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Disaster Management: The Place of Disaster Parasitology

Dr. Iniodu George Ukpong,

Head of Department, Department of Animal and Environmental Biology, Cross River University of Technology, Calabar, Nigeria.

Background

Dating into its natural history, mankind has had to grapple with onslaughts occasioned by nature and the outcome of its activities; and intuitively would react to deal and adapt to survive. This explains the multidisciplinary cascade of reactions in disaster management. A disaster is a sudden, calamitous event that seriously disrupts the functioning of a community or society and causes human, material, and economic or environmental losses that exceed the community's or society's ability to cope using its own resources (IFRC, 2018). Such could be natural event, either geophysical earthquakes. а (e.g. tsunami, volcanic eruptions), hydrological (e.g. avalanches, floods), climatological (e.g. extreme temperatures, wildfires, drought), meteorological (e.g. cyclones, tropical storms) or biological (e.g. disease epidemics, insect/animal plagues); or anthropogenic, e.g. complex emergencies and conflicts, complex accidents (e.g. transport, nuclear), famine, environmental pollution, etc. (WHO, 2002; IFRC, 2018). In any case, disasters unleash menacing impacts on man and the environment and produces series of attendant effects on impacted ecosystems.

Going by popular statistics, natural disasters caused an average of 60,000 deaths globally, in the past decade and mostly amongst those in poverty, as found in low- to-middle income countries where prevention and response capacities are lacking, (Ritchie and Roser, 2019). As much as could be captured, in the past year, natural and man-made disasters claimed 11,000 lives globally in 292 disaster events, according to the Insurance Information Institute; and those events induced enormous economic losses: 193 natural disasters caused \$50 billion in losses and 99 man-made events caused \$6 billion in losses (III, 20209). As the global community grapples with the corona virus pandemic, stronger partnerships are required to build capacity to manage this and other disasters.

Disaster management

Disaster Management has been defined as the organization and management of resources and responsibilities for dealing with all humanitarian aspects of emergencies, in particular preparedness, response and recovery in order to lessen the impact of disasters (IFRC, 2020). However, there are ideally four basic phases in the disaster management cycle, namely prevention, preparedness, response and recovery. Hence it entails a comprehensive

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array of policies and procedures that ensure early warning and prediction measures and risk reduction strategies to prevent occurrence of a disaster event; effective planning for response in such precise way to reduce impact of the event; deployment of efforts to rapidly rescue, stabilize and thus minimize the attendant hazard and prevent further losses; and eventually assist in rehabilitation, resettlement and fortification of the vulnerable / affected population. This means disaster management is much more than a social science or public works activity. It is a multidisciplinary comprehensive response system deployable at instants to preserve life and sustain livelihoods before, during and after complex emergencies. Its extent is colossal and requires skillful partnership. It should derive expertise and collaboration from diverse disciplines from the social, physical, biological and allied medical sciences, to medicine,

engineering, information and communication technology and logistics.

This brief paper serves to highlight the emerging concept of disaster parasitology and its contemporary relevance in disaster management.

Deploying Disaster Parasitology in Disaster Management

Disaster Parasitology has been previously defined as crisis time parasitology or the branch of parasitology that deals with the management of parasitic disease trends in crisis. It was first proposed (Ukpong, 2018) as an interdisciplinary concept to drive a new body of knowledge in parasitology that will provide a disciplinary platform to apply the principles of environmental and public health parasitology in disaster management. This should provoke a curriculum development in order to afford parasitologists the leverage to expand their scope of contribution and participation in burning global and development issues, especially as it concerns population and the environment.

How does the parasitologist fit in here? The basic characteristic features of disasters; whether natural or man-made, are sudden / spiraling and massive impact on the environment, causing degradation of the natural, built or social environmental structures; and population problems such as massive population displacement, migration and explosion (overcrowding due to refugee resettlement issues). For instance, at disaster or crisis time, there is a breakdown of environmental structures and disorganization of ecological parameters, which would affect standard indices in disease epidemiology, such that known trends like transmission patterns, host preferences, infection frequencies, etc, are dominantly affected; and such parameters must be considered in the process of managing the disaster. Currently, this is not a prominent issue in disaster management, yet it is of exigent value.

Considering these as major elements of disaster parasitology; risk identification, postdisaster risk assessment, health impact assessment, intervention and resettlement studies,

Page | 2www.junikhyat.com

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epidemic prevention, and health education (Ukpong, 2018), it is notable that disaster parasitology is needful at the three phases of the disaster event, namely, pre-disaster, disaster and post-disaster phases, on which the four basic phases of disaster management apply.

Conclusion

The collective partnership of humanity is required to build stronger capacities to procure and maintain a sustainable environment on the globe. Currently continents of the world are plagued by the strange corona virus strain; SARS-CoV-2 code-named COVID-19. The pandemic is a biological disaster of the highest imaginable level. Disasters are never ceasing. We need to build stronger partnerships; and new partnerships are required. I place this at the reading table of all scientists gathered here and the global science community; and most especially, drawing the attention of two categories of persons: the modern parasitologist and the disaster manager. Disaster parasitology will close a lacuna in the works of disaster management.

References

- IFRC (2018). About disasters. 2018. International Federation of Red Cross and Red Crescent Societies.http://www.ifrc.org/en/what-we-do/disaster-management/aboutdisasters/definition-of-hazard/. Accessed 10/1/2018.
- IFRC (2020). About disaster management. International Federation of Red Cross and Red Crescent Societies https://www.ifrc.org/en/what-we-do/disaster-management/about-disaster-management/. Accessed 20/5/2020.
- III (2020). Facts + Statistics: Global catastrophes. Insurance information institute. https://www.iii.org/fact-statistic/facts-statistics-globalcatastrophes#Natural%20and%20Man-made%20Disasters. Accessed 21/5/2020.
- Ritchie, H & Roser, M. (2019). Natural Disasters https://ourworldindata.org/natural-disasters. 20/5/2020
- Ukpong, I. G. (2018). Disaster Parasitology: A novel concept in disaster management. *South Asian Journal of Parasitology*, 1(1): 1-6.
- WHO (2002). Disasters and Emergencies. World Health Organization/EHA. Pan African Emergency training centre. http://apps.who.int/disasters/repo/7656.pdf. Accessed 8 January 2018.

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