

# NEEDS 2021

5th edition of the Northern European Conference  
on Emergency and Disaster Studies

Östersund / online 21–23 September

Abstracts from the panel

Anticipatory governance – Dealing with uncertain futures



EUROPEISKA  
UNIONEN  
Europeiska  
regionala  
utvecklingsfonden

# Pandemic preparedness in a Finnish expert organization before and after COVID-19

**Corresponding Author:**

Helmi Räisänen  
University of Helsinki Finland  
helmi.raisanen@helsinki.fi

**Author(s):**

The ongoing COVID-19 pandemic has had devastating consequences around the globe. National responses to the pandemic have not been coordinated, and there has been great variation in how nations were prepared to deal with a public health emergency of this magnitude. Yet the situation did not come as a surprise to infectious disease experts who had been warning that the next pandemic is just a matter of time.

In this paper, I describe an ethnographic study of pandemic preparedness. The time frame of the study extends from 2017 to 2021. I focus on the infectious disease expert community in the National Institute for Health and Welfare (THL). THL is an independent research institute under the Finnish Ministry of Social Affairs and Health, and it has had a central role in the pandemic response in Finland. The study is based on interview material, participant observation in THL's infectious disease unit during the pre-pandemic phase, and health security related document analysis. Firstly, my aim is to analyse how the experts conceptualize and act on future health threats that are caused by new, emerging pathogens. This leads me to study some of the techno-scientific anticipatory practices that the experts use in order to turn the uncertain future into an object of present intervention. Examples of these practices include disease surveillance networks, health security evaluation processes, and simulation exercises. Secondly, based on interviews conducted during the COVID-19 pandemic, I intend to trace how the actualization of a pandemic has shaped the anticipatory practices and perceptions of preparedness.

This study shows how, in the Finnish case, the common risk-based approach to the management of public health co-exists with vigilance against previously unknown pathogens. The governance of uncertain future does not rely solely on data on historical patterns of disease occurrence. While some practices are converting the future into specific possibilities, other practices aim to leave more space for the unexpected and treat the future as more indeterminate. According to the informants of this study, the COVID-19 pandemic seems to highlight the importance of all-hazards approach to pandemic preparedness.

# Exploring new strategies for firefighting and hazard prevention in Europe's rural areas. Insights from Germany, Austria, and Scotland

## **Corresponding Author:**

Annett Steinführer

Thünen Institute of Rural Studies Germany

annett.steinfuehrer@thuenen.de

## **Author(s):**

Alexandru Brad<sup>1</sup>

<sup>1</sup>Thünen Institute Of Rural Studies, Alexandru.Brad@Thuenen.De, DEU

Volunteer firefighters are a key institution in local hazard prevention in many European countries. In Germany and Austria, for example, they represent over 95% of the firefighting force. In rural areas, the almost exclusive provision of hazard prevention through volunteers is based on a long tradition which is virtually unquestioned and taken for granted to this day. However, in spite of its ubiquity, volunteer firefighting faces significant challenges. For the past years, in many places, the number of volunteers has been following a downward trend due to outmigration, longer commutes, and shifts in the culture of volunteering. Therefore, the strategic planning of firefighting and hazard prevention in rural areas is very much about managing the present. Maintaining the availability of fire and emergency services, keeping up with brisk technological developments, and adapting to novel organisational models are amongst the most relevant topics under consideration.

But what about future-proofing local firefighting beyond securing its mere functioning? Drawing on an analysis of German, Austrian, and Scottish policies, we observe a common approach binding plausible firefighting futures. In essence, maintaining the reliability of the service is inextricably adjoined by cuts in spending through a more efficient allocation of resources, which is broadly enabled through the mass adoption of new technologies. In planning for uncertain futures, two key challenges are widely accepted as an immovable given. A first challenge is demographic ageing which is expected to have both organisational consequences (i.e., through a lack of sufficient prospective younger firefighters) and practical implications (i.e., as rescuing the elderly demands more time and specialised knowledge). A second threat is posed by climate change, which is understood to fundamentally impact preparedness strategies and escalate the severity of upcoming events.

