Governance of decentralised disaster management in Jamaica:

Processes of empowerment and power-sharing across scales

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Image: Portland Parish Council Building, Portland, Jamaica.
Source: Author

This dissertation is submitted as part of a MSc degree in Disasters, Adaptation & Development at King's College London

September 2011

KING'S COLLEGE LONDON

UNIVERSITY OF LONDON

DEPARTMENT OF GEOGRAPHY

MA/MSc DISSERTATION

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Abstract

This research presents a case study of decentralised disaster risk governance in Portland, Jamaica. A 'zoning in' approach to understanding power relations was adopted, interviewing individuals in national government, local government and local communities. The innovative approach to processes *across* scales draws on contemporary literature on the politics of scale. This study indicates scalar processes of scale-jumping, partial participation and weak accountability explain the existence and reinforcement of power asymmetries between actors, rooted in the socio-political context. It argues attention to processes and agendas at all scales is necessary to fully understand the construction of realities at a single scale.

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Abbreviations

BDRC	Building Disaster Resilient Communities
CDEMA	Caribbean Disaster Emergency Management Agency
DRM	Disaster Risk Management
DRR	Disaster Risk Reduction
NDC	National Disaster Committee
ODPEM	Office of Disaster Preparedness and Emergency Management
PC	Parish Council
PDC	Parish Disaster Committee
SIDS	Small Island Developing State
UNFCCC	United Nations Framework Convention on Climate Change
UNISDR	United Nations International Strategy for Disaster Reduction
ZC	Zonal Committee

Acknowledgements

I wish to thank Professor Mark Pelling for his supervision and guidance whilst undertaking this research. In addition I am greatly indebted to Mr Ronald Jackson and the staff at ODPEM, Portland Parish Council, the communities of Manchioneal and Skibo, and all other participants, for their enthusiasm in agreeing to assist with this project, and their kindness for accommodating me. In particular I wish to thank Mrs Denise Lewis for her warmth and generosity, and the huge amount of time she dedicated to guiding me in my fieldwork. I could not have done it without her. Finally many thanks to UWI for hosting me, especially Donovan Campbell for his invaluable support.

Map of study area

Approximate location of sample communities (not to scale)

Source: Nations Online Project, permission granted for educational purposes

1. Introduction

This research has a dual aim. The first is to present an in-situ, cross-scale analysis of decentralised disaster risk governance in Jamaica, to aid understanding of decentralisation as a component of 'good governance'. The second is to add to literature on the politics of scale, "one of the most vibrant areas of research in human geography" (Moore 2008, pp.221), adding empirical weight in the previously uncharted context of environmental risk governance.

Such a project is important for several reasons. Firstly, data suggest the frequency and impact of natural disasters is increasing worldwide, with a threefold increase in numbers affected and fivefold increase in economic impacts between the 1970s and 1990s (Ahrens and Rudolph 2006). This trend is likely to accelerate further with the progression of global environmental change (Parry et al 2007), and how governments respond is of critical economic, social, political and environmental concern (Adger et al 2009). For small island developing states such as Jamaica (UNFCCC 2007), which suffer disproportionately from the impacts of natural disasters (Pelling and Uitto 2001), these concerns are particularly salient.

Many have identified governance as a highly significant factor controlling effective disaster risk management, particularly the importance of decentralisation, which gives voice and ownership to local people (e.g. Tompkins et al 2008). Equally common are critiques of existing approaches to disaster management, such as those falling into the 'local trap' with insufficient attention to scales above the community level (Brown and Purcell 2005).

Less commonly addressed are *multi-scalar processes* giving rise to particular configurations of actor empowerment across levels of decentralised governance. This paper argues it is these processes, and the contextual forces controlling them, which critically determine governance regime outcomes. As Batterbury and Fernando state:

> "A detailed understanding of both the origins and the impacts of a process can only occur by multi-scaled work… we argue that 'scaling' the analysis of governance issues is a vital element of research into its impacts" (2006, pp.1859)

This argument is strongly influenced by the politics of scale literature, which first emerged in the 1980s driven by interest in scalar reconfigurations of power associated with globalisation (Swyngedouw 2004). The constructionist view of scale as non-inherent and contingent is a refreshing approach to analysing power relations within structured governance regimes, particularly the asymmetries embedded within it. It is therefore an apt analytical lens through which to understand power distribution within a disaster risk management regime, in particular the forces leading to the construction and perpetuation of this.

Project outline

This research opens with a review of existing literature on scale and disaster risk governance, placing the present study in the context of existing knowledge and introducing the research questions (Chapter 2). This is followed by contextual background providing justification for choosing Portland, Jamaica for the case study (Chapter 3), and an explanation of the methodological approach (Chapter 4). Chapter 5 presents analysis of the results, closing with discussion and conclusions indicating wider implications.

2. Literature Review

This chapter i) outlines the evolution of politics of scale literature and the contemporary debates therein, ii) introduces the problem to which the theory will be applied, and iii) summarises the theoretical approach to be adopted and introduces the research questions.

2.1 Analytical framework: Scale theory and the politics of scale

The simplest definition of scale is provided by Johnston et al (1994, quoted in Marston 2000, pp.220), of scale as "level of representation". However, the following review of the literature provides a fuller understanding of its many facets.

2.1.1 Areas of agreement

Grounded in regional geography and spatial science, the concept of scale is highly familiar (Marston 2000). However, over the last thirty years, partly in response to the discipline's post-structural turn, its 'taken-for-granted' status has increasingly been questioned (Marston et al 2005). The major trigger for interest in scale in the 1980s, and its subsequent resurgence in the 2000s, was the observed reconfiguration of power relations as a result of processes of globalisation (Brown and Purcell 2005). Originating in Marxist political economy, scale has since spread to other geographical sub-disciplines including political ecology (Neumann 2009).

Despite some theoretical 'squabbling' over the precise meaning of scale, its relevance and conceptualisation (ibid), there is some consensus:

(a) Scale is socially constructed

Scale literature rejects scale as an ontologically 'given' category (Marston 2000, Smith 2004), favouring a view that is "socially constructed, the product of changing configurations of capital and state territorial organization [sic]" (Brenner 1997, pp.299). Smith and Brenner are very influential in this field, drawing on Henri Lefebvre's work on the production of space (Marston 2000). The constructionist approach argues the significance of any scale is not inherent (Brown and Purcell 2005), but *produced* through political, economic, and social processes characteristic of a particular social system, for example the capitalism class

system (McMaster and Sheppard 2004). Thus "scale is not necessarily a preordained hierarchical framework for ordering the world... it is instead a contingent outcome of the tensions that exist between structural forces and the practices of human agents" (Marston 2000, pp.220).

(b) Scale is relational

A 'scaled' perspective dictates each (constructed) scale is viewed as part of a wider order of significance (Brown and Purcell 2005). The delineation of scaled spatial boundaries or spheres of influence is always relative to other scales, and simultaneously makes a statement about the relative importance of those (McCarthy 2005). The value of a 'scalar analysis' lies in unpacking the processes which shape inequitable landscapes, with the focus on the relational nature of these (Swyngedouw and Heynen 2003). The process whereby scales become hierarchically organised is termed 'scale structuration' by Brenner (1998), which has both rhetorical and material consequences (Marston 2000).

(c) Scale is both fixed and fluid

Newstead, Reid and Sparke define scale as "the temporary fixing of the territorial scope of particular modalities of power" (2003, pp.486). Brown and Purcell (2005) observe that whilst certain scales can attain long-term hegemony, they are ultimately subject to a constant process of contestation and re-production. Therefore 'the state' is not inherently hegemonic, rather it "has been socially produced as national in a particular historical era by particular political interests" (ibid, pp.609). Marston (2004) states "a particular scalar fix is only a temporary spatialization [sic] of certain social assumptions" (p.171), highlighting the fragility of scalar relationships which nevertheless can be perpetuated by powerful actors through the construction of dominant discourse (Kelly 1999).

