



# The politics of expertise in building back better: Contrasting the co-production of reconstruction post-Irma in the Dutch and French Caribbean

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## ARTICLE INFO

### Keywords:

Build back better  
Disaster recovery space  
Knowledge co-production  
Transformation  
Caribbean

## ABSTRACT

Reconstruction processes in post-disaster contexts are both technical and political. In the face of growing losses from disasters to human development, we question how the call to Build Back Better (BBB) is rendered authoritative in different governance settings through the mobilisation of expertise and knowledge. Bringing the idea of knowledge co-production from Science and Technology Studies into critical studies of post-disaster politics, we contrast the politics of expertise emergent after Hurricane Irma in French St Martin and Dutch St Maarten. Although they share a common geography, reconstruction processes unfolded very differently across these two island settings. Governance arrangements contributed to the delineation of different 'recovery spaces', *i.e.* the actors, their resources, relationships and visions as constituted by and through different forms of post-disaster knowledge and expertise. Comparative analysis of these spaces shows how highly differential knowledge outcomes emerged out of common processes on both sides of crafting multiple forms of political legitimacy in order to undertake reconstruction activities. Through the notion of interactional coproduction we illustrate how such processes both drew on established historical repertoires as well as contained potential for co-evolution, which cautions against deterministic views of the relationship between reconstruction actors, their interests, and knowledge claims. Mobilising the contrast between two differing governance regimes that nevertheless share common histories of colonial and post-colonial development as well as environmental hazard, we argue that knowledge co-production needs to be understood in order to take advantage of the emergence in post-disaster policy regimes of possibilities for progressive transformation, but that these are ambiguous and contingent moments in which expertise becomes a flexible political resource through which to both constrain or enable Building Back Better.

## 1. Introduction

In this contribution we take up Cretney's invitation to develop a 'critical geography of disaster recovery politics' (2017) by bringing Science and Technology Studies (STS) in conversation with critical human geography to interrogate the contemporary operationalisation of 'Build Back Better'. We are motivated, like others who have explored the nature of disaster response in the Caribbean and beyond (Rhiney 2018; Moatty et al 2021), by questions of how impulses for transformative change might emerge within contested and non-linear processes of disaster recovery. As noted elsewhere (Tironi 2014), disasters bear some similarities with what knowledge controversies are for STS: they render

visible the fabric of societies. Disaster events can be understood as 'experimental events' (Stengers 2005), that is 'moments of ontological disturbance in which the things we rely on as unexamined parts of the material fabric of our everyday lives become molten' (Whatmore 2009:587). They allow for the expression of diverse forms of contestation and make visible alternative visions for development and future imaginaries (Manuel-Navarrete et al., 2011; Dickinson 2018). This has the potential to lead to political reconfiguration, but too often also leads to the re-assertion and even expansion of the status quo (Cretney & Bond 2014; Pelling & Dill 2010).

In the face of growing losses from disasters, the call to Build Back Better (BBB) has been increasingly promoted in international

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<https://doi.org/10.1016/j.geoforum.2023.103813>

Received 9 July 2022; Received in revised form 12 May 2023; Accepted 13 June 2023

Available online 9 August 2023

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agreements and humanitarian responses as an opportunity to connect frameworks for disaster risk reduction with the achievement of broader development goals (UNDRR, 2017). Building on the assumption that disasters can be catalysts for change, the BBB concept is generally understood as an opportunity to reconstruct differently to address both physical and social elements driving exposure and vulnerability to risk (Berke & Beatley 1997; Mannakkara and Wilkinson 2014). In practice, different reconstruction processes mobilise different discursive framings promoted as transformative, from resilience to 'Build Back Better'. These framings have themselves been the object of growing academic scrutiny (Cretney 2014; Cheek & Chmutina 2022; Collodi et al 2021); work on resilience, for example, has highlighted how the concept may act as a vehicle for a neoliberal approach to disaster risk reduction, shifting responsibilities on to individuals (Rhiney 2018). This prompts us to ask: better reconstruction for whom and by whom? For what?

Emerging studies deploying Science and Technology Studies to examine the nature and impact of disasters reveal the hidden politics and power of expertise and knowledge during disaster events as well as in the processes of managing risks (Donovan 2017; Fortun et al 2016). Drawing specifically on the knowledge coproduction idiom (Jasanoff 2004), as identified as a critical mediator of recovery pathways (e.g. Pelling et al 2022), we examine the politics of expertise in what we call the 'recovery spaces', *i.e.* the actors, their resources, relationships and visions as constituted by and through different forms of post-disaster knowledge and expertise, produced post Hurricane Irma on the binational island of Dutch St Maarten and French St Martin. Situated in a region characterised by constrained sovereignty even across multiple forms of post-colonial governance arrangements (Sheller 2020; Boatcă, 2021), hurricanes Irma and Maria also wrought an epistemic 'break point' in the study of Caribbean disasters to call into question the persistent colonial power dynamics shaping supposedly 'post-colonial' processes of reconstruction, recovery and resilience-building (Moulton & Machado 2019). The use of the co-production idiom, we argue, moves beyond existing accounts of post-disaster governance and its relationship to expertise to open our understanding of the relationships between knowledge, actors and their interests, both within these power arrangements, as well as across different governance settings.

## 2. The co-production of expertise and knowledge in disaster recovery spaces

The realm of 'post-disaster politics' has emerged in the past decade as a reinvigorated subject of enquiry through which to ask whether disasters can catalyse change in risk reduction practices, and under what conditions (Birkmann et al. 2010). Understood as spaces of political contestation invoking struggles between actors over symbols and discourses as well as material actions, such crisis moments both provoke rupture but are also shaped by pre-disaster conditions and agendas (Cretney 2017; Pelling and Dill 2010; Cannon 1994). In tandem, new resource flows also often shift the networks of actors involved in governance and usher in the entry of new, private interests (Feener and Daly 2016; Kelman 2011). Within such spaces, the barriers to transformative changes, including those to governance regimes (Thomalla et al. 2018), have been identified in the resources, skills and power relations between actors (Pelling and Dill 2010), and the accompanying visions, narratives, interests and frames that guide the actions of different organisations (Lebel et al., 2017; Phelps et al., 2011). In the Caribbean, the ongoing predominance of US and European political and economic interests, even in those territories that have moved to independence or greater autonomy, have brought to debates about post-disaster politics new understandings of the ways in which structural legacies of earlier eras of colonisation as well as the power dynamics of the contemporary post-colonial era have inhibited effective and inclusive change (Moulton and Machado 2019; Bonilla 2020).

The roles played by different forms of knowledge and expertise in the politics of post-disaster reconstruction, as well as in longer-term

recovery processes, have been largely under-examined. Although expertise is often presented as neutral and objective, expertise is another form of political representation (Brown 2009) and a way to exert power and influence (e.g. Kuus 2013; Ezrahi 1990). STS studies therefore prompt us to shift the object of focus of existing post-disaster frameworks to ask not only what formal responses emerge out of disasters, such as the declaration of buffer zones, early warning systems or legislation (Birkmann et al 2010; Jones et al. 2022), but also how such actions are produced and made authoritative by and through technology, knowledge and expertise, for whom and to the exclusion of what (e.g. O'Connor et al., 2014; Drury et al 2005). Disasters can produce significant redistribution of powers through creating new knowledge topologies (Donovan 2017) with common methodologies deployed in disaster risk reduction such as risk assessments and hazard mapping in effect value-laden and associated with particular socio-political contexts (Borie et al., 2019a; Fraser, 2017; Borie et al 2019b). The coproduction framework as derived from STS highlights that knowledge, politics and values are mutually constituted (Jasanoff 2004). In particular the notion of interactional co-production points up how contexts of new opportunity and understanding interact with existing institutions and practices to reshape older (constitutive) knowledge claims and categories (Forsyth 2020).