The overlapping and wicked nature of these different technological, social, and environmental transformations pose a significant challenge for a system that is almost exclusively based on volunteers. In our research, we are particularly interested in how local fire brigades handle these challenges and whether their small-scale innovations can be transferred to other places. To this end, we offer initial insights into our exploratory research based on semi-structured interviews with firefighters and policy experts in Germany, Austria, and (as a contrasting example with a distinct governance of firefighting) Scotland. The local projects and broader strategies we investigate vary from piecemeal approaches to radical transformation, yet they are bound by the aim of adapting to the afore-mentioned challenges.

# Pouring from a Full or Empty Cup? A Survey on How Non-Profit Oriented Organizations Exercise Enterprise Risk and Continuity Management

## **Corresponding Author:**

Eula Bianca Villar

Asian Institute of Management Philippines

[ejvillar@aim.edu](mailto:ejvillar@aim.edu)

## **Author(s):**

Carl Vincent Caro<sup>1</sup>

<sup>1</sup>Asian Institute Of Management, [Carlcaro.EMDRCM2021@Aim.Edu](mailto:Carlcaro.EMDRCM2021@Aim.Edu), PHL

Enterprise risk and continuity management is a key organizational process allowing organizations to identify and address events that entail potential risks in achieving their strategic and operational objectives. It is commonly practiced by firms to ensure that risks are controlled and minimally impact their operations and profit. On the other hand, non-profit oriented organizations such as public sector organizations and humanitarian organizations face similar, or in certain instances, more disruptive risks in their day-to-day operations. This is due to their service commitments to their respective constituents, where they are expected to continue operations in disaster and crisis environments. More specifically, these organizations can be classified as essential organizations whose tasks are critical across all the phases of disaster management (Kapucu and van Wart, 2006). There is an abundance of empirical data regarding how such organizations undertake risk and vulnerability assessment in relation to the communities they serve, which in turn form the basis for policy and advocacy initiatives. Curiously, we find that the experience of how these organizations internally manage and strategize around their risks (i.e. at the enterprise level) has yet to be captured fully.

This paper explores the question, how do non-profit oriented organizations exercise enterprise risk and continuity management? We draw on the experience of organizations in the public and humanitarian sectors in the Philippines, one of the most disaster-prone countries in the world (Behlert et al., 2020; UNDRR, 2019). Consequently, such organizations do not only have to manage the risks of their respective communities, but also their risks at enterprise level as they regularly face natural hazards. Using a survey, this study seeks to understand how such organizations manage their risks at the enterprise level, and explore their levels of awareness and utilization of risk and service continuity management. The study also analyzes the converging and diverging points between profit-oriented and non-profit oriented sectors in order to provide a more nuanced understanding of how risk and continuity management can be applied in the context of the latter.

## References

Behlert, B., Diekjost, R., Felgentreff, C., Manandhar, T., Mucke, P., Pries, L., Radtke, K., et al. (2020), WorldRiskReport 2020, Bochum, available at: <https://reliefweb.int/sites/reliefweb.int/files/resources/WorldRiskReport-2020.pdf>.

Kapucu, N. and van Wart, M. (2006), "The Evolving Role of the Public Sector in Managing Catastrophic Disasters", *Administration & Society*, Vol. 38 No. 3, pp. 279–308.

UNDRR. (2019), *Disaster Risk Reduction in the Philippines: Status Report 2019*, UNDRR, Bangkok.