One important mechanism of scale fluidity identified by Smith (2004) is '*scale bending'*, in which "entrenched assumptions about what kinds of social activities fit properly at which scales are being systematically challenged and upset" (ibid, pp.193). This is typically observed in the upward and/or downward transfer of power over national resources to multilateral organisations or more local actors respectively, in a process termed

'*glocalisation*' (Swyngedouw 2004). Such shifts, characteristic of neoliberal policy reforms, typically weaken the national scale (Smith 2004).

(d) Scale as political strategy

Increasingly scale has been acknowledged as being highly political. Scale structuration implicitly involves relative empowerment and disempowerment of actors (Delaney and Leitner 1997, Leitner 2004), and attention must focus on the motives and methods underlying this (Brown and Purcell 2005). Brenner's (1997) concept of 'spatial tactics' is a useful lens for this, identifying for example how the state 'produces' spatial scale through regulation.

In many cases, "scalar configurations are not an independent variable that can cause outcomes, rather they are a strategy used by political groups to pursue a particular agenda" (Brown and Purcell 2005, pp.614). '*Scale-jumping*', wherein the 'natural order' of whom speaks to whom in the scalar hierarchy is circumvented, has been frequently documented as a tactic of resistance by grassroots organisations against oppressive power (Smith 1992). As such, dynamic scalar reconfiguration can be driven from both 'above' and 'below', and just as scalar relations are constructed through socio-economic and political processes, so scale itself can become the vehicle for social, economic or political change (Delaney and Leitner 1997). As Leitner states, "scales are thus both the realm and outcome of social relations" (2004, pp.238). This dynamic mutual constitution of scale and social relations is termed the 'politics of scale' (Brown and Purcell 2005, Swyngedouw 2004, Swyngedouw and Heynen 2003), a label first used by Smith (1992).

2.1.2 Areas of debate

Perhaps inevitably for a term so variously used, disagreements over correct usage and conceptualisation of scale abound almost as greatly as agreements. Marston has been particularly vocal in her critiques (e.g. Marston et al 2005), and whilst space prevents a more thorough examination, the most significant are presented here:

(a) Scale and social reproduction

Marston (2000, 2004) argues that scalar analyses focused on political economy (e.g. Brenner 1997, Smith 2004) and politics (Delaney and Leitner 1997, Leitner 2004) have paid

insufficient attention to processes of social reproduction, and mask socio-cultural processes of scale structuration. Marston argues the scope of scalar analysis should be widened beyond the overarching concern with capitalist production to include other forms of domination. This focus on social processes and human agency in scalar reconfiguration is indeed a neglected area within the politics of scale.

(b) 'Analytical blunting'

Brenner warns that in the proliferation of theoretical and empirical material on the subject of scale, the literature has suffered from "slippage…between notions of geographical scale and other core geographical concepts, such as place, locality, territory and space" (2001, pp.592). Marston et al (2005) attribute this to fuzzy and, at times, indeterminate application of the concept, compounding confusion in the distinction between scale as 'size' and scale as 'level' (the latter view is favoured here). Further, Moore (2008) warns that in the tension held between scale fixidity and fluidity, constructivism and materialism, "geographers' abstract and metaphorical uses of scale are unreflexively mixed, leading to analytical confusion" (pp.205). These critiques highlight the need for conceptual clarity.

(c) Hierarchical conceptualisations of scale

Whilst the scale literature explicitly rejects treating scale as an ontological 'given', Marston et al (2005) observe a persistent tendency to approach analyses in terms of 'known' levels (body, neighbourhood, nation-state etc.), which risks "form determining content" (ibid, pp.422). They favour an abandonment of scale, preferring a 'flat ontology' in which individual sites are constructed at the cross-section of spatial processes.

Others argue the 'flat ontology' does not offer a viable alternative and ignores the possibility of power flows in both directions (Jonas 2006, Neumann 2009). As Moore (2008) argues, given the innovation of the politics of scale literature, it seems hasty to "throw the baby out with the bathwater" (pp.214). Nevertheless such critiques have led many to favour a 'networked' approach, emphasising the uneven, interconnected, and often non-hierarchical dimensions of scale (Cox 1998, Leitner 2004), reminiscent of Brenner's description of interpenetrating 'scaffolding' of spatial scales (1998).

Here, the relevance of Marston et al's critique is the importance of considering all actors equally, and making no assumptions about relativity. It must also be acknowledged that scales are non-discrete, and one agent can be present at multiple scales (Brown and Purcell 2005)

(d) Scale and the environment: towards a political ecology of scale

An emergent critique of the politics of scale literature is its inattention to the environment (Neumann 2009, McCarthy 2005, Brown and Purcell 2005), with explicit calls for more explicit engagement with scale within political ecology (Brown and Purcell 2005, Zimmerer and Bassett 2003): a broad discipline focused on the power struggles inherent in human-environment relationships (Bryant and Bailey 1997). Likewise, whilst political ecologists have not ignored scale completely, Neumann (2009) argues in favour of a 'political ecology of scale' which retains a focus on the interaction between processes of relative empowerment, agency and scale but incorporates consideration of socio-ecological processes (ibid).

2.2 The problem: disaster risk governance

An area which has so far evaded scale theorists is disaster risk management (DRM[1]) governance, which this study will focus upon using a case study of Jamaica. This topic was chosen because, firstly, government structures comprise an inherently scaled system of hierarchy, providing a rich arena to explore scalar tensions. This is particularly salient given the need for coordination across scales for successful adaptation to climate change (Adger et al 2005). Secondly, it aims to widen the scope of Neumann's (2009) 'political ecology of scale' into environmental risk. To date, political ecology has tended to focus disproportionately on issues of environmental entitlement, and where it has engaged with environmental risk ("an important nature-society focal point within political ecology" (Zimmerer and Bassett 2003, pp.7)), it has not explicitly engaged with scale (ibid). For example, Pelling (2003a), in his political ecological analysis of environmental risk in Guyana, identifies 'gaps' between levels of government but does not relate these to scaled processes; an observation nevertheless highly salient to the present study.

[1] DRM encompasses disaster risk reduction (DRR), preparedness, relief and response

2.2.1 The importance of governance in vulnerability reduction

Reducing vulnerability, defined simply as capacity to withstand hazard impact, is the core aim of disaster risk management (Wisner et al 2004). The 'good governance' discourse emerged in wider development literature in the 1990s and has since infiltrated disasters literature, adding to debate over conditions for DRM effectiveness (Batterbury and Fernando, Wisner et al 2004). Governance is defined as the system of stewardship, regulation, and decision-making powers within a society (Batterbury and Fernando 2006). It encompasses formal and informal structures, in government, the private sector and civil society (Wisner et al 2004, Ahrens and Rudolph 2006). This research will focus on the structures and behaviours of the state, which has ultimate responsibility for DRM. Whilst some theorists have warned of state-centrism in scale research (e.g. McCarthy 2005), this analysis favours Pelling's view that it remains well-positioned at the nexus between the local and the global for the delivery of vulnerability-reduction programmes (Pelling 2003b).