In the context of what we call disaster recovery spaces coproduction offers a productive way of understanding relationships between governance, expertise and knowledge as well as underlining the constitutive role of science and technology in different visions of Building Back Better. In difference to other authors' descriptions of post-disaster arenas (e.g. Feener and Daly, 2016), with this concept we direct attention to the ways in which these spaces are produced post-disaster and to how actors, their resources, relationships and visions are constituted by and through different forms of knowledge and expertise (as for Forsyth's analysis of 'political forests' (*ibid.*)). Less oppositional than other contemporary readings of disaster response, this approach opens space to account for the myriad and often unresolved processes through which expertise and knowledge is configured by actors and their interests, but also the differential knowledge outcomes of those processes. As for assemblage approaches (Müller, 2015; Kinkaid, 2020) to disaster risk management, also being mobilised within the disasters studies literature to understand how networks of actors, infrastructures and knowledges come together to produce disaster risk and response (McGowran & Donovan 2021; Donovan 2017; Angell 2014), co-productionist analysis provides a more thickened context for understanding how disasters reconfigure institutions and institutional thinking than previously-held notions of a singular 'tipping point' or 'window of opportunity' related to a discretely occurring disaster event (Moatty et al. 2021). However, in counterpoint to assemblage descriptions of how networks of actors and things re-configure post-disaster, we use co-production to focus greater attention on the relationship between political authority and expertise, and how particular arrangements 'come to be'.

These questions of knowledge/power are increasingly accounted for in risk and resilience thinking – and allied with the use of assemblage concepts - by bio-political explanations of power and its disciplining force, beyond modes of direct coercion (Grove and Pugh, 2015). Indeed, this has been strong focus of Caribbean studies of post-disaster response. Both Rhiney and Moulton and Machado use a bio-political lens to demonstrate how ideas of resilience are deployed politically to create particular forms of subject – both particular forms of post-colonial territory, as well as particular forms of individualised response (Rhiney 2018; Moulton & Machado 2019). Whilst also seeking to problematise the relationship between power and critical inter-related constructs such as resilience and Build Back Better in this paper, we use coproduction to show up more strongly the two-way relationships between expertise and politics. It enables us to ask not only how knowledge created about and around particular reconstruction and recovery processes constitutes power, but also how the objects of knowledge themselves, such as risk assessments or new building regulations, embody such power relations,

values and discourses (e.g. Fraser 2017). Putting this idea to work in a comparative study immediately reveals, as for other STS studies of regulatory regimes, remarkable differences in processes of evaluating and incorporating expertise in policy as well as in the knowledge outcomes of such processes (e.g. Jasanoff et al 2021; Miller 2008). Within and beyond existing accounts of biopolitical power, we seek to break open how and why such differences emerge even within a commonly acknowledged post-disaster context of ‘histories of colonialism, neoliberal extraction, structural adjustment, imposed austerity, and the intense intersectional violences of racial capitalism’ (Popke and Rhiney 2019).

In this way, coproduction invites us to interrogate the ways in which knowledge and expertise can open possibilities for transformation as well as close them down. It facilitates a more nuanced view of the alignments between knowledge, actors and their interests than one focussed on ‘discipline from above’ and the response from ‘below’, although this form of disciplinary power is indeed also constitutive of authority. This also allows us to raise questions about how depoliticisation through the production and use of technical knowledge (as a strategy through which actors manoeuvre for legitimacy and support, and key to biopolitical power) functions within a wider set of politics and with what effects. As Büscher (2010) argues, ‘anti-politics’, or the concealing of ideological difference through technicalising problems and solutions, is inherently political, works differentially across contexts and is often an incomplete project. It can obscure contested histories of development and marginalise the relational processes that give rise to vulnerability and inequality (Mikulewicz and Taylor, 2020).

Drawing together critical geography scholarship with insights from STS, we analyse how and why particular forms of post-disaster knowledge and expertise emerged post hurricane Irma. Whilst mindful that recovery processes and outcomes are shaped by the interactions between different knowledges and experiences that arise across multiple societal actors (Donovan 2021; Collodi et al. 2021), and the racial, class and other societal cleavages that are at play in this process, we focus more closely on the institutional landscape of policy actors involved in forging reconstruction in a particular moment of time. This closer focus on the expertise constructed by respective policy ‘elites’ is nevertheless revealing of power relations, subtler break points to dominant power as well as variation across post-colonial regimes.

### 3. Methodology

The research approach focused on two inter-related spaces in which expertise and knowledge was being mobilised for reconstruction and recovery, across the two island settings. First, the overall construction of different visions of reconstruction, which were articulated through different discursive frames (some explicitly engaging with the ‘Building Back Better’ concept while others, especially in Saint Martin, did not), and their operationalisation. Second, the knowledge and expertise developed in relation to the land use and housing sector, given the known critical role of land use planning and building regulation as driver of risk (Fraser, 2016; Duvat, 2008), and the extensive damage done to the housing sector by hurricane Irma. This allowed us to understand the broader political contexts for knowledge production, as well as develop a detailed understanding of the evolution of a particular regulatory regime within this.

The main mode of data collection was in-depth semi-structured interviews, conducted according to an interview guide which probed the relationship between the factors influencing ‘disaster recovery politics’ with the role of expertise and knowledge pre and post disaster: i) Actors: the role of the individual and their respective organisation in the reconstruction process, including their relationship to other actors; ii) Vision / imaginary: their vision and priorities for reconstruction; iii) Resources: their capacities, including their relationships to other actors and iv) Expertise and knowledge produced, deployed and used.

Interviewees were first approached based on their participation in a study conducted by one of the authors on the island in 2015. We then snowballed out from these initial actors to capture a variety of perspectives. When selecting interviewees, state actors across the Dutch, French, St Maarten and St Martin governments were particularly important given their role in setting regulatory frameworks and in financing the reconstruction process, but we also interviewed representatives of NGOs and expert organizations contributing to reconstruction activities (see Table 1). The site and mode of interviewing varied, with interviews conducted during fieldwork in March 2018 on both the Dutch and French sides of the island, through a field visit to interview French officials in Paris in April 2018, and via telephone and skype interviews throughout January-July 2018. This brought flexibility to the research process, given the difficulties of reaching all stakeholders during a limited timeframe for fieldwork. The quality of the interviews was seemingly unaffected by being face-to-face or virtual, and depended more on relationships of trust with stakeholders (aided by prior fieldwork and our involvement in a larger research project on the island). Approaches to interviewing were adapted depending on the interviewee’s background and the language of the interviews (French or English); the prompts were tailored (e.g. reference to specific reconstruction documents) to fit each context.