# Securing the power grid through futures. How the lights stay on, and blackouts stay fictional dystopias.

## **Corresponding Author:**

Leonard Schliesser

Department of Geography, Durham University United Kingdom

leonard.f.schliesser@durham.ac.uk

## **Author(s):**

This paper contributes to ongoing debates about the securitisation of everyday life and the governance of emergencies. It explores how anticipation ought to secure and prepare against the loss of the steady flow of electricity while the interconnected European power grids are undergoing a fundamental green and digital transformation. Thereby, I share insights from ongoing fieldwork around Germanies network operators, their regulators and my experience from within the German Federal Agency for Technical Relief (THW) looking at how the power grid as a critical infrastructure and 'vital system' (Collier & Lakoff 2015) is (digitally) secured.

The seemingly mundane process of forecasting power demand, generation and network load a day-ahead is shedding light on the immediate role anticipation plays in pre-empting dangerous grid states or the loss of power. A multitude of (automatically) calculated futures is created by different actors, exchanged, traded and fused into the operational schedules for the next day, as well as their intra-day relatives. Synchronised with the rhythms of the power markets and increasingly supported by 'smart technologies' these forecasts should ensure that the control engineers do not have to intervene, yet they must regularly become active to re-establish the network's balance. With the increasing loss of rotating mass, growing numbers of volatile generators as well as increasing powerline load the complexity – understood as the certainty of surprises - of the power grid increases, challenging not only the optimisation algorithms but also the physical limitations of the power grid.

Becoming known through forecasts potential threats to and constraints on the smooth flow of electricity can be identified a day-ahead, intra-day and addressed through the operational schedules while providing the network operator with reliability of expectation. As these forecasts, however, assume that demand, generation and network load are constant in their 60- and 15-minutes intervals they are always missed. Anticipating a deviation from the forecast the network operators are preparing in contracting tiered operating reserve that are supposed to stabilise and re-establish the balance of the grid. Similarly, to 'stockpiles' (Folkers 2018) these reserves function as shock absorbers and mitigate disruptions.

In examining the changing socio-technical constellations of forecasting and preparing that are to 'keep the lights on' this paper highlights how futures in the power grid look like, become governable and where the limits of anticipation lie.

# Preempting the next disaster. The fundamental ambiguity of disaster management

## Corresponding Author:

Sandra Pfister  
University of Linz Austria  
sandra.pfister@jku.at

## Author(s):

Taking the example of disaster management in Austria, the paper argues that disaster management as a realm of the State's self-proclaimed role as the guardian of security and public order is permeated by a fundamental ambiguity: Paradoxically, it relies on both a guarantee for security and the enactment of a threat at the same time.

This ambiguity grounds in common understandings about disasters, which permeate the institutional arrangements of disaster management. A disaster is considered a fundamental disruption of everyday life, undermining the routines and structures that have been taken for granted before. As a consequence, "normality" (the social order *ex ante*) is often proclaimed as a safe haven, which has to be preserved, and – once destroyed – restored. Against this background, security is taken as protection *from* disasters. This protection *from* disasters becomes the purpose, around which a social space of specialized practice, a governmental-induced field of disaster management, is formed.

As a consequence, the abovementioned, fundamental ambiguity becomes a part of the field foundations as well: Its purpose is the solution of a problem, which cannot be solved – meaning that it is *practically* limited – and even *shall* not be solved without undermining its own *raison d'être* – meaning that it is *symbolically* limited. Disaster management needs both to safeguard society facing a potential disaster *and* to fuel the belief in the *potential occurrence of the next disaster*. Otherwise, it will eradicate the reason of its very own existence and the ground for the State's self-enactment as the guardian of security and the savior in need through the realm of disaster management. Taking the example of the Austrian disaster management, the paper illustrates, *how* the practices of security production in the field of disaster management meet these ambiguous requirements, meaning that there is a dual logic that permeates the practice of disaster management. Disaster management is suggested to create both, security (preventing or preparing for the next disaster) and insecurity (preempting the next disaster) at the same time. In other words: in order to promote its utopia of a safe society, it needs the dystopian imagination of a disastrous future as a contrast agent.