Ahrens and Rudolph (2006) argue institutional failure is the fundamental source of disaster vulnerability, and good government leadership is "an unalterable prerequisite… to significantly reduce personal, economic, and environmental losses during and after disastrous events" (Ahrens and Rudolph 2006, pp.207). Wisner et al (2004) agree that governance underlies the reversal of many other 'root causes' of vulnerability, supported by others who agree that good governance practices set the pre-conditions for deeper vulnerability reduction (Tompkins et al 2008, Cannon 2008).

2.2.2 The 'local trap'

'Good governance' discourse tends to emphasise the need for the state to incorporate community views into decision-making. However, participatory approaches have been widely critiqued, largely relating to failure to capture 'local voices' in a meaningful way (Blaikie 2006, Allen 2006). In such cases, the state is often implicated in failing to provide adequate communication channels or failing to listen and act upon views raised, and Mohan and Stokke (2000) argue the ability of the local to solve development problems has been over-stated. Similarly Allen (2005) shows empirically the weakness of local solutions operating in a vacuum of 'political capital' (i.e. wider state support). She argues community-based activities cannot be sustainable without commitment to and systematic realisation of

decentralised control by the central government. This echoes conclusions reached in community-based natural resource management literature (Larson 2002, Pacheco 2004). Brown and Purcell (2005) argue such failures are the product of a 'local trap' in which under-theorisation of scale in political ecology has contributed to views of the local as inherently beneficial in environmental management. In reality, "there is nothing inherent about any scale, and so the local scale cannot be intrinsically more desirable" (pp.607). Brown and Purcell (2005) argue the scale literature offers a theoretical route out of this, by encouraging attention to the influence of all scales.

2.2.3 What is 'good governance'?

Whilst its importance has been emphasised, literature on what 'good governance' actually entails and how to achieve it are less forthcoming. Wisner et al (2004) identify multiple components beyond the technicalities of elections and decentralisation to include ideology, power relations, networks, and resource flows. Similarly, Pelling states "urban risk arises not out of lack of technical expertise but rather because of intervening socio-political structures that undermine or misshape attempts at mitigation policy" (2003a, pp.77), echoing Marston's (2000, 2004) calls for greater attention to processes of social reproduction in the politics of scale.

In practice, components of 'good governance' are highly complex. Table 1 outlines some different characterisations in order to pick out key themes:

Batterbury and Fernando (2006)	**Ahrens and Rudolph (2006)**	**Tompkins et al (2008)**	**Others**
Participation Accountability Openness Effectiveness Coherence Civic peace	Accountability Participation Predictability (enforcement) Transparency Credibility Decentralisation	Democratised decision-making (decentralisation) Flexible and responsive government Long-term commitment from politically active actors	Political will (Pelling 2003b, Wisner et al 2004) Social capital (Putnam 1993)

		Mainstreaming DRR into other policy areas Buy-in from stakeholders (participation)	

Table 1: Characteristics of 'good governance' regimes in environmental management. Of the above, only Tompkins et al (2008) looked explicitly at disaster risk governance.

Table 1 indicates there is some agreement about conditions for 'good governance'. Decentralisation, accountability, and participation are components appearing recurrently. However in the literature their scalar dimensions have been under-emphasised, something this study seeks to address. Their theorised importance and scalar aspects are addressed below. Social capital is also included due to its potential for facilitation of state-society relations across scales (Putnam 1993).

Decentralisation

Scalar shifts of power and resources associated with decentralisation are typical of governance reforms over the last twenty years (Batterbury and Fernando 2006). Decentralisation is theorised to offer greater institutional flexibility and creativity, democratising the environment by allowing local actors greater autonomy (Tompkins et al 2008, Herrald 2006). This is argued to be vital for sub-national governance efficiency (Ahrens and Rudolph 2006). Wisner et al explicitly link this to vulnerability reduction, stating "any recovery programme that shifts power and control back into the hands of households and localities… will accordingly contribute towards addressing root causes [of vulnerability]" (2004, pp.365).

However in reality, how decentralisation policies interact with existing power relations is highly complex. The most common reasons for failure are relinquishing insufficient control, weak chains of accountability, capture of control by local elites, and failure to create an 'enabling' institutional environment (Batterbury and Fernando 2006, pp.1856). Pacheco (2004) states a common shortcoming of decentralisation is tension between devolution of

control and capacity, terming the outcome of a partially democratic, partially participatory regime as '*incomplete democratic decentralisation*'.

Decentralised governance requires a greater role played by local government, which in many places is weak (Larson 2002). Cox (1998) pays particular attention to the dynamics of local governance, providing a framework of analysis for its relationship with the centre. He distinguishes two modes of scalar interaction:

1) *Spaces of dependence* – localised relationships, required to secure essential resources
2) *Spaces of engagement* – contextual relationships which permit spaces of dependence

Accountability

Accountability is a means to ensure responsibilities and standards are upheld, entailing clarity of roles and responsibilities and reporting on action taken (Ahrens and Rudolph 2006, pp.214). Accountability goes both downwards to beneficiaries (e.g. consultation) and upwards to higher-level government (e.g. reports). Accountability is closely linked to transparency, another oft-cited condition of good governance, to ensure prevention of corruption (ibid).

Participation and community empowerment

The argument for participatory DRM governance stems from the failure of top-down solutions in vulnerability reduction (Chambers 1995). Participation can involve formal or informal mechanisms which allow citizens to 'reach' policy-makers – an inherently cross-scalar process (Swyngedouw 2004) – and seeks to ensure policies are "both politically required as well as socially accepted" thus enhancing downward accountability (Ahrens and Rudolph 2006, pp.215).

A key goal of participation in DRM is transforming vulnerable individuals at the local scale from 'victims' to "actors with the capacity to contribute to the management of their vulnerability levels" (Allen 2003, pp.175). This occurs through strategies of empowerment in which communities are enabled to take ownership of the issues affecting them and challenge power inequalities (Chambers 1995, Tompkins et al 2008). Brenner (1998) highlights the potential for scalar reconfiguration to "serve not only as a tool of

disempowerment, exclusion, and domination but also as a means to construct empowering, inclusive, and even emancipatory counter geographies" for local actors (pp21).Empowered participation requires engaged citizens as a prerequisite, which depends on a wide variety of factors including poverty levels and clarity of communication (Williams 2004).

Social capital

Interest in the 'nourishing' effect of trust and social capital in citizen-state relations (Pelling et al 2008) has attracted attention in governance literature, heavily influenced by the work of Putnam (1993). Häkli and Minca define social capital as "an unevenly distributed resource that depends on individuals' ability to enact the power potentials that reside in their membership in social networks" (2009, pp.1). Putnam observed "voluntary cooperation is easier in a community that has inherited a substantial stock of social capital, in the form of norms of reciprocity and networks of civic engagement" (ibid, pp.167), explaining that social capital aids societal cooperation but can be difficult to generate. Governance regimes that seek to enhance and utilise social capital (stocked in trust, norms and networks) are generally more successful (ibid). Pelling et al (2008) term the supportive informal networks between organisations 'shadow spaces', and argue they greatly aid disaster response and adaptive capacity.

2.3 Theoretical agenda and research questions

Broad theoretical consensus suggests analytical priority in scalar analysis of decentralised DRM governance should be the *processes* through which relationships of relative empowerment are produced and contested, in order to question entrenched scalar disparities Swyngedouw (2004). Attention should focus on the actions and motivations of actors, constituting the politics of scale (Neumann 2009, Brown and Purcell 2005). Batterbury and Fernando (2006) call explicitly for in-place, cross-scale analysis in studies of environmental governance, arguing that attention to processes across scales is necessary to fully understand the manifestation of power inequalities 'on the ground'. This is echoed by Jonas (2006) who demands greater attention to the 'inbetweenness' of scales.