The research reflected viewpoints expressed in a particular moment in the recovery process. Relief, reconstruction and recovery responses were overlapping, but enough time had passed since the disaster events for ideas and strategies for reconstruction and recovery to be under formation, even if the full implications for longer-term recovery outcomes were not yet apparent. The distance in time from the disaster and immediate relief efforts also allayed ethical concerns about taking up stakeholder time for research during a humanitarian emergency. Nevertheless, time pressures on stakeholders and political sensitivity meant we were unable to directly access particular policy elites, such as local politicians or the World Bank. Guaranteeing confidentiality and anonymization was key as in such small island contexts interviewee identities are easily revealed. Interview codes have therefore been removed in the publication of the results. In addition to interviews, our understanding of each reconstruction process was buttressed by analysis of a corpus of documents including reconstruction strategies published after the disaster, institutional reports and guidelines, and a compilation of media articles retrieved using systematic searches conducted through the Lexis Nexis database (search terms: Irma & St Martin; Irma & St Maarten) as well as searches of local newspapers not reported in this

**Table 1**  
Organisations interviewed for the study (N = 25).

Dutch St Maarten	French St Martin
Dutch Red Cross	French geographer (CNRS)
Ministry of Public Housing, Spatial Planning, Environment and Infrastructure (VROMI)	French academics
Meteorologist, Ministry of Tourism	French Development Agency
Engineer (ICE)	St Martin Nature Reserve
Broadcast journalist	Conservatoire du Littoral (French Coastal Conservatory)
Department of Social Development	Trait d’Union – France Victimes
VNP (Dutch Representation in St Maarten)	SXM Verde (waste management)
Disaster Risk Management Unit of St Maarten	Disaster Risk Management Unit, Local Authority
Salvation Army	Urbanism Unit, Local Authority
Policy Department, VROMI	Regional Cooperation Unit, Local Authority
United Nations Development Programme (UNDP)	Meteo France Guadeloupe
United Nations Children’s Fund (UNICEF)	Inter-ministerial delegate for the reconstruction of the islands of St Martin and St Barthelemy (Paris)
International Cooperation Agency of the Association of Netherlands Municipalities (VNG)	

database. In addition, our prior analysis of the structural drivers of risk on the islands (Fraser, 2016; PEARL 2018), provided us with an important ‘baseline’ through which to understand whether different post-Irma reconstruction strategies addressed underlying, transformative issues.

The overall corpus of data including interview transcripts in English and French was coded for each island jurisdiction according to emergent themes (actors, capacities, knowledge(s) / expertise(s) pre- and post-Irma, visions), with continuous triangulation and thematic development undertaken between the authors.

#### 4. The context for St Martin/St Maartens’ recovery spaces post-Irma

The case study of the Caribbean islands of Dutch St Maarten and French St Martin post Hurricanes Irma and Maria in 2017 (see Fig. 1) provided us with a unique opportunity to interrogate questions about co-production in a post-disaster context in which differences in institutional and governance context could be set alongside strong commonality in colonial and post-colonial histories of socio-economic and political change, and in experience of hazard. Both St Maarten and St Martin have seen changes in their administrative and political status that mark a more autonomous status (Oostindie 2006; Redon 2006), but still within post-colonial arrangements in which certain powers have been retained by the Dutch and French central governments respectively. The differences in governance system between the two islands have been described as ‘negotiated autonomy’ (for the Dutch territories) vs. ‘shared sovereignty’ (for the French) (Skinner 2006). Since 2007, St Martin is a French overseas collectivity (COM) administered by the French government with more autonomy than metropolitan French regions but less than St Maarten. Since 2010, St Maarten is one of the constituent countries of the Kingdom of the Netherlands but has its own government, Prime Minister, and Parliament. Geographically this binational island is situated on the hurricane belt and has experienced five major hurricanes since 1960 (Duvat et al 2021).

The influence of differences in governance environment across the two jurisdictions had already been highlighted as significant for risk management by earlier studies showing its importance for regulation (Redon 2006; Duvat 2008). The mode of French building control was particularly salient in reducing loss and damage on St Martin in comparison with St Maarten post hurricane Luis in 1995.<sup>1</sup> This reflected the way regulations in St Martin, as an Ultra-Peripheral Region of the EU, are standardized by national and EU policy frameworks, whereas St Maarten is part of Overseas Countries and Territories and is not subject to European legislation. Conversely, during Irma, the informal application of a US building code set to high wind speeds protected St Maarten better than St Martin, however, where a national building code was more strongly (if still under-) applied but too light in specification for Irma’s winds. In 2017, the damages caused by Irma fell disproportionately on French St Martin, as damages due to marine submersion and flooding were driven to the French side by the particular trajectory of Irma and the topography of the island. Nevertheless, the damages were extensive on both sides, with 70–90% of St Maarten’s housing stock affected, of which 2,044 houses were severely damaged or destroyed (World Bank 2020), while St Martin experienced 60–70% of houses affected, of which 3,809 were severely damaged or destroyed (Jouannic et al. 2021). Recovery was exacerbated by low insurance coverage, particularly among low-income populations – with fewer than 50% of affected households in St Maarten covered (Jouannic et al. 2020; World Bank 2020).

Although devolution processes gave both sides more autonomy, this

<sup>1</sup> Note reflecting on ‘The Use of Check Consultants in Design and Construction’ written by Tony Gibbs in 2003, at the time Director/Consultant, Consulting Engineers Partnership Ltd, with activities principally in the Caribbean.

is held to have exacerbated the de-prioritisation of risk management relative to economic development in both contexts (Duvat et al. 2021; Fraser et al., 2020). St Maarten, with strong economic interests in mass tourism, confronted the consequences of a developmental “free for all”: a building code dating from 1935 and poorly specified for hurricane impacts, a high proportion of unlicensed buildings and low inspection rates, decades of discussions about new land zoning policies which had never been given legal status and the development of flood maps by UNESCO but poorly used across government agencies (Fraser, 2016). These broad pathways for risk accumulation were mirrored on St Martin, where late and poorly enforced regulations on land use and building codes failed to prevent coastal urbanisation and development driven by economic reliance on tourism (Duvat et al. 2021), although French St Martin saw a later onset of deregulation and investment (from the 1980s), a different model of tourism development (high-end rather than mass tourism), lesser population density, and higher poverty. In both cases, poverty related to rapid immigration – and in the context of high social disparity – has been a major source of vulnerability and has led to rapid urbanization with construction in at-risk areas, and in informal settlements (Duvat et al 2021; Fraser, 2016; World Bank 2020). In the case of St Martin, territorial and social segregation based on class and race has historically been exacerbated by hurricane impacts (Jouannic et al. 2020). Although more akin in governance to other semi-autonomous territories, in common with all other Caribbean territories, both administrations have been sub-administered by their respective colonial powers, with the legacy of direct colonial rule both revealed and structural dependencies on colonial power deepened in moments of disaster, and the complexities of disaster response exacerbated by tensions around colonial governance structures (Bonilla 2020; Donovan 2021). Far from viewing our case studies as bounded exemplars of vulnerability or resilience (see Chandler & Pugh 2020), we seek to elucidate the extra-territorial networks of expertise and knowledge in which post-disaster processes become entangled. While to some extent the detail of these processes on a uniquely divided small island is incomparable, there is also wider resonance from our case studies in that all post-disaster processes involve struggles for authority and legitimation involving local and extra-local actors (e.g. Gaillard et al 2008; Kelman 2011).

#### 5. Findings: contrasting co-production in St Martin and St Maarten’s reconstruction processes

We outline in three sections how contrasting forms of interactional co-production emerged post-Irma. In the first section, we show how new governance arrangements for reconstruction were constituted, and embodied different discursive framings of reconstruction, and associated with divergent ways of mobilising expertise. In the second, we examine the genesis and influence of these ideational struggles post-Irma, framed in both cases by tensions over autonomy under devolved, post-colonial administrations, but revealing of different political strategies of legitimation that enrolled different forms of expertise and gave rise to contrasting processes for knowledge production. In the third, we ground analysis of the contrasting processes and outcomes of knowledge production in an examination of the re-working of building repair guidelines and land use regulation.

