such a role is important in all stages of a disaster. Hence, building the capacity of OH professionals in disaster risk reduction approaches and principles so they can undertake a more effective role in disaster and emergency situations is important. For example, OH professionals’ roles are to establish due diligence in the workplace, build resilience, maintain health and well-being of the workforce and business continuity as well as contribute to plans and strategies that address vulnerability factors in the workplace at all stages of a disaster.

‘Building back better’ (BBB) is an approach strongly advocated by the Sendai Framework in the post-disaster recovery, rehabilitation and reconstruction phases to

| Table 1. The SFDRR 2015–2030 global targets [3] (p. 12) |
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| • Substantially reduce global disaster mortality by 2030, aiming to lower average per 100 000 global mortality rate in the decade 2020–2030 compared to the period 2005–2015. |
| • Substantially reduce the number of affected people globally by 2030, aiming to lower average global figure per 100 000 in the decade 2020–2030 compared to the period 2005–2015. |
| • Reduce direct disaster economic loss in relation to global gross domestic product (GDP) by 2030. |
| • Substantially reduce disaster damage to critical infrastructure and disruption of basic services, among them health and educational facilities, including through developing their resilience by 2030. |
| • Substantially increase the number of countries with national and local disaster risk reduction strategies by 2020. |
| • Substantially enhance international cooperation to developing countries through adequate and sustainable support to complement their national actions for implementation of this Framework by 2030. |
| • Substantially increase the availability of and access to multi-hazard early warning systems and disaster risk information and assessments to the people by 2030. |
rebuild more disaster-resilient infrastructures and systems and increase resilience at all levels [3]. The term BBB is relevant to employers and OH professionals, especially that national, regional and local initiatives in preparation of and the aftermath of disasters are encouraged to include strategies to foster employment, support livelihood protection and recovery, improve skill development, ensure social protection, prevent poor working conditions and ensure business continuity. These are important given the evidence that the wider social determinants of work such as insecure, poor quality employment and poor working conditions are associated with an increased risk of physical and/or mental health illness that in turn result in absence due to illness and ultimately loss of work.

OH professionals have an important role in delivering these three 2015 UN landmark agreements, given their roles within healthcare and the wider industrial domains for influencing and engaging actively in emergency preparedness, prevention, managing disaster risks, post disaster planning and recovery. Their roles can be seen as operationalizing a strategic vision which was articulated by the International Labour Organisation Director General on 12 March 2015: ‘The goal of decent work provides a solid basis on which governments can establish and reinforce the engagement of social partners, businesses and agents of local economic development in disaster risk reduction. Through better regulation, innovative partnerships, specific incentives and mechanisms of cooperation with local communities, this can be done. As actors and beneficiaries, employers, workers and their organizations have a dual role in disaster risk reduction and workplaces are focal points for prevention, mitigation, recovery and rehabilitation strategies’ [11]. What an opportunity for OH professionals to engage at the highest levels for local delivery!

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