This research answers these calls by gathering data from all levels of governance, focusing the analysis on the interactions between these and associated geographies of

empowerment. It is hoped an improved understanding of the nature of actor interactions, and the processes underlying their construction, might contribute to improved understanding of how 'good governance' might be reconstructed in practice. Particular attention will be given to the scaled aspects of aforementioned governance components, freshly interpreted as dynamic processes controlling regime outcomes. This is consistent with Marston (2000) and Brenner's (2001) view of scalar politics as a vehicle of political endeavour within critical geography.

This research also seeks to provide empirical grounding for scale theory which, whilst sophisticated and well-developed, perhaps has suffered from an intensity of internal debate which tends to distract from its utilisation as a practical framework for geographical enquiry (Moore 2008). Delaney and Leitner remarked in 1997 that "to date, little empirical work has been offered showing how the construction of scale is attempted or accomplished by actors engaged in political transformations" (pp.93) but their call has garnered limited response. This research seeks to assess whether scale is still a relevant, and more importantly *useful,* conceptual framework.

These concepts have been translated into three research questions, informing a methodology of analysis which will be used to interrogate scaled geographies of power distribution within the decentralised system of disaster risk governance in Jamaica. These are as follows:

1. Which actors are empowered and disempowered in Jamaica's system of DRM governance?
2. Through what scaled processes does this relative empowerment and disempowerment of actors occur?
3. What are the socio-cultural and political forces shaping the interactions between scales?

Answering these questions responds to gaps in the literature related to the social dimensions of scale structuration, scaled dimensions of 'good governance' components, and what more the politics of scale can offer the political ecology of environmental risk.

Note: 'Empowerment' is used here in the literal sense of 'having power', as used by Delaney and Leitner (1997), as opposed to 'processes of empowerment' as it appears in development literature. 'Scaled processes' implies processes working *across* scales, involving more than one actor. Finally, whilst many political ecologists and scale theorists adopt historical approaches in their analyses to unpack 'how we got here', this paper presents a snapshot view of current power relations within a dynamic system of reconfiguration.

3. Context: Portland, Jamaica

The small island developing states (SIDS) of the Caribbean suffer disproportionately high vulnerability to natural disasters (Pelling and Uitto 2001, UNISDR 2009), with increased disaster incidence every decade since 1970 (Sahay et al 2006). This is the culmination of high hazard exposure and a variety of socio-economic vulnerability factors (Crowards 2000, Osei 2005). Furthermore, the magnitude and frequency of natural hazard events in the Caribbean are anticipated to increase significantly with global environmental change (Parry et al 2003).

Table showing estimated losses from tropical cyclone events, 1975-2007

Region	Average annual number of reported tropical cyclones 1975–2007	Average annual estimated economic loss (million constant 2000 US$)	Average annual GDP exposure (million constant 2000 US$)	Percent of global total economic loss	Estimated average annual economic loss as % of GDP in affected countries	Ratio of economic loss to GDP exposure (global mean = 100)
East Asia and Pacific	8.8	5,835	44,136	15.1	0.22	438
Europe and Central Asia*	-	-	-	-	-	-
Latin America and Caribbean	3.2	2,465	14,656	6.4	0.13	557
Middle East and North Africa*	-	-	-	-	-	-
South Asia	1.2	1,054	8,380	2.7	0.11	417
Sub-Saharan Africa	1.9	306	3,467	0.8	0.55	292
OECD	11.1	27,451	1,060,431	71.2	0.13	86
Other high income countries	3.5	1,434	176,010	3.7	0.19	27
Total	**29.7**	**38,545**	**1,307,080**	**100**		

* insufficient observations

Source: UNISDR 2009, pp.28

Table 2: Latin America and the Caribbean (highlighted) shown to suffer very high economic vulnerability - the highest in the world

Selecting Jamaica

Globally, the Greater Antilles (Haiti, Cuba and Jamaica) are the most vulnerable island group (Pelling and Uitto 2001). Jamaica in particular is an important study area due to regional economic, cultural and political significance, for example it is a Sub-Regional Focal Point with considerable DRM oversight responsibility for neighbouring islands, as designated by the Caribbean Disaster Emergency Management Agency (CDEMA) (www.cdema.org).

Jamaica has a tropical climate and experiences hurricanes, earthquakes, landslides and flooding (ODPEM 1997).

In addition Jamaica has a well-established and internationally well-regarded national disaster agency: the Office of Disaster Preparedness and Emergency Management (ODPEM). Established in 1980, ODPEM's responsibilities are legislated in the 1993 Disaster Preparedness and Emergency Management Act. However Hurricane Ivan (2004) had severe economic impacts which have brought into question the ability of the Act to deliver on its core objectives (Osei 2005). Additionally the Hyogo Framework for Action (HFA) Interim National Progress Report (ODPEM 2008) identified weaknesses in terms of financial decentralisation and operational capacity, particularly at Parish level. Consequently, amendments to the 1993 Act are underway, but have been in draft format for 6 years and remain un-finalised (R20, personal communication).

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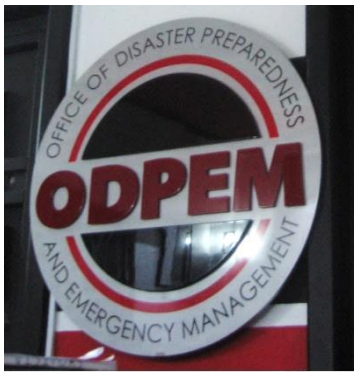

Figure 1: ODPEM logo
(Source: author)

The Jamaican DRM system

Jamaica has a decentralised system of DRM governance. Whilst ultimate responsibility is held by the National Disaster Committee (NDC), chaired by the Prime Minister (ODPEM 1997), ODPEM is responsible for on-going DRM implementation so analysis of 'national level' DRM here focuses on them. Parish Disaster Committees, sitting within each Parish Council (PC), are responsible for DRM at local government level, with community-based Zonal Committees (ZC) (theoretically) established in each sub-parish district (ibid). The structure and core functions of these key actors are shown in Table 3.

Table 3: Description of key actors in Jamaica's DRM system			
	ODPEM	**Parish Disaster Committee (PDC)**	**Zonal Committee (ZC)**
Level:	National	Parish	Community
Description:	Affiliated government agency (i.e. non-elected) responsible for leadership, oversight and coordination of disaster preparedness and emergency response activities across Jamaica. Employ Regional Coordinators (N-E-S-W) to provide support to PDCs, and ensure they are conversant with ODPEM objectives.	Responsible for the planning and provision of Parish-level disaster preparedness and response (where able) and promoting collaboration between relevant actors. Where capacity is exceeded in emergencies, assistance is provided by ODPEM.	Aims to strengthen community disaster preparedness and response capacity and develop rapid local response mechanisms, in order to be community-sufficient for three days following a hazard event.
Chaired by:	Director General, Ronald Jackson	Parish Mayor (elected)	Chairperson (elected), Vice-Chairperson and Secretary
Membership:	Paid ODPEM staff	25 voluntary members consisting PC staff (incl. Parish Disaster Coordinator), all elected Portland Parish Councillors, and representatives of relevant non-governmental and relief organisations (for a full list see Appendix C)	Community residents, including trained shelter manager, first aider, initial impact assessment persons. All voluntary.

Source: ODPEM 1997, www.odpem.org.jm, personal communication (Portland Parish Disaster Coordinator)

Each PC employs a Parish Disaster Coordinator, responsible for providing key linkage between communities, the PC, and ODPEM, ensuring the meeting of the PDC, and ensuring local governments address key issues.