##### 5.1. The governance of expertise: internationalisation vs internalisation

In Dutch St Maarten, the scale of Irma’s impacts prompted a national-level response, grounded in historic agreements for Dutch assistance in the event of disaster and a constitutional settlement with St Maarten which restricted debt financing for the island. The response was marked by the re-imposition of Dutch conditionality and the subsequent internationalisation of the response. The entry of Dutch reconstruction finance was first made available exclusively to non-state actors, including a preponderance of international NGOs. Subsequently, the

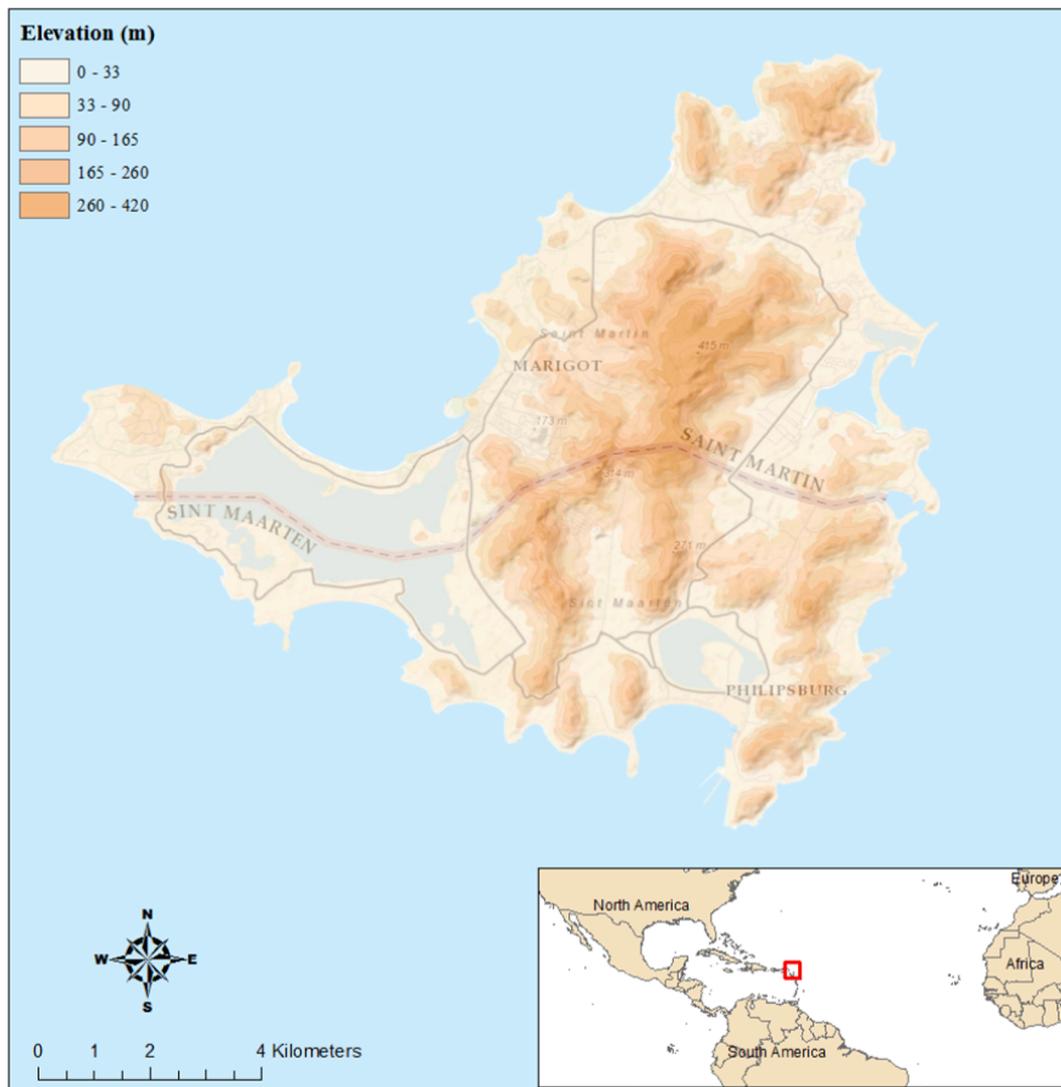


Fig. 1. A map of the binational island, showing the Saint Martin in the North and Sint Maarten in the South, and respective topographies. Source: PEARL 2018

major tranche of longer-term Dutch funding (to 2025) was mandated to be managed through a Trust Fund administered by the World Bank, in consultation with the Dutch and St Maarten governments. Although the situation resembled the nature of other post-disaster responses in the region, driven by external imposition and the uncoordinated arrival of external humanitarian agencies (e.g. Schuller 2012 on Haiti), it was unprecedented for St Maarten. Conventionally St Maarten is not eligible for World Bank grant funding as a high-income state (with higher GDP per capita than Saint Martin). Interviewees discussed how the Dutch appointment of the World Bank as a *de facto* recovery 'mediator' reflected their desire for institutional 'neutrality' and 'experience', over more locally aligned candidates. The internationalisation of recovery efforts in St Maarten was driven by a deep-rooted Dutch concern about governance on the island, and the need for domestic legitimisation of the use of public funds for relief, but also the nature of the island's status as a semi-autonomous territory (echoing the tension between demands for self-sufficiency and control described for the British and French territories by Moulton & Machado 2019). In contrast to French St Martin, as one interviewee described:

*"International actors do not operate on the French side because it is French territory and not a developing country, so they do not have any*

*mandate there, in contrast on the Dutch side there is more flexibility because of the blurred status of St Maarten."*

As noted elsewhere for the Caribbean, the logics of territorial status and particular ways of classifying territory unrelated to risk trumped actual vulnerability as a determinant of both finance and of different actors' involvement in the recovery process (Moulton & Machado 2019; Donovan 2021). Internationalisation framed the business of BBB, which became an explicit motif of the official reconstruction process. As stated by one St Maarten government official: *'The opportunity for 'BBB' will depend on international organisations and how to channel them in a good way'*. The bias in funding streams was reflected in the human resources and capacities of different organisations in the post-Irma landscape. While government capacities remained constrained, non-governmental capacities increased (beyond the spike in short-term emergency response). UNDP and the Red Cross grew in terms of staff and offices, while organisations such as the International Cooperation Agency of the Association of Netherlands Municipalities (VNG International) re-entered, following St Maarten's exit from the network after the new constitutional settlement of 2010.

In contrast, in St Martin there was very little intervention from international actors and the NGOs and charities involved were French (e.g. *Fondation de France, Les Compagnons Bâtisseurs*). The main institutional

actors involved in the reconstruction process were the French government and ministries, in collaboration with representatives of local authorities. An inter-ministerial committee gathering around 20 officials from different ministries was set up on September 12th, 2017. The different stages of the reconstruction were framed by a protocol between the French State and local authority. The reconstruction plan presented by Philippe Gustin, the head of the inter-ministerial delegation in charge of the reconstruction in St Martin, included reinforcing the presence of French authorities on the island to ensure a better enforcement of legislation and regulations, to be matched by an increase in state civil servants (see Gustin 2017). Illustrative of the difference between internationalisation and internalisation, this document insisted that local companies would be prioritised to help with the reconstruction.

