

"DRR: toward a crisis/disaster causation model"





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INTRODUCTION

- ✓ Several studies have analyzed crisis and disaster;
- ✓ Literature offers heterogeneous insights on their definitions depending upon different disciplines and approaches. No definition of disaster and crisis is universally accepted (Shaluf et al., 2003; Keown-McMullan, 1997);
- ✓ Some scholars don't distinguish between the two terms. However, another research stream is based on the statement that disaster and crisis are two different and related events (Faulkner, 2001; Shaluf et al., 2003; Duncan et al., 2011).

OBJECTIVES

- ✓ Evaluate main current contributions on the topic;
- ✓ Identify main differences between crisis and disaster;
- ✓ Propose the definition of a common language regarding crisis and disaster concept;
- ✓ Define a crisis/disaster causation model

MATERIALS & METHOD

- ✓ Due to the breadth of the topic, the paper is not intended to be a comprehensive review; however, the proposed output is grounded on most relevant and cited previous peer-reviewed contributions since 1980;
- ✓ The analysis has been conducted from Feb. 2015 to Feb. 2016.

RESULTS

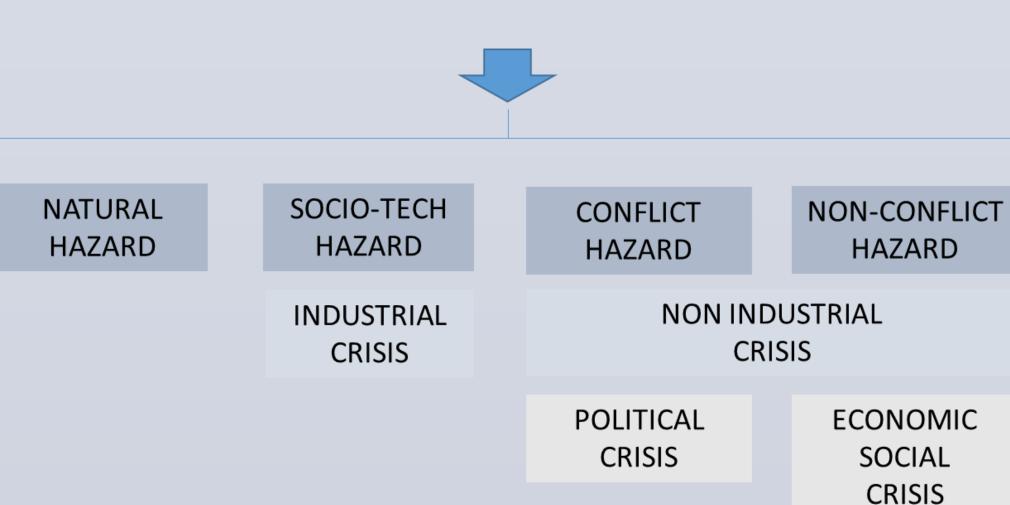
✓ The study investigates crisis and disaster from three different perspectives:

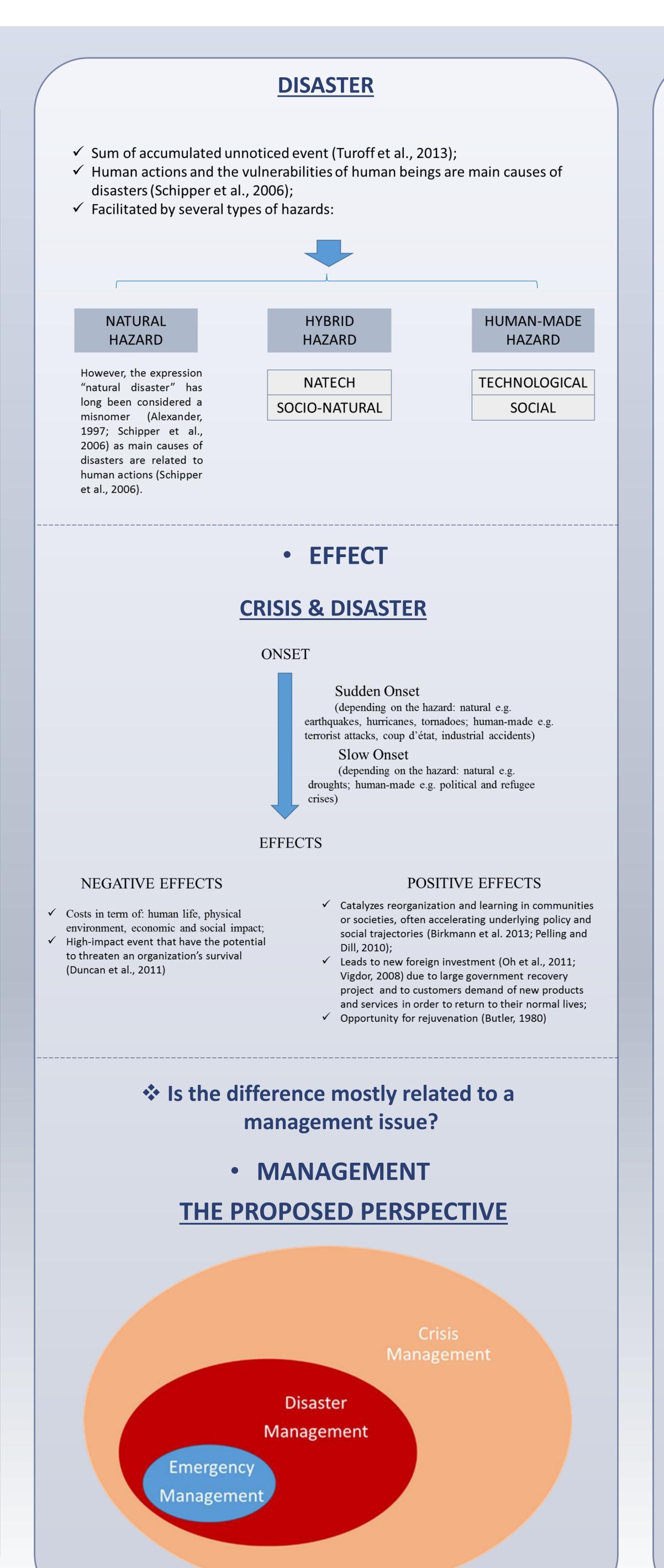
- 1) Origin;
- 2) Effect;
- 3) Management