Selecting Portland

Selecting a single case study parish allowed maximum analytical depth within resource constraints. Portland was recommended on the basis of experiencing relative system success, boasting the highest number of active ZCs of all parishes: 38[2]. Whilst this increases the likelihood of meaningful results vis-à-vis observing the system 'in motion', Portland is not representative and findings cannot be extrapolated to other parishes. Portland was also selected because it is highly vulnerable, in particular to flooding and slope failure due to high annual rainfall. It is a rural and predominantly agricultural parish, with high poverty levels (R16, personal communication).

[2] Numbers of active ZCs elsewhere approximated at 5-6 in six parishes and 1-2 in the remainder (ODPEM, personal communication)

4. Methodology

Field data were collected over four weeks in Jamaica. The majority of time was spent hosted by the University of the West Indies (UWI) for security and access to facilities. One week was spent in the north-east, undertaking a case study in Portland Parish.

Table 4: Fieldwork Schedule		
Weeks 1 & 2	Kingston	Interviews with ODPEM staff
Week 3	Portland	Case study in Portland parish Interviews with PDC, PC and ZC members Participant observation of PDC and ZC meetings
Week 4	Kingston /Portland	Additional interviews with ODPEM and Local Government Day trip to Skibo to observe launch meeting for mitigation project and interview participants

4.1 Data collection techniques

Data collection was qualitative, fitting the research goal to unpack the *nature* of relationships between scales of governance and the complex processes shaping these (Mayoux 2006). McCracken (1988) states all critical social science research requires in-depth knowledge of the respondent, necessitating qualitative methodologies. Data collection consisted of 21 semi-structured interviews, two group interviews, and participant observation. Appendix A contains full details of all data sources.

Interviews

Semi-structured interviews were selected for flexibility and the ability to pursue interesting or unanticipated topics more deeply during each interview (Longhurst 2003, Valentine 1997). The opportunity to "step into the mind of another person" (McCracken 1988, pp.9) was seen as highly important in understanding relative mutual perceptions of scaled actors.

Interview guides were constructed from desk-based research, tailored to the knowledge and activities of intended respondents, and piloted with two UWI academics to ensure broad appropriateness. Open-ended questions allowed participants to explore issues in their own words, upholding "the law of nondirection" by avoiding leading questions (McCracken 1988, pp.21). Interviews began with 'easy' factual questions about employment history and current responsibilities, moving towards more sensitive questions about personal opinions when respondents felt more comfortable (Longhurst 2003). Interviews were attuned towards themes newly uncovered by successive respondents, allowing triangulation of respondent views and gradual focusing-in on topics found to be the most salient, leading to some 'empirical drift' towards, for example, politicization (Reid-Henry 2003).

Interview length averaged 50 minutes, with several lasting up to 90 minutes. Shorter interviews (15-20 minutes) were with non-executive PDC and ZC members post-meeting, amongst those travelling long distances with whom it was difficult to pre-arrange meeting times. However the research priority was breadth of knowledge capture, so maximising exposure to respondents was prioritised over interview length standardisation.

All interviews were recorded (except one conducted via telephone and another where notes were relied upon). All granted written or verbal consent on the basis of strict confidentiality of recordings and anonymity, except the Director General of ODPEM and the Mayor of Portland who permitted direct quotation.

Group interviews

Two group interviews each lasting 30 minutes were held post-ZC meeting in Skibo and Manchioneal to provide a more in-depth understanding of ZC dynamics. These sessions differed in two respects from the format of 'focus groups', defined as 6-12 people openly discussing a particular pre-set topic in which the facilitator has a minimal role (Longhurst 2003). Firstly the number of participants differed widely, because they were recruited post-ZC meeting on an 'opt-in' basis which depended on willingness and availability; to exclude any individuals would have caused alienation. Secondly the groups were quite shy, possibly as time restraints limited opportunities for 'ice-breaker' activities which are recommended in group work (ibid), which meant the conversation was maintained via direct questions

posed to the group. Whilst this precluded the development of in-depth group discussion, it succeeded in quickly gaining a lot of information from the grassroots level.

Participant observation

Periods of participant observation were undertaken at PDC and ZC activities, in order to i) gain a more detailed understanding of how they work in practice, ii) triangulate stories told in interviews about inter-agency dynamics with first-hand observations and iii) see how key individuals behave and relate to others. The latter point was particularly important in contributing to a 'thicker description' (Geertz 1973) of the nature of interactions between scales of government, helping to uncover the human personalities which constitute and shape these interactions. This was complemented by shadowing Mrs Lewis (Portland Parish Disaster Coordinator) in Portland, through which I learnt much about her life and work. Similar to Reid-Henry (2003) this method was not strictly ethnographic due to the limited time-frame and my high visibility (van Donge 2006), rather it constituted a blending of ethnographic techniques into more formal data collection with emphasis on trust-building and informal information-gathering which was extremely valuable in understanding the cultural context.

In PDC and ZC meetings I sat at the back of the room, participating only briefly to introduce myself to minimise the impact of my intrusion on proceedings. At the Skibo transect walk I interacted more directly, talking with other participants to facilitate 'active learning' about their activities. In all instances I took detailed notes of discussion content, exchanges between actors, and personal reflections.

4.2 Sampling

The sampling strategy consisted of a 'zoning in' approach, with data collected at the following scales: national government (ODPEM), local government (Parish Disaster Committee, Parish Council), and community level (Zonal Committees). Swyngedouw (2004) argues you can't 'do justice' to a process-based approach by beginning an analysis framed by a pre-given social scale. However the state structure cannot be ignored; it is

institutionally hierarchical. Interest here lies in the *'real'* distribution of power, and how that is constructed, enabled, and contested.

Respondents were selected through both purposive and convenience sampling (Longhurst 2003) which is non-representative of dynamics across Jamaica but enables understanding of how the governance system works under particular (place-specific) conditions i.e. in particular Portland communities. The target interview sample at the outset was 20, to optimise depth and breadth of understanding.

Selecting ZCs to observe

One community was selected which had a well-organised ZC (Manchioneal), and another which was less active and requires 'motivating' (Skibo). This was to highlight factors contributing to greater community mobilisation. Selection was aided by the Parish Disaster Coordinator who is highly familiar with all Portand ZCs.

Gatekeepers

Being unfamiliar with Jamaica, gatekeepers were extremely important. Odendahl and Shaw (2002) observe that elites (who are often inaccessible) can be particularly helpful gatekeepers to other elites in their network; contacts within ODPEM certainly snowballed after interviewing the Director General early on. Mrs Lewis was a vital gatekeeper in gaining access to geographically remote ZCs.

4.3 Challenges and sources of bias

Access and personal security

Crime levels in Jamaica are high, and roads generally very poor. This restricted independent mobility, and necessitated being escorted by Mrs Lewis or other ODPEM representatives when visiting rural communities (although not during interviews). The advantage of this was being accepted by communities, due to Mrs Lewis' widespread popularity. The disadvantage was the influence of 'sticky politics', whereby "the research process carries within it the politics of other times and places" (Reid-Henry 2003, pp. 192), i.e. association with ODPEM could have generated perceptions I was a 'government person', causing respondents to be

less forthcoming in their political opinions. To minimise this, I emphasised my independent status at the start of every interview, and clarified all results were for research purposes.

Language

Whilst the official language in Jamaica is English, Patois (indigenous English-based creole) is extremely widespread, and in rural areas less of a distinction is drawn between the two. Interpretation difficulties slightly reduced the 'flow' of some conversations, but was overcome during analysis by listening to recordings repeatedly.