## 5.2. Framing the reconstruction: Legitimizing imaginaries of recovery and the enrolment of expertise

### 5.2.1. Dutch St Maarten: good governance and the blending of expertise

The provision of Dutch foreign aid was made immediately conditional on a Dutch view of governance which included a local integrity commission to combat corruption, which led to the isolation and subsequent resignation of the democratically-elected Prime Minister of St Maarten upon refusal of the conditions. According to this 'good governance' discourse, the objective was to reinforce the capacity of the government of St Maarten. It represented a particular strand of governance discourse focussed on fiduciary accountability and public financial management, rather than democratic reform or political economy, and was seen by relevant actors as a precursor to any more systemic change in development pathway, as exemplified by one Dutch official:

*"Before St Maarten can actually develop differently... many government functions have to be reinforced, for example the level of tax compliance, so the ability and capacity of the government to perform its functions should be improved first...and then you can have more ambitious aims, but it is not possible for now."*

This view was not new, but rather representative of an historic repertoire of action in Dutch politics, with political integrity and public finance in the Antilles a concern since the 1950s (Alders 2015). Under the post-colonial settlement – and with no constitutional mechanism for full independence – the Dutch government sought 'good governance' as a way to limit its own liabilities for its former colonies and avoid involvement in local politics which would lead to accusations of neo-colonialism. Since the 1990s hurricanes the Dutch government had sought tight control of disaster recovery funding, often performing democratic 'by-pass' to do so (Geraets 2012). In 2017–2018, the mantra of good governance found 'fit' with the procedural mandate and public financial management function of the World Bank (as funding executor for Dutch government funds), but also with other international actors, such as VNG.

Local post-disaster priorities were initially circulated through the publication of an interim government 'Reconstruction and Recovery Plan' (NRRP) in October 2017 which called for alignment with locally identified priorities and a swift recovery for economic resilience. This document explicitly drew on another historic repertoire – local learning from Hurricane Luis (1995) about the importance of the speedy resumption of tourist activities on the island. With a nod to governance concerns, the document discusses (and de-politicises, given the occurrence of clientelism) the need for better tax compliance, data and human resources. However, as for other Caribbean contexts where temporality became part of the strategy of governance (Bonilla 2020), the stress on resuming full economic activity as quickly as possible challenged the slowness of the Dutch approach to contracting the World Bank and adopting its processes and requirements for disbursement – a perspective critiqued by one Dutch official who stated "*Building Back Quicker is not Building Back Better*". The World Bank was also seen as bringing its own emphasis: standards for waste management, following the outbreak

of fires at the Philipsburg waste dump, which drew on experience supporting other projects in Latin America, and a discourse linked to sustainability organised around the Sustainable Development Goals.

Our interviews and analysis of the final executive brief of the document reveal the World Bank's role as a broker in 'blending' the expertise of these different actors to define the reconstruction and recovery pathway for St Maarten. The World Bank brought together existing documents produced by local and international actors and engaged in one-on-one conversations with non-governmental actors. At the same time however, it was seen as facilitating a largely closed process with the local and Dutch governments. Now framed under the motif of resilience as well as recovery at the instigation of the Dutch, who wanted to allow for funding to be used for a wider range of purposes, the NRRP places economic diversification, rather than quick recovery, alongside 'transparent, effective government with enhanced capacity' (NRRP, 2017:xiv) and includes solutions to debris and dump fires as a priority intervention. The term 'Build Back Better' also found direct use, but was defined in fairly loose and limited terms as 'The range of improvements on the pre-disaster situation that have been recommended in the sector recovery strategy and needs analyses.' (NRRP, 2017:2).

Relating these responses to our prior analysis of the drivers of risk for St Maarten reveals exclusions shared across key actors that limited the immediate transformative potential of the reconstruction process: left out were broader structural issues related to the economic development model, unplanned urbanisation and land use and the structural reliance on migration, without planning or support, which created vulnerability for an estimated 10–15 thousand undocumented migrants (Fraser, 2016).

### 5.2.2. St Martin: the 'exemplary' reconstruction and 'pas de deux' with the metropole

In St Martin, as a French department and as part of the European Union, the choice of reconstruction priorities by the central government was justified by recurrent mentions to existing French and European legislations. The Gustin report (2017), which outlined the central government's vision, promoted a 'sustainable reconstruction'. The Gustin report recommended strengthening adaptation to climate change and developing sustainable tourism. President Macron promoted this aspect of the reconstruction strategy, mentioning St Martin as a process of 'exemplary reconstruction', and referring to these events during an international discourse at the Conference of the Parties (CoP 23) of the UNFCCC in November 2017.<sup>2</sup>

To achieve its overarching vision, the report strongly insisted on regulatory aspects and emphasized that the land use plan needed to be improved and made consistent with the 'Natural Disaster Prevention Plan' elaborated by national authorities. A strong focus was placed on the lack of implementation of existing European and national legislation (e.g. Littoral law 1986; Water Framework Directive 2004; Flood Directive 2007; Grenelle Law for the environment 2007) as well as the absence or ignorance of relevant local regulations and town planning documents (e.g. the territorial coherence scheme). This was the case of Sandy Ground district, situated between the lagoon and the sea, where planning regulations had never been enforced, and which was wiped out by Irma owing to the greater impact of flooding in the French side. With regards to tourism, a new strategy that respected safety norms and regulations was deemed necessary as many hotels had been built either too close to the coastline and/or with materials of poor quality.

The national vision reiterated that in terms of responsibilities, according to the current distribution of roles between the State and the local government, urbanism was a competency of the local authority. It should then be up to local actors in St Martin to design and implement a

<sup>2</sup> Discourse of French President Macron during UNFCCC COP23 (Bonn): <https://www.elysee.fr/emmanuel-macron/2017/11/15/discours-du-president-e-la-republique-emmanuel-macron-lors-de-la-cop23-a-bonn>.

sustainable urban strategy consistent with existing laws and regulations. However, in the event of the local authority failing to do so, the government could adopt an organic law that would give this competency back to the State. Consistent with this view, the inter-ministerial committee announced that there would be a consolidation of the State's presence, implying more civil servants, in St Martin (Gustin Report, 2017). At the same time, the report emphasized: *'The task ahead is challenging but, curiously, Irma has mostly revealed pre-existing dysfunctions. A unique opportunity to re-think these territories lies ahead of us.'* (2017:31)<sup>3</sup>.

This French vision, like the Dutch, drew partly on an historic repertoire: the political recommendations resonate with those published in an official report on St Martin by the French National Assembly in 2014 (Assemblée Nationale 2014). This report emphasized that the local authority now benefited from more autonomy and competencies but also had to use these and to develop strategies of its own. Simultaneously, the 2014 report re-iterated the need for the French government to reinforce its presence on the island and to ensure a better enforcement of existing legislation. A rethink of the tourism model for the island was also mentioned. French ideas went more deeply to the heart of the economic development and land use model than in St Maarten, although only implicitly tackling problems of illegal settlement due to migration (through expropriation of 'at risk' areas). The emphasis on the distribution of roles and responsibilities did not directly tackle 'good governance' in the ways raised by the Dutch government. Like the Dutch government, however, the French government set aside its own responsibility for the historic 'maladministration' of the island, despite a 2018 report by the French Audit Court criticising the French state for its lack of engagement with St Martin and for not fulfilling its functions, effectively creating a public service vacuum (Cour des Comptes 2017).