ORIGIN

CRISIS

✓ Preceded by a string of early warning signals; Depending on the hazards, crisis has been categorized (Shaluf et al., 2003; Quarantelli, 1998) in:





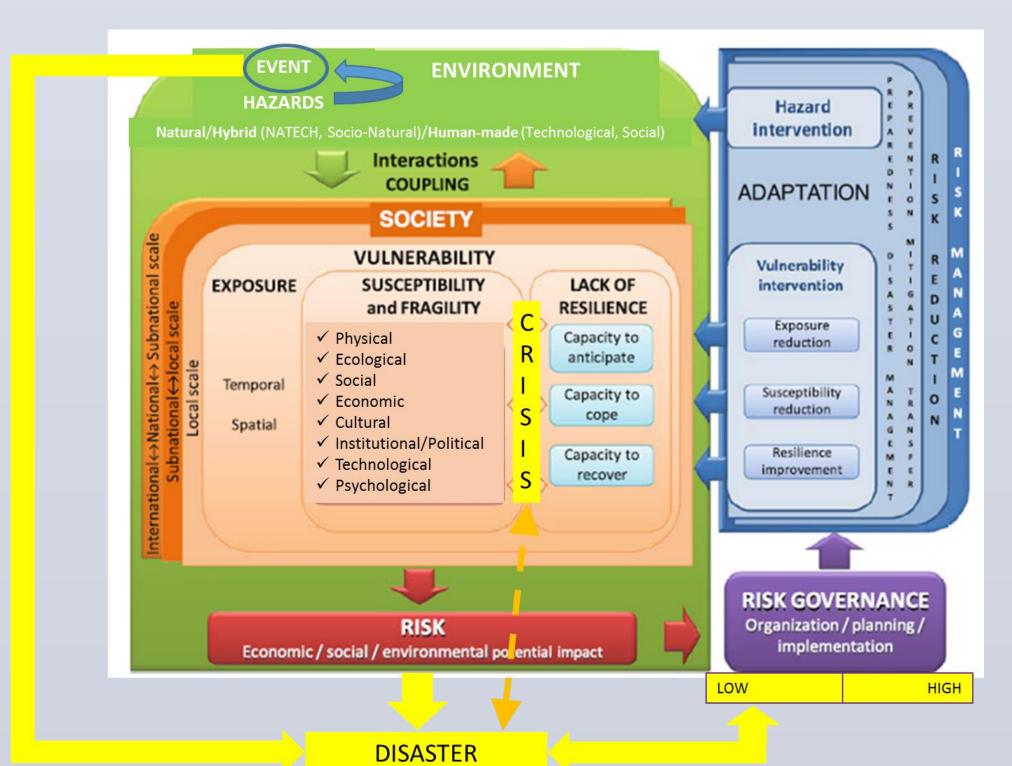
THE EMERGING PROCESS

- ✓ Crisis and Disaster happen in a change and complex context;
- ✓ Crisis may affect 8 components of the organization and it is managed through crisis management (Birkmann et al., 2013; Pearson and Clair, 1998; Hickmann and Crandall, 1997);
- ✓ A good crisis management will ensure that the availability of resources will be always higher than the challenges ("inept management structures and practices or a failure to adapt to change" (Faulkner, 2001));
- ✓ The presence of hazards increases the risk that challenges become higher than resources and capabilities;
- ✓ This condition increases the risk of disaster happening. Due to the presence of risk, disaster management influences crisis management (anticipating phase)
- ✓ The appearance of the event increases the challenges. When challenges are higher than resources and capabilities, disaster management influences crisis management (coping and recovering phase);
- ✓ Both crisis and disaster management influences susceptibility and fragility, determining the grade of vulnerability of the society;
- ✓ The challenges may be controllable or un-controllable depending on the size of the event, the degree of knowledge about it and the available technology to prevent, cope and recover.



THE PROPOSED FRAMEWORK

This is the proposed CAUSATION MODEL (based on MOVE framework, Birkmann et al., 2013): Disaster influences vulnerability of an organization and may generate new crisis within the 8 components of the organization; Crisis increases the vulnerability of a society and may facilitate a disaster when the hazard becomes event.



CONCLUSIONS

- ✓ The paper enriches Shaluf et al. (2003) review of crises and disasters including more recent contributions. A new and more fine-grained classification based on 3 levels (Origin; Effect; Management) is proposed. According to Fawcett et al. (2014), this type of contribution is named "summarization and differentiation";
- ✓ The proposed "Causation Model" allows the integration of the two different phenomena (crisis & disaster) in a unique framework. According to our knowledge, this a "new-to-theworld" entity. The framework contributes to clearly identify and define the two concepts. This contribution type is named "Identification & Integration" (Fawcett et al., 2014).
- ✓ MANAGERIAL IMPLICATIONS: The integration of crisis and disaster in a unique framework guarantees an overview able to generate new managerial implications related to resource management. The emerging findings support the idea that crisis and disaster management are two different and integrated processes that requires dedicated resource management strategies.