Location

Elite interviews are likely to be located at the subject's convenience, which is not ideal as they are in a position of power (Odendahl and Shaw 2002, Longhurst 2003). However since ODPEM interviewees were extremely busy (particularly due to concurrent nationwide flooding) and personal safety issues, I was required to hold interviews at their offices. Whilst not ideal, this was unavoidable. I attempted to redress the power balance using techniques outlined in the following section.

4.4 Ethics and positionality

Ethical clearance was granted on the grounds of anonymity, confidentiality and independence as previously outlined. These terms, the research objectives, and respondents' right to withdraw for undisclosed reasons were clearly explained in simple language at the start of every interview. Respondents were given a copy of these details to keep for future reference.

Several aspects of my positionality required consideration during data collection and analysis, as follows:

Race

All respondents were Jamaican of Black African descent, apart from two of Asian descent. I am White British, of European descent. Given the post-colonial context, I was prepared for a possibly unwelcome reception (Skelton 2001). Whilst the conspicuousness of my 'whiteness' did contribute to an outsider/insider dynamic, I experienced much good-will towards the

British, and people were generally curious about my 'exotic' background. I sometimes felt however that people tempered their responses so as not to offend or shock me, which I countered by emphasising that all aspects of Jamaican culture, even controversial issues, were invaluable for my research.

Wealth

Power asymmetry associated with wealth was particularly apparent during the rural case study work. In such a context, Skelton emphasises the importance of choosing methods "that empower the 'researched'" (Skelton 2001, pp.90). This was done using the following techniques: using open-ended questions allowed people to speak about topics important to them, and 'impress' me with their knowledge (ibid); maintaining a conversational tone in interviews, to build rapport and trust (Longhurst 2003); sharing some personal information with respondents to encourage open lines communication (Mohammad 2001); dressing 'down' in rural settings to minimise perceived power disparity.

Gender

Jamaica remains a patriarchal society, and as a young (23) female I repeatedly experienced greater enthusiasm to be interviewed amongst men. This was balanced in group interviews by the disproportionately high number of women. To combat patronisation by some male (elite) respondents, I prepared fully in advance, was polite but firm in my questioning, and emphasised a professional demeanour by presenting business cards (Odendahl and Shaw 2002).

4.5 Analysis

All interviews and observations were fully transcribed upon return to the UK, permitting re-immersion in the data. Data were coded for themes arising using a 'grounded' approach (Crang 1997) befitting the constructionist conception of scale adopted in the research. These were then reviewed by reference to literatures consulted, which constituted "a set of expectations the data can defy" (McCracken 1988, pp.31) and aided in the identification of theoretical connections.

5. Analysis

This chapter outlines the results of the research and provide an analysis of its significance drawing on literature introduced in chapter 2. As much as possible respondents' own words are used as illustration, to anchor the analysis as 'closely' to the data as possible. The notation R- is used to distinguish between respondents.

5.1 Research Question 1: Which actors are empowered and disempowered in Jamaica's system of DRM governance?

Delaney and Leitner (1997) argue the core of scalar politics is the relationships between actors which are relatively empowered and disempowered. In this section each structure of DRM governance is addressed to assess its relative level of empowerment, subsequently considering their inter-relationships. In brief, ODPEM was found to be highly empowered, whilst PDCs and ZCs experience relatively low empowerment. The Parish Disaster Coordinator is found to hold very significant 'bridging value' between scales.

5.1.1 ODPEM

The results suggest ODPEM contains the greatest share of power within the decentralised DRM system in Jamaica. Whilst the closeness of its relationship with core government departments and the extent of DRM mainstreaming at the 'top' have been critiqued (Jones 2011), ODPEM retains a sound international reputation. All ZC members spoke respectfully of ODPEM, indicating high public trust. Particularly in comparison to 'central' government, respondents believed ODPEM are responsive and can be relied upon in case of emergency. For example:

> "They [ODPEM] are committed people, and they show it to the public. When ODPEM speaks, the nation listens" (R15)
>
> "ODPEM has a very strong connection with the community" (R6)
>
> "If ODPEM had everything under their umbrella we'd have a faster connection; whatever you ask them you get" (R11)

ODPEM has succeeded in constructing a neutral identity, emphasising integrity and credibility. This is aided by its status as an independent agency, and partnerships with other independent agencies which such as the Social Development Commission (R20).

As outlined in section 2.1.1, 'glocalisation' (Swyngedouw 2004) is theorised to represent a threat to the sovereignty of national-level actors. However the research suggests that although some power has shifted upwards to the international scale, the national scale remains strong. This shift is the product of increased reliance on international donors to fund mitigation projects such as the Building Disaster Resilient Communities project (see Appendix B), linked to funding cuts from central government (R3). ODPEM's continued autonomy despite this is illustrated in, for example, retaining control over selection of beneficiary communities using their own Vulnerability Ranking Index, and independent implementation of projects without direct supervision from the donor (observed at the Skibo Mitigation Project launch). Thus 'glocalisation', as conceived by Swyngedouw in terms of *dis*empowerment of the national scale relative to the international, was not observed.

5.1.2 Parish Disaster Committee

In any decentralised system the actions of local actors are a critical factor in overall system effectiveness (Larson 2002). The strengths of the Portland PDC are that it meets regularly, is chaired by the Mayor who is enthusiastic and committed ("the Mayor is a great chairman, he gives so much support" (R16)) and is well-attended by non-government members. In addition the Parish Disaster Coordinator is a hugely dedicated individual and provides strong leadership.

However, many aspects of DRM at the PC level were also found to be dysfunctional, contributing to a disproportionate share of responsibility for DRM being shouldered by the Parish Disaster Coordinator. All ODPEM respondents documented a failure of Parish Councils (PCs) to fully realise their responsibilities, for example:

> "While we have this decentralised system it doesn't work as well because the local authorities have never truly owned their responsibility for DRM" (R3)

Areas of weakness were multiple, including: poor attendance at PDC meetings (at the meeting on 13th June, three out of nine Councillors were present), lack of enforcement of

DRM objectives, members' failure to acknowledge DRM responsibilities outside PDC monthly meetings (and associated failure to adequately support the Parish Disaster Coordinator), lack of initiative in project implementation, lack of coordination between actors (government and non-government), and inadequate mainstreaming of DRM into other PC activities. The PDC and its constituent members, also suffer from lack of enforcement power.

5.1.3 Zonal Committees

The data show there are differences in empowerment levels between the two ZCs sampled, but there is evidence that both experience relative disempowerment. Participant observation revealed differences between Manchioneal and Skibo which were consistent with their characterisation as 'mobilised' and 'less mobilised' (respectively) during the selection process.

The reasons for differing levels of mobilisation varied between respondents. ODPEM staff attributed level of mobilisation to frequency of hazard impact which increases community engagement with DRM concerns. ZC members themselves reported a desire to 'give back' to the community, self-protection, and frequency of impact, as significant motivations, for example:

> "I attend meetings to help lift up the community… we live in a flood-prone community, we want to make sure things are taken care of" (R1, Manchioneal group interview)

However group interviews revealed that in both ZCs, even in Manchioneal, the level of committee activity is strongly correlated with the regularity of contact with Mrs Lewis. Members of both ZCs were vocal in their view that this contact was the PC's responsibility to ensure. For example:

> "It is very important that she comes to the meetings, to every meeting" (R3, Manchioneal group interview)

> "3-4 years ago the group was going but after a while the numbers dwindled and eventually they stopped altogether… it restarted because Ms Lewis she was concerned, so she called me up" (R1, Manchioneal group interview)

Such data indicate that ZCs generally do not feel sufficiently empowered to maintain meetings unsupported, and they are heavily reliant upon the work of Mrs Lewis with whom they have a strong connection. Currently Mrs Lewis attends almost all ZC monthly meetings (R16). This is a huge individual undertaking given the large number of ZCs in Portland, and contributes significantly to her disproportionate share of responsibility for DRM within the PC.