The "exemplary reconstruction" coming from the metropole, and invoking imaginaries of island laboratories, was articulated in the context of Macron's positioning as an international leader for climate action and his attempts to legitimate this through taking domestic action. This vision was met with caution by local authorities, in particular Daniel Gibbs (locally elected representative) and residents, who expressed scepticism about its "experimental" nature (e.g. Jacquard 2018).

In response to the vision promoted by the State, the local authority developed their own 'Plan Phoenix', organized around four phases: *Rebuilding, Economic recovery, Success for our children and young adults and Support for the population of St Martin*. Although this plan drew on French government funding for reconstruction, it was made clear in several outlets and public events that, while St Martin residents needed financial support, they did not want to be controlled at a distance by Parisian civil servants. Local newspaper articles and discourses from local politicians emphasized the need to maintain autonomy and control over their territory. Daniel Gibbs emphasized: *'It's up to us the people of St Martin to rebuild our island'* (ibid.). As for the St Maarten government, the implications of 'rethink' for the timing of economic recovery was controversial:

*'With regards to the pace to follow, we need to think while moving quickly at the same time. If we wait until July we will be dead. The time of the administration is not the time of the economy.'* (Daniel Gibbs, interview in *Le Parisien*, January 2018)<sup>4</sup>

Proposals for land use change – in particular the expropriation of property on Sandy Ground and Baie Orientale, where most buildings did not benefit from any official authorisation – were also contested locally.

<sup>3</sup> A sentiment echoed in one of our interview with a high-level French civil servant who described a strategy of 'deconstruction' in order to do things well, even if it wasn't popular.

<sup>4</sup> <https://www.leparisien.fr/economie/saint-martin-le-temps-de-l-administration-n-est-pas-celui-de-l-economie-16-01-2018-7503915.php>.

### 5.3. Co-production in building repair guidelines and land use regulation

#### 5.3.1. St Maarten: the anti-politics of aid and the delineation of expertise

Despite ostensible government commitment to evaluating building codes, very little government communication and regulation around housing reconstruction ensued in the ten months following Irma. However, the post-Irma context brought in multiple international agencies providing housing repair programmes (e.g. Samaritan's Purse, Salvation Army) and, for many agencies, the commitment to 'Build Back Better' centred on housing reconstruction. In general, the government was overwhelmed by the influx of NGOs, only some of whom worked with government, and whom often had different technical assessment and reporting procedures. However, NGOs also depended on the local government for implementation, many depending at least initially on government lists of contractors and government lists of vulnerable households. The forms of knowledge and expertise developed in this period reflect the politics – and anti-politics – of these governance relationships, within the broader context of internationalisation and reinforced Dutch presence on the island.

In the absence of government regulation, the tension to provide households with guidance in the face of rapid self-rebuilding by those who could afford to do so, and the approach of the 2018 hurricane season, led to the organic development of piecemeal forms of guidance by private and international actors. A prominent individual at a local engineering firm drew up new designs for hurricane and seismic-resistant roofing, which were taken up and published in a Red Cross public brochure and endorsed – but not disseminated – by government (see Fig. 2). Further guidelines were produced by UNDP. While this process was led by two of the most financially self-sufficient and autonomous international agencies, without government backing such guidelines were neither binding nor supported, for example, through mass procurement of required materials (e.g. zinc roofing of a particular thickness).

The scope of NGO programming was influenced by the tensions facing operating agencies to be legitimate, credible and accountable with both the St Maarten government – upon whom their operations depended – as well as their funders. This led to three forms of 'depoliticisation'. First, the avoidance of support for full structural repairs (which would include foundations and walls rather than just rooves and windows) due to regulatory uncertainty, and fear of working illegally. Second, the blurring of commitment to work with undocumented communities, despite their vulnerability, in the face of government antipathy to address the issue. Third, stated pressure to show results for (short-term) aid funding coupled the politics of the sector – the politics of "land and property rights, overseas ownership and middle men", as one interviewee described it – led one major INGO to avoid working in it altogether, preferring to focus instead on psycho-social support programmes, which also fell under its banner vision of 'Build Back Safer'.

In this context, a second process of brokerage by an international actor to develop government-backed guidelines was orchestrated by VNG, who received funding from Netherlands municipalities to work in St Maarten. This took the form of workshops with all parties to discuss a draft new building code. Three features of this process as described by our interviewees stand out. First, as for the World Bank drafting of the national recovery plan, the workshops functioned as a medium to mediate differing local-international perspectives. One example was differing commitments to undocumented migrants, as a major structural issue unaddressed in formal planning documents. The VNG process sought to accommodate government wishes to avoid the politics of the issue, whilst addressing the potential problem of over-regulating the most vulnerable. Second, unlike in French St Martin where French and EU norms and standards applied, the open status of St Maarten allowed for discussion of multiple forms of international expertise – and in this respect was possibly a positive opening for generating more transformative knowledge for risk prevention. This included building norms from both the US and EU, alongside an examination of the Dutch codes

Category	Information sheets	Illustration
Structure	Masonry: Practical Sheet N°4 Timber structures: Practical Sheet N°5	
Roof	Timber frame: Practical Sheet N°2 Metal roofs: Practical Sheet N°1	
Projecting components	Awnings: Practical Sheet N°6	
Woodwork	Windows and bay windows: Practical Sheet N°3	

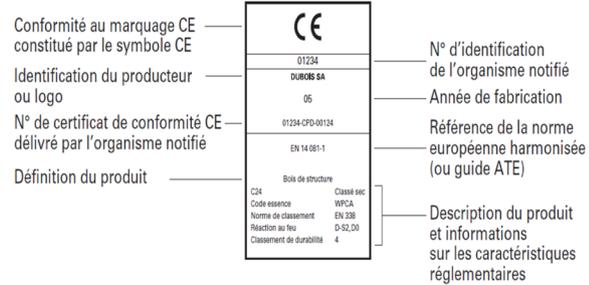


Figure 5 : Principe d'une étiquette liée au marquage CE

DO

DON'T

## HOUSE REPAIR MANUAL

### MAKE ST. MAARTEN STRONG AGAIN

**Use screws** ✓

**Minimize roof overhang** ✓

**Use strong connections** ✓

**Use enough screws** ✓

**Locate house in safe position** ✓

**Use nails** ✗

**Construct a large roof overhang** ✗

**Use weak connections** ✗

**Use not enough screws** ✗

**Locate house next to water, mountains or trees** ✗

**Evacuation** Make a plan and practice it! Decide early if you will evacuate and stay in place. Prepare safe evacuation routes. Know location of evacuation sites. Know what transport you can use.

**Communication** Know the disaster warning signal. Know how you can receive information about the disaster. Inform your relatives and friends when you will evacuate to know how and when to inform of your situation after a disaster. Know where to find information on missing persons.

**Be Prepared** Prepare a waterproof "Go-Bag" for each family member prior to a disaster. Make a personal and your immediate family members preparing the "Go-Bag". The "Go-Bag" should be easy to carry and contain important documents (passports and personal records/bankbooks, insurance deeds, insurance papers etc.), medicines, first aid kit and a radio.