# Autopoietic Socio-Technical Systems: A new lens for understanding anticipation

## Corresponding Author:

Gregory Vigneaux

Design Network for Emergency Management United States of America

greg@gregoryvig.com

## Author(s):

Bringing together socio-technical systems theory and autopoietic theory offers insight into the anticipation of risk in emergency management. As socio-technical autopoietic systems, emergency management organizations come into focus as units continually reaffirming their own identity delimited from their environment by a boundary (Maturana & Varela, 1987). Inflows such as funding, information, and technologies enter into the system and are then transformed into outflows through the union of social and technological systems performing work cycles (Trist et al., 1993). As work cycles are completed, they produce outcomes that perpetuate further work cycles, creating a circular process at the heart of identity reproduction. Flowing out of the system are products and services designed to protect communities. Identity reproduction extends beyond these products and services and is tied to their success. The identity of emergency management organizations is constituted by these inflows, work cycles, and outflows, theories about the social and technical systems, and situations that threaten and support identity reproduction (Di Paolo et al., 2017).

From this perspective, anticipation is a component of adaptation. By being adaptive, emergency management organizations can move towards conditions that support identity reproduction, away from those that threaten it, and transform the latter into the former (Di Paolo et al., 2017). The temporal horizon of adaptation becomes extended through the addition of anticipation, where signals indicating eventual threats are acted upon in the present. Anticipation is then grounded in an organization's concern to continually reproduce its identity across time and space. As the organization anticipates, it reaches into the future towards everything that could disrupt the reproduction of identity. It is through this temporal extension that the present becomes intelligible (Stendera, 2015). Recast as an act of finding the future for the purpose of maintaining the identity of socio-technical autopoietic unities, anticipation reveals a landscape where an organization can change inflows, work cycles, and outflows preemptively as it moves across it.

Di Paolo, E., Buhmann, T., & Barandiaran, X. E. (2017). *Sensorimotor Life: An Enactive Proposal*. Oxford, UK: Oxford.

Maturana, H. R., & Varela, F. J. (1987). *The tree of knowledge*. Boston, Massachusetts: New Science Library.

Stendera, M. (2015). Being-in-the-world, temporality and autopoiesis. *parrhesia*, 261-284.

Trist, E., Gurth, H., Murray, H., & Pollock, A. (1993). Alternative work organizations: An exact comparison. In E. Trist, H. Murray, & B. Trist (Eds.), *The social engagement of the social science: A Tavistock anthology*. University of Pennsylvania Press.

# Anticipating futures: preparedness under radical uncertainty in Gujarat, India

## Corresponding Author:

Shilpi Srivastava

Institute of Development Studies United Kingdom

s.srivastava2@ids.ac.uk

## Author(s):

Lyla Mehta<sup>1</sup>, Shibaji Bose<sup>2</sup> and Tom Ainsworth<sup>3</sup>

<sup>1</sup>Institute Of Development Studies, L.Mehta@Ids.Ac.Uk, GBR

<sup>2</sup>Independent Consultant, Shibbose@Gmail.Com, IND

<sup>3</sup>University Of Brighton, T.Ainsworth@Brighton.Ac.Uk, GBR

Changing rainfall patterns caused by climate change can increase the severity and frequency of both droughts and floods. This is a cause for concern when these historically new patterns occur in drought-prone areas. For example, in 2019 after the hottest summer on record, a delayed monsoon in India brought floods to several historically drought-prone regions. This sudden deluge caught local people and agencies off-guard and unprepared. While the Indian monsoon has always been notoriously difficult to predict, anthropogenic climate change has dramatically altered the scale and incidence of extreme weather events. Climate scientists are struggling to understand these changes because of uncertainties in observations and climate models. It is unclear what implications these changes have for the ability of people and organisations to deal with their impacts. While local communities in arid rural areas may be used to adapting to the uncertainties around drought, the incidence of floods in drought-prone regions is stretching the planning and response capacities of both individuals and public agencies. This has led to what we conceptualise as radical uncertainty in this paper. As such extreme events become more pervasive globally, new ways to deal with climatic uncertainty are required, which will involve acknowledging knowledge pluralism as well as novel ways of understanding, anticipating and reimagining for socially just transformation in the context of climate change. Instead of seeing uncertainty as potentially apocalyptic and disruptive, we explore how such events can foster new forms of knowledge-making and collaboration, which could lead to better preparedness.