5.1.4 Interactions between actors

Figure 2 shows the 'official' chain of authority for DRM from ODPEM, to local government, to ZCs, is dysfunctional. Relationships between constituent actors at Parish level are functional but weak. In contrast, the Parish Disaster Coordinator maintains a strong relationship with both ODPEM and ZCs. This highlights the importance of the Parish Disaster Coordinator in supporting interactions between ODPEM and the ZCs, and enabling the decentralised system as a whole to function. These interactions will be explored in greater depth in the following sections.

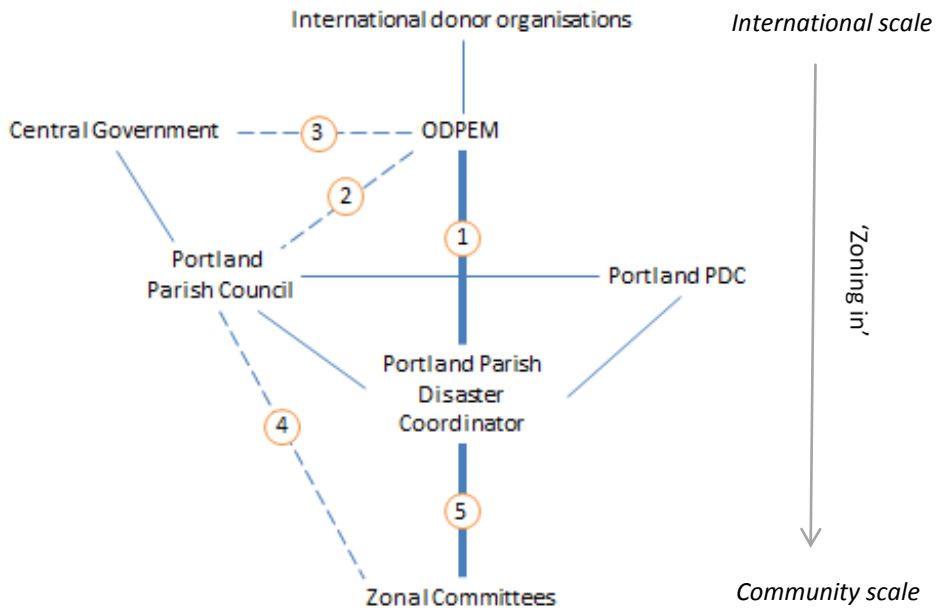

Figure 2: Relative strength of actor inter-relationships in Jamaica's DRM system. Line thickness correlates to relationship strength. Dotted lines represent relationships found to be dysfunctional. The key provides exemplary evidence for these characterisations. **Source:** author

1. "I think there is a very close connection [between ODPEM and the Parish Disaster Coordinators], to the extent that sometimes people think that the Parish Disaster Coordinators are employees of ODPEM, but they aren't" (R8)
2. "ODPEM has just one physical person working within each parish, that is a challenge… I think from national to parish level I would suggest that is the weakest" (R7)
3. "I'm not sure that the communication between the source [of financial resources] and ODPEM is that strong" (R11)
4. "When we were doing the risk planning component of the IDB project [mitigation] we invited a lot of councillors, but they didn't show. I can't recall anybody saying a councillor has ever turned up" (R8)
5. "Some Parishes depend too much on the personality of the Parish Disaster Coordinator, but the Parish people, they know their community" (R6)

5.2 Research Question 2: Through what scaled processes does the relative empowerment and disempowerment of actors occur?

This section addresses the processes leading to patterns of relative empowerment as highlighted in section 5.1. These are: scale-jumping from the top-down, broken chains of accountability, and partiality of local participation. It is found these directly contribute to and perpetuate power disparities between scales.

5.2.1 Scale-jumping 'over' local government

This research indicates an institutional tendency to scale-jump 'over' the PC during mitigation project delivery. This is indicative of a relatively strong relationship between ODPEM and communities, combined with institutional weakness of local government. The top-down scale-jump was observed at the Skibo Mitigation Project (see Appendix B), where ODPEM is working directly with the community and even the Parish Disaster Coordinator did not attend. It was also outlined in interviews, for example:

> "The level of initiative is not happening yet so most of the projects which can be initiated at the parish level is not being done, so they're being initiated at ODPEM then we partner with the community" (R8)

It should be noted that this type of scale-jumping is unusual; most cases in the literature refer to upward scale-jumping as a mechanism of grassroots resistance (McCarthy 2005). The processes contributing to the scale-jump will now be examined in further detail.

(a) Local government ownership and mainstreaming of DRM

Section 5.1.2 outlined the reported weaknesses of the PDC. These were widely attributed to failure to 'own' DRM within local government and frequently accompanied by references to the construction of DRM as 'ODPEM's business', for example:

> "The biggest challenge is they [the PCs] have never truly owned it. They've found every way to say 'disaster management is ODPEM's business, it's not the PC business'" (R3)

This culture of deference was attributed partly to the strength of association between the Parish Disaster Coordinator and ODPEM, illustrated by the tendency to refer to both Mrs

Lewis and the PDC as 'ODPEM'. This conflation of terms implies a fluidity of identity which does not fix ownership for DRM upon the PC, and legitimises deference of responsibility to ODPEM and its perceived delegate: Mrs Lewis. This embedded misconception is outlined thus:

> "Some of the PCs have not fully accepted the Parish Disaster Coordinators as employees. They appear to be, they are given offices, but they see them as ODPEM, rather than 'your work is our work'" (R20)

This view indicates a lack of structured mainstreaming of DRM into other PC functions, reflecting Osei's (2005) observation that horizontal networks between DRM actors and other departments are lacking. This is of concern, because DRM mainstreaming is necessary for effective DRM (Tompkins 2008).

(b) Resource distribution

A problem cited repeatedly at all scales was insufficient funding, echoing the HFA Interim Progress Report results (ODPEM 2008). The problem was framed as preventing the PDC from delivering on DRM objectives as defined in its terms of reference (ODPEM 1997), and compounding low ownership of DRM due to low monetary incentive. A particular area of unmet need is provision of basic emergency equipment for ZCs to provide first-line disaster response, such as first aid kits and blankets (R8, R16). PDC members expressed frustration at having insufficient funds to be proactive in DRM, such as not being able to commence drain cleaning in advance of the hurricane season (R15).

Particular frustration stemmed from perceptions that "funding is found to do other things" (R10), supporting suggestions that DRM has low priority amongst PC decision-makers. Several PDC members favoured establishing an independent PDC budget (it currently relies on expense reimbursement). Many believed the national Department for Local Government (who allocate PC budgets) should provide this support, whilst others highlighted the existing autonomy PCs have to allocate committee budgets which they do not exercise. It was argued:

> "Honestly, I think the idea that resources get stuck higher up is just perceived… Something forgotten is that each parish council is responsible for their own supplies" (R16)

In any case, PDCs are caught in a 'space of dependence' (Cox 1998) in which they are hindered from fully supporting communities, and the disempowering effects of under-funding stems from characterisation of the PDC as experiencing "too much talk but little action" (R10). This is reflected in ZC perceptions that they receive inadequate support, for example:

> "The government needs to put in more effort, they aren't doing enough for us" (Manchioneal group interview)

Wisner (2001) found similar problems in El Salvador, noting that decentralisation of responsibilities in the absence of adequate financial support cannot reduce vulnerability. Pelling echoes this, stating "the deleterious effects of this mismatch between financial resources and functional responsibilities are often exacerbated by a reluctance from the state to admit to the limits of local government" (2003b, pp.82). The observed contradiction between rhetorical and real devolution of power and resources constitutes what Pacheco termed 'incomplete democratic decentralisation' (2004), as outlined in 2.2.3.