**How Does a Hurricane Affect Your House?**

Weak Structure Without Cross Bracing

Strong Structure With Cross Bracing

Tie Posts Down to Strong Foundations

Tie Roof Beams Down to Posts and Floor Joists to Frame

Use Strong Joints

Minimize Roof Overhang

Use Washers or Screws with Many Screws

Overlap Roof Sheets to Strengthen Joints

Red Cross + St. Maarten



Fig. 2. Examples of repair guidelines, Dutch St Maarten and French St Martin (excerpt). A number of differences emerge in the repair guidelines and their application. For Saint Martin (documents on top), the advice itself is far more comprehensive than for Sint Maarten, with six brochures in all produced for awning, timber and metal structures, windows and bay windows, and masonry, not simply rooves (and walls in the case of the UNDP guidelines). The logo representing conformity with European standards was well emphasized. The advice considers earthquakes and hurricanes. Flyers were distributed by the Fondation de France. Tighter zoning regulation also meant that a difference was made around whether permits were needed or not for high risk zones and non-high risk zones, and bunkers were advised for new constructions.

applied on neighbouring islands of Saba and St Eustatius, which were then to be adapted locally. Third, the process built on VNGs mission and credibility as a peer-to-peer, local government learning network. VNG interviewees stressed the need to use the ‘soft’ influence of its values of integrity, common interest and the rule of law alongside peer-to-peer exchange with Dutch municipal actors, as a way to influence the overall governance environment as well as ‘locally-adapt’ international expertise from its Dutch municipal network.

Nevertheless, VNG’s status as an international donor limited the possibilities for the VNG-brokered process, excluding deeper systemic issues of land use as well as governance issues related to elite land-ownership and the overall lack of public sector capacity. The VNG project needed to be both Irma-specific and show results in a 2.5-year timeframe – leading to the decision to focus on the building code rather than the land zoning plan and to tackle enforcement by training VROMI inspectors. The fragmentary and politicised institutional landscape created potential for a widening social divide (with a lack of provision for the undocumented residents and landlords putting up rents on repaired houses).

### 5.3.2. St Martin: legitimising the governmental vision through new regulatory knowledge

The distribution of roles between the French State and local authorities was key to changes in the land use sector in the post-Irma environment. While the French State is responsible for environmental regulations, the local authority is autonomous for urban policy and, since 2015, is equipped with its own urban code which is more permissive than the national one. Here the French state could only exercise a technical, and advisory, role. Historically, and as commented on by a number of interviewees, regulations over land-use and planning documents have always been at the core of heated debates. As stated by the locally elected representative:

*‘What I would like is to adapt the metropolitan building code to our local specificities. This ‘80m’ rule might limit exposure to natural risks (...) but what we need to see is that our economy is 95% dependant on tourism. Neighbouring islands have got hotels on the beach and we are told to construct 80m away from the coastline?’ (Daniel Gibbs, interview in Le Parisien, January 2018)*

In the wake of Irma, the first action undertaken by the inter-ministerial committee was to give mandate to a public expert body (CEREMA) to perform a diagnostic of the damages and produce a new hazards map (updating a version from 2011). This new map hazard map was then communicated to the local authority which was tasked with its inclusion in the context of the reconstruction. While this new map was used by the French authorities to give legitimacy to their vision of the reconstruction and justify strong changes in land use as well as expropriation in risk areas, it was also interpreted flexibly locally.

While it was used by the urbanism department to monitor reconstruction work, compiling data using a GIS system, and identify whether these were taking place in risk areas or not, the local authority also had to adopt a specific procedure to differentiating between repair work and reconstruction work as well as between private and commercial buildings. These measures aimed at facilitating processes for those undertaking repairs only, particularly bearing in mind that around 60% of housing had been built without the required permissions. As one interviewee explained: *“Without this procedure almost no one would be allowed to reconstruct”*. However, for complete reconstruction there was a juridical uncertainty for those situated in a risk area with the adoption of a two year moratorium – meaning that from a strictly legal standpoint they were at risk of expropriation. There was a strong push from the French government to identify infringement and take judiciary action if needed and an environmental and urban police committee was created involving devolved actors (e.g. public prosecutor, local civil servants working for the environment, planning and housing department, representative of local urban authority). Expropriation was a key area of

tension between the French State and local authorities, and funding allocated to this by the government went unspent locally. At the same time there was some local support, in the environmental sector in particular, for a *“real urban planning strategy, not just a reconstruction strategy”*.

In addition to the introduction of new regulatory knowledges via hazard maps, the inter-ministerial delegation for the reconstruction coordinated activities aimed at providing technical advice, in particular guidelines for house repairs, as requested locally. A guide for repairs was drawn up by over 50 experts, 40 of whom were from French islands, to ensure knowledge was adapted to local conditions. This process worked with the Scientific and Technical Center for Building<sup>5</sup>, based in Paris, and local organisations in order to legitimate new knowledge. As one interviewee described:

*“This was a demand by local actors and in order to overcome tensions we [the inter-ministerial delegation and a Paris-based public organization expert on construction, CSTB] have worked predominantly with organizations based in St Martin so it does not include ideas coming from elsewhere.”*

Published jointly by the local and national government, who emphasised the need for a long-term perspective on reconstruction work, the repair guidelines themselves were detailed and comprehensive (see excerpt on Fig. 2). However, the need to be compliant with EU standards proved difficult to achieve in St Martin due to the lack of appropriate supply chains for EU compliant materials, and timing. These guidelines were released in Summer 2018 while the hurricane took place in September 2017, meaning that many reconstruction processes had already taken place.<sup>6</sup> Despite the stronger felt influence of the French state in regulation, the closed knowledge regime coupled to the need to legitimise new expertise and knowledge locally, potentially facilitated but also restricted recovery options. Expressing a desire for more knowledge exchange, one interviewee commented: *“We could take inspiration from Miami where hotels and residences are set back from the coastline, or from St Kitts and Nevis.”*

## 6. Discussion

Across both island contexts, we surface striking difference in the forms of reconstruction expertise and knowledges put to work in two contrasting governance regimes, despite some commonality in the power dynamics. These embody ongoing tensions around autonomy and sovereignty and illustrate different strategies of legitimation. As other studies of Caribbean disasters have noted, the logics of territorial and governance status rather than the nature of risk and vulnerability have exerted a strong and somewhat arbitrary influence on the nature of disaster response (Moulton & Machado 2019; Donovan 2021). Our analysis shows how this further framed the question of whose expertise was mobilised to reconstruct, and reconstruct ‘better’, and through what forms of knowledge. These forms of knowledge co-production were arguably more powerful in their influence on reconstruction processes than the experience of hazard, the nature of risk or levels of vulnerability alone – and alongside the materiality of the hazard itself, had material consequences in terms of the shape of the reconstruction process, as the differing repair guidelines illustrate.

While, in the diverse landscape of post-colonial governance in the Caribbean, St Maarten and St Martin exemplify the wider constraints on local autonomy, they both also represent cases of semi-autonomous power, in which certain actions were also negotiated between external and local actors. On this aspect we find more resonance in governance

<sup>5</sup> <https://www.cstb.fr/en/cstb/missions-activites/>.

<sup>6</sup> [https://www.com-st-martin.fr/Guide-de-bonnes-pratiques-pour-la-construction-et-la-r%C3%A9habilitation-de-l-habitat-St-Martin-Antilles\\_1439.html](https://www.com-st-martin.fr/Guide-de-bonnes-pratiques-pour-la-construction-et-la-r%C3%A9habilitation-de-l-habitat-St-Martin-Antilles_1439.html)

dynamics with cases of semi-dependent territories such as Monserrat, as described by Donovan (2021), than with cases of fully autonomous territories with agendas for self-financing (see Jones et al. 2022). Our analysis certainly highlights the disciplinary power and imaginary exerted by the central French and Dutch governments, which reinforced highly exclusionary planning processes in both localities (see Collodi et al. 2021 for St Maarten; Jouannic et al. 2020 for St Martin). This closed down spaces for the mobilisation of wider sets of knowledge and expertise in both societies. However, a close reading of the construction of expertise and knowledge, as enabled by the lens of interactional coproduction, also suggests possible openings for change.