- ✓ LIMITATIONS & FURTHER RESEARCH: The study is not based on a systematic literature review. Further research could develop a systematic literature review in order to more in-depth analyze the differences between crisis and disaster and enrich the proposed framework. In addition, an operationalization of the framework is needed in order to strengthen the description of the dynamics that lead from crisis to disaster and from disaster to crisis.

SELECTED REFERENCES

Alexander, D.E. (1997), "The Study of Natural Disasters, 1977–97: Some Reflections on a Changing Field of Knowledge", Disasters, Vol. 21 No. 4, pp.284–304.

Birkmann, J. et al., 2013. Framing vulnerability, risk and societal responses: The MOVE framework. Natural Hazards, 67(2), pp.193–211.

Cruz, A.M. et al., 2004. State of the Art in Natech Risk Management. EU/ISDR Duncan, W.J. et al., 2011. Surviving organizational disasters. Business Horizons, 54(2),

pp.135–142. Faulkner, B., 2001. Towards a framework for tourism distaster management. Tourism Management, 22, pp.135–147.

Hickman, J.R. & W., C., 1997. Before Disaster Hits: A Multifaceted Approach To Crisis Management. Business Horizons, 40(2), pp.75–79.

Keown-McMullan, C., 1997. Crisis: when does a molehill become a mountain? Disaster Prevention and Management, 6(1), pp.4–10.

Oh, C. H., & Oetzel, J., 2011. Multinationals' response to major disasters: How does subsidiary investment vary in response to the type of disaster and the quality of country

governance? Strategic Management Journal, 32(6), 658–681 Pearson, C.M. & Clair, J.A., 1998. Reframing Crisis Management. Academy of Management

Review, 23(1), pp.59–76. Available at: http://amr.aom.org/content/23/1/59.full. Quarantelli, E.L., 1988. Disaster crisis management. Journal of Management Studies, 25(4), pp.373–385. Available at: http://onlinelibrary.wiley.com/doi/10.1111/j.1467-6486.1988.tb00043.x/epdf.

Shaluf, I.M., Ahmadun, F. & Said, A.M., 2003. A review of disaster and crisis. Disaster Prevention and Management, 12(1), pp.24–32.

Schipper, L. and Pelling, M. (2006), "Disaster risk, climate change and international development: scope for, and challenges to, integration.", Disasters, Vol. 30 No. 1, pp.19–38.

Turoff, M. et al., 2013. Multiple perspectives on planning for emergencies: An introduction to the special issue on planning and foresight for emergency preparedness and management. Technological Forecasting and Social Change, 80(9), pp.1647–1656. Available at: http://dx.doi.org/10.1016/j.techfore.2013.07.014.

Vigdor, J., 2008. The Economic Aftermath of Hurricane Katrina. Journal of Economic Perspectives, 22(4), pp.135–154.

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