

Adapting to Risk Under Austerity: Case Studies from Europe and the Caribbean

Dr Arabella Fraser and Prof Mark Pelling, King's College London;
Dr Stavros Mavrogenis University of Athens;
Dr Anna Scolobig ETH-Swiss Federal Institute of Technology



The PEARL project



- Preparing for Extreme And Rare events in coastal regions
- EU-Funded, 2014-2017, led by UNESCO-IHE
- Principal objective: Design and implementation of holistic and structural solutions to flood risk in coastal communities
- Includes the investigation of the root causes of risk and vulnerability; and the incorporation of root cause analysis into holistic risk assessment models and policy-making processes
- Focus: small-scale but high-impact disasters



Investigating the root causes of coastal risk and vulnerability: approach and methods



- Approach:
Adapted FORIN (Forensic Investigations of Disasters) Methodology
Systematic investigation of historic causes of risk across the physical and social science domains.
Disaster events 'reveal' causality.

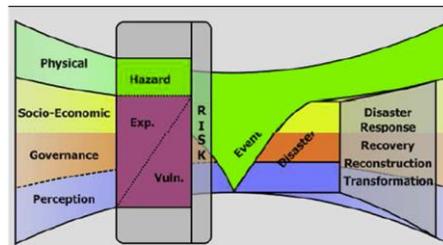


Figure 1. PEARL Root Cause Analysis Framework based on the FORIN approach, Fraser et al. 2014

- Case studies: Genoa, Italy (2011 and 2014 floods)
Rethymno, Crete (annual flooding)
St Maarten, Dutch Caribbean (2014 hurricane and flooding events).
- Specific methodologies: desk reviews; semi-structured interviews.

Understanding Risk Dynamics and Drivers: Conceptual Frameworks



- **Root Cause Analysis:** Using history to understand systemic root causes of risk; linking risk and development; broadening spatial and temporal scales of analysis; prioritising governance.
- **Double Exposure:** Generalised (structural) approach to understanding the interactions between large-scale environmental and economic shifts and their influence on risks and vulnerabilities (Leichenko et al. 2010); extended to understand influence on adaptation planning and policy and changing discourses as well as practices (Jeffers 2013).
- **Pathways:** Overlap with Root Cause Analysis; also emphasises the importance of framings and values by different actors under conditions of uncertainty (Leach et al. 2010)
- A risk and root cause pathways approach allows us to see:
 1. The interaction of institutional and economic change together
 2. The differentiated effects of austerity across institutional scales and time-frames, its positive and negative effects
 3. Agency in responses.

Emergent themes: risk, resource constraint and institutional stasis / shift



Figure 2. St Maarten: Philipsburg 1950 and 2015

- * Deeper background urbanisation, economic development and associated political visions, narratives and vested interests
- * Risk management shaped by institutional relationships across jurisdictional and spatial scales in which the role of local government / governance is key
- * Resource constraint, including the recent impacts of austerity

Case study 1: Genoa and the Bisagno river



Yellow area: river covered

100,000 inhabitants at high risk

Case study 1: Genoa, Italy



- **Role of political culture as it plays out at the local level is key:**
- The legislative procedure to allocate tenders for building protection works has proven dysfunctional. Local authorities accused of corruption in the selection of the building companies. This causes extreme delays in the realisation of structural mitigation measures (funded from other levels of government and by the EU) which are paradoxically blocked by anti-corruption drives.
- Also affected by a culture of over-regulation, inadequate human resources and political short-termism.

Case study 1: Genoa, Italy



- Austerity measures since 2011 exacerbate bureaucratic weakness, constraining local-level spending and human resources; risk mitigation loses priority at the local and regional scale
- Critical interventions at the national and EU scale: 'unblock Italy' decree to overcome political and bureaucratic inertia / EU Flood Directive standardises risk assessments and changed criteria for funding allocations across regions
- National-level discussion about infrastructure investments as economic stimulus, which could include risk protection measures

Case study 2: Rethymno, Crete



Case study 2: Rethymno, Crete



- Impetus for infrastructure construction in the 1990s comes from pro-active mayor who draws on EU funding: 'EU funds provided a tipping point that opened a window of opportunity for Rethymno to reduce its vulnerability through large-scale hard engineering measures'
- From 2008 access to finance for local authorities becomes more difficult
- Stakeholders shift strategy to consider smaller-scale infrastructure works, greater consideration of maintenance and non-structural measures
- Also draw on non-governmental sector, e.g. request help from construction companies with clean-up
- Austerity ruptures social contract based on clientelism and political party ties, new possibilities for social engagement

Case study 2: Rethymno, Crete



- At the same time, both austerity and institutional reform weaken capacity for disaster risk prevention and planning:
 1. Regional and local headquarters severely under-staffed; disaster risk reduction planning suffers
 2. 2010 reform moves power to regional level, from civil protection to fire brigade
- Persistent lack of stakeholder engagement due to local politics
- Pre-existing institutional fragmentation at national level delays local implementation of the EU Flood Directive and Hyogo Framework

Case study 3: St Maarten, Dutch Caribbean



Case study 3: St Maarten, Dutch Caribbean



Influence austerity:

- Heavily influenced by US economy, less of a downturn than other Caribbean islands, but budgets cut over a number of years
- Different relationship to European institutions, but European funding for infrastructure cushions effect of 2009-2011 slump
- Strategies for managing austerity embedded in local political cultures and practices - 'small island mentality' provides resilience

Case study 3: St Maarten, Dutch Caribbean



- Devolution reform 2010 reduces access to Dutch finance and debt relief deal constraints government finance
- Enables more direct access to knowledge and funding, allows for development locally-appropriate knowledge
- Clientelism and lack of developed party system means short-term economic gain and favours prioritised over risk reduction except in emergency situations; politics of land ownership prevents proper land use planning; political short-termism exacerbated with autonomy disrupts initiatives; weak civil society in terms of scrutiny

Conclusions: Pathways to risk and adaptation



- Pathways are defined by the ways scalar shifts in governance and responses at different scales interact with the impact of economic constraint
- Local governance issues and strategies seem as important as structural changes brought by austerity at the European and national levels for adaptive capacity and action
- The extent and type of impact from austerity measures are shaped by interplay between local contexts and histories and national, regional and international processes, including the introduction of the European Flood Directive and provision of EU finance as well as institutional reform
- Austerity presents opportunities as well as constraints; the effects of austerity measures are felt differentially at different scales but negative impacts concentrate at the local level; new strategies emerge in response

Adapting to Risk Under Austerity: Case Studies from Europe and the Caribbean

Dr Arabella Fraser and Prof Mark Pelling, King's College London;
Dr Stavros Mavrogenis University of Athens;
Dr Anna Scolobig ETH-Swiss Federal Institute of Technology