In French St Martin the system of 'shared sovereignty' led to the heavier regulatory footprint of national and EU legislation and quicker embedding of capacities and systems of control. However, greater centralisation also led to rigidities in knowledge production that constrained local appropriateness. Despite the system of 'shared autonomy' in Dutch St Maarten, the influx of Dutch resources was powerful in shaping the structures, actors and ideas involved in the reconstruction process, but led to an initial focus on governance arrangements over regulatory reform. On the one hand, this led to a fragmented regulatory landscape marked by piecemeal initiatives and forms of 'soft' learning. On the other, the potential for a more open knowledge regime in Dutch St Maarten is indicated by the process of building code re-design.

Although the influx of external resource brought immense power, the need for external actors to find legitimacy with multiple political constituencies emerges as central to the process of co-production. It defines the ways in which expertise is constituted and created, within a relational rather than absolute conception of autonomy. In this process there were both challenges and opportunities. On the French side the central State declared ambition for new climate change adaptation plans, tourism models, land use governance and administrative capacity. This vision reflected the desire for global legitimisation (as a climate change leader) as well as national legitimisation (to manage financial aid 'well', whilst keeping from view questions of historic state neglect of the local administration). In practice, the central state developed a logic of partnership, working jointly with local authorities, but it was also contested by the local authority over matters of expropriation, and because the French state's vision was perceived locally as patronizing and interventionist. The reconstruction was more a negotiation and bargaining process between the State and local representatives, regarding who pays for what, rather than an open deliberation about different recovery pathways.

In St Maarten, the Netherlands adopted a logic of mediation via the contracting of the World Bank, creating a context attractive to the international development community, but also a fragmented governance landscape in which new actors sought to broker ideas and knowledge for action. Again, this manoeuvre reflected the need for legitimacy with both the Dutch public as well as with a local government partner (and was initially forced through a strong conditionality framework). Applied both to government and to NGOs, there was deep commonality with St Martin in the process of co-producing knowledge to address risk with a multi-faceted and spatially diffuse politics of legitimisation. This again drove consideration of how to create locally appropriate knowledge, whilst it limited opportunities to create new knowledge to address structural repairs, land use planning and the structural causes of vulnerability for the island's migrants. The 'technicalisation' of particular knowledges was a strategy used in attempts to blend, bridge and build consensus for action between powerful actors, whether through World Bank audit processes or in the design of new building codes. Contrasting the two island settings, however, the difference in the form of such strategies reveals the importance of understanding the 'politics' of such 'anti-politics', both to understanding its functioning but also the differential implications of such manoeuvres.

Our analysis of the politics of expertise and knowledge in contrasting post-disaster governance settings therefore shows how knowledge is not simply a material resource used to improve disaster reduction (e.g. by

producing new maps) but is used flexibly to seek multiple forms of political legitimisation. In St Maarten this was done 'externally' via the mediation of the World Bank and the deployment of international NGOs. In St Martin it was done 'internally', with technical expertise (e.g. new regulatory knowledge produced by public expert bodies) and legislative expertise (reference to extensive national legislation) used to mitigate contestations over the reconstruction. In both processes, constructs such as Build Back Better, resilience and sustainable development needed to be problematised as part of the discursive manoeuvring of particular actors – but were also linked to the construction of different forms of expertise.

The differences in knowledge outcomes, despite strong commonalities in many aspects, highlights a two-way relationship between expertise and knowledge and political projects of post-disaster 'state-making' which is constituted as new imperatives interact with old concerns, often invoking the involvement of and re-alignment between new actors, interests and ideas (Jasanoff 2004; Forsyth 2020). The lens of 'interactional' co-production allows us to appreciate how resulting forms of knowledge were shaped out of historic repertoires of colonialism, post-colonial relations, past disasters, economic crisis and the experience of international actors in other geographic contexts, while also revealing potential for co-evolution.

Reflecting on the implications for just transitions and transformation in such ambivalent moments, fraught with possibility but also inertia, as for Moatty et al. (2021), we see how these multiple and often unresolved projects of governance open or close myriad windows for more structural change. While the goals of the reconstruction process were questioned across both contexts, more radical forms of transformation or transition tied to logics of new forms of sovereignty or reparative finance were not evident. Truly opening-up possibility for the co-production of alternative pathways would require interrogations of existing constitutional settlements, discussion of socio-political changes, the inclusion of residents' perspectives, and involve significant power shifts (Blackburn 2018), aided by further research into the wider political context for knowledge production, and its societal dynamics (Donovan 2021).

## 7. Conclusion

Like other emergent and critical readings of disaster reconstruction and recovery – extending to broader thinking about recovery processes (Pelling et al. 2022) – this paper challenges the assumption of 'Build Back Better' as a linear, technical process defined in singular moments of opportunity. However, by bringing in Science and Technology Studies, and in particular the notion of 'interactional co-production', to move forward critical geography debates about the messy and contested politics of post-disaster processes, we deploy the notion of 'recovery spaces' to denote how expertise, knowledge, values, visions and power mutually constitute in different governance settings with ramifications for the potential, and scope, of transformation. Through surfacing the role of knowledge and expertise in projects of political legitimisation, we challenge notions of post-disaster governance as projects simply built 'from above' that meet resistance 'from below'. We highlight the political nuance and tension of constructing state power for reconstruction under different forms of post-colonial arrangements, but in which autonomy is constantly under negotiation. In turn, we invite critical reflection on how different knowledge practices come about in particular moments in ways that recognise the fluid and contingent, yet situated, ways in which political actors rework expertise, and the place of anti-political strategies of 'technicalisation' within that. By making visible different legitimisation strategies associated with knowledge/expertise, our analysis highlights the importance of considering these to understand which pathways are made possible or bracketed out, pointing towards key questions regarding the potential for transformation often associated with post-disaster context. Going forward, the paper brings to the fore, for the context of environmental disasters, calls to pay greater attention to the politics of coproduction (Wyborn et al. 2019; Turnhout et al.

2020) in different political cultures of authority, legitimacy, accountability and transparency, and to their implications, here for the ways in which risks and vulnerabilities come to be defined and addressed.

### CRedit authorship contribution statement

**Maud Borie:** Conceptualization, Data curation, Formal analysis, Investigation, Methodology, Project administration, Validation, Writing – original draft, Writing – review & editing. **Arabella Fraser:** Conceptualization, Data curation, Formal analysis, Investigation, Methodology, Project administration, Validation, Writing – original draft, Writing – review & editing.

### Declaration of Competing Interest

The authors declare that they have no known competing financial interests or personal relationships that could have appeared to influence the work reported in this paper.

### Data availability

The data that has been used is confidential.

### Acknowledgements

This research was funded by the European Union Seventh Framework Programme (Grant No. 603663) Preparing for Extreme and Rare Events in Coastal Regions project (PEARL). We would like to acknowledge all who gave their time to be interviewed, and Mark Pelling, King's College London, for his support and guidance during the initial research and original funding acquisition, and to thank the reviewers for their useful comments.

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