We focus on the Indian state of Gujarat, where extreme variability (floods and droughts) has pushed pastoralists, dryland farmers and fishers to the limits of coping. Drawing on ethnographic insights, we conceptualise radical uncertainty through the lived experiences and everyday practices of marginalised communities and explore how preparedness can be re-imagined from the ground up.



# Assemblage Theory & Disaster Risk Management: conceptualising disasters-in-the-making

## Corresponding Author:

Peter McGowran

King's College London United Kingdom

[peter.mcgowran@kcl.ac.uk](mailto:peter.mcgowran@kcl.ac.uk)

## Author(s):

This talk will discuss how assemblage theory provides a useful theoretical basis for analysing disasters temporally. Discussion will centre around the idea of the 'Disaster Risk Management (DRM) Assemblage' (Donovan, 2017; McGowran and Donovan, 2021). The DRM Assemblage is conceptualised in two distinct but connected forms. The first is as an overarching analytical tool or conceptual approach that can be used to investigate the drivers of emergent disaster risk. The second form is the idea of DRM Assemblages as objects of study themselves. In the latter conceptualisation, DRM Assemblages are the constellations of policies, institutions, ideas, and actors that 'manage' – but also contribute to – disaster risk. A DRM Assemblage approach incorporates well-established ideas from assemblage thinking on non-linearity, interconnected-ness and the more-than-human nature of the world (Anderson and McFarlane, 2011), but also trains the researcher's focus towards futures (Adam and Groves, 2007) and/or 'disasters (McGowran and Donovan, 2021) 'in-the-making'. Looking backwards, this approach helps researchers to unpick how past disasters emerged from the relationships between political and economic decisions, physical processes, and the vulnerabilities of those affected (Wisner et al., 2003). For the purposes of studying present and future disasters, the idea of disasters-in-the-making can aid in investigating and explaining how present decision-making (or lack thereof) is contributing to as yet unmaterialised disasters-in the making. The idea also speaks to the critical literature on emergency governance that explores how states – amongst other institutions – 'make' imaginaries of disaster in order to further political agendas and reinforce power relations (Adey and Anderson, 2012; Agamben, 2005). Empirical examples from the literature will be used as explanatory tools throughout.

## References:

Adam B and Groves C (2007) *Future Matters: Action, Knowledge, Ethics*. Brill.

Adey P and Anderson B (2012) Anticipating emergencies: Technologies of preparedness and the matter of security. *Security Dialogue* 43(2): 99–117. DOI: 10.1177/0967010612438432.

Agamben G (2005) *State of Exception*. book. Chicago: University of Chicago Press.

Anderson B and McFarlane C (2011) Assemblage and geography. *Area* 43(2): 124–127. DOI: doi:10.1111/j.1475-4762.2011.01004.x.

Donovan A (2017) Geopower: Reflections on the critical geography of disasters. *Progress in Human Geography* 41(1): 44–67. DOI: 10.1177/0309132515627020.

McGowran P and Donovan A (2021) Assemblage Theory and Disaster Risk Management. *Progress in Human Geography* (Forthcoming).

Wisner B, Blaikie PM, Cannon T, et al. (2003) *At Risk II: Natural Hazards, People's Vulnerability and Disasters*. Florence, UNITED STATES: Routledge. Available at: <http://ebookcentral.proquest.com/lib/kcl/detail.action?docID=182221>.