Some progress in PDC-strengthening appears to have been made via the BDRC project, which seeks to strengthen partnerships between actors. As an outcome of the project many respondents noted PCs begun to accept greater responsibility, although the Mayor of Portland confirmed this has not been matched by greater devolution of funds away from the centre.

In summary:

Sub-processes (a) and (b) have been shown to culminate in local government weakness in terms of low commitment and low capacity respectively to undertake DRM, contributing towards an institutional tendency for ODPEM to 'scale-jump' over the PC in project delivery. This is of concern given Allen's (2006) warning that weak local government support of community-level activities contributes to unsustainability of project outcomes, reducing

potential for long-term vulnerability-reduction. Whilst providing legitimacy to national and international actors, jumping to the community level misses the opportunity to strengthen local government capacity to support DRM by devolving funds and accountable responsibility for project implementation, and embeds the misconception that responsibility for DRM lies purely at the national scale.

5.2.2 Breaks in the accountability chain

Ahrens and Rudolph highlight the centrality of accountability to equitable environmental governance, stating "only if policymakers and bureaucrats can be held accountable for their actions will they be responsive to their stakeholders" (2006, pp.214). Ensuring accountability at and between levels constitutes a 'space of engagement' (Cox 1998) because it requires actions at one scale being felt at another. The data suggest weaknesses in both upward and downward accountability (Ahrens and Rudolph 2006), reflecting others' observation that Jamaica suffers from an enforcement problem (Robotham 2003).

Upward accountability

The Disasters Act 1993 dictates upward accountability (ibid) for DRM be ensured via ZCs reporting to the PDC, and the PDC to the NDC. However the data suggest upward accountability is a significant weakness of Portland's DRM governance, with no legal sanctions for actors failing to undertake duties to a sufficiently high standard.

Some respondents felt strongly that the NDC met insufficiently often, and provided inadequate leadership. One believed inadequate requirements for upward reporting legitimise local government failure to take political responsibility for DRM, contributing to perceived and material disconnect between levels. This is aptly captured thus:

> "It's like you have the head up here at the top but it's chopped off. Down here we try our best, but we're running around without the head. So there's this disconnect, because there's no form of responsibility. If things function well at the top then the same thing will be seen lower down in a systematic flow" (R16)

Inadequate upward reporting also reduces opportunities for institutional learning, which Tompkins et al (2008) state is vital for effective DRM governance.

Downward accountability: issues of representation

Technically, ZC chairpersons may raise community concerns directly to the PDC at meetings. However in practice they do not because i) many cannot afford the travel expense ii) their numbers were found to disrupt and prolong the order of PDC meetings (R16). Thus Councillors are relied upon to represent their electorate at meetings. However as a result of low Councillor attendance, community representation is dysfunctional, constituting weak downward accountability.

This issue reflects a wider problem of low contact between Councillors and their electorate. Group interviews confirmed residents are unaware of the formal mechanisms to raise grievances, including their ZC chairpersons' right to attend PDC meetings. Respondents openly expressed scepticism of the Councillors' commitment to representing community views, for example:

> "The Councillors say 'the people elect me to represent them, why do I need representatives from the community?' But are they really representing the views and needs of the community, there is a question mark beside that" (R3)

Councillors' weak community connections were observed during the Skibo Mitigation Project meeting (see Appendix B) where the idea of quarrying sand from the river bed to combine income generation with flood management was raised. ODPEM representatives encouraged residents to approach their Councillor about this, to which the group responded 'oh, we don't see the Councillor'.

Failure of formal mechanisms of representation disempowers ZCs by excluding their voices from DRM policy-making. Ahrens and Rudolph (2006) argue responsiveness to community needs may be improved by enforced accountability to the electorate, which could be achieved through mandatory PDC attendance. Several respondents hoped the revised Disasters Act would incorporate binding legislation of this nature to strengthen the accountability chain (R13, R16, R21). However, communication with the Department for Local Government suggests such legislation is not included in the draft.

5.2.3 Participation and community empowerment

The disempowerment of ZCs that accompanies failed community representation is exacerbated by a partiality of grassroots participation, similar to Pelling's (2003b) observations in Guyana. The participation process was observed at the ODPEM-led Skibo Mitigation Project meeting, which included transect walk and hazard-mapping exercises. In such a process, there are inevitable challenges of the dominance of powerful local voices during open discussion (Blaikie 2006), indicated in this case to favour men aged 25-35 and women over 50. However, ODPEM overcame this during hazard-mapping through purposive selection of a demographic cross-section of participants.

Figure 3: Skibo community notice board communicating Skibo Mitigation Project launch meeting. **Source:** author

Three main concerns arose from observation of this process. Firstly, community members (privately) expressed scepticism that the outcomes of the project would match those promised:

> "The government are heartless, they don't care… we'll write a report from the meeting and maybe something will happen, but it's unlikely" (R18)

Secondly, whilst consultation is now standard during mitigation project *implementation* (R8), there is no formal mechanism for community input into policy or project *development*. ODPEM respondents acknowledged this would be beneficial and avoid "scrambling at the end of the day trying to find out how to bring certain issues into the project" (R6). Thirdly,

because consultation is not institutionalised and only communities selected for project implantation participate, grassroots voice capture remains a highly exclusive process under pre-conditions dictated by ODPEM and international donors. This evades a key benefit of participation: that seeking to confirm the type of project the community actually requires (Ahrens and Rudolph 2006).

These issues indicate a partial and exclusive form of participation in Jamaican DRM, maintaining an asymmetry of power and knowledge-sharing from the top-down and constituting a core limiting factor to community-level empowerment. As Pelling (2003b) states, “power lies in relationships, and when partnerships are built on unequal relations of power, development outcomes are open to bias” (p.90).

As observed in the HFA Interim Progress Report (ODPEM 2008), non-uniform access to training sessions with a tendency to exclude less well-organised communities was also noted (R8). This is problematic given the importance of inclusivity in community engagement with government programmes (Tomkins et al 2008).

Inevitably additional factors contribute to community empowerment and engagement with DRM principles. Respondents alluded to socio-economic status, which van Aalst et al (2008) also find frequently reduces engagement with participatory development, and inclusivity of training programmes, which Tompkins et al (2008) have highlighted as an important condition for effective DRM governance. Space precludes more thorough exploration of these, which require further analysis elsewhere.

5.3 Research Question 3: What are the socio-cultural and political forces shaping the interactions between scales?

As Desai and Imrie state, the manifestation of governance in any place is "contingent on a complexity of sociocultural and political relations and formations" (1998, pp.636). This section outlines contextual forces contributing to dynamics outlined in 5.2.

5.3.1 Politicization

Political culture in Jamaica is deeply embedded, highly polarised, and closely interconnected with crime (Robotham 2003), which Gayle (1986) partly attributes to long-standing national economic malaise. Pelling (2003a) observes that "for a democratic polity to function meaningfully, it requires political competition" (p.86), attributing government inefficiency in Guyana to underdevelopment of political competition between parties due to the depth of political polarisation. It is possible a similar mechanism is preventing more rapid movement away from populist politics in Jamaica (Gray 2004), which personal observation suggests stems from strong inherited political identities.

Political culture

Interviewees repeatedly emphasised the entrenched nature of political loyalties:

> "The political problem is standard, it's just how the people are… in any community you have a division along a road, one side is one party the other is the other, and they cannot get along" (R6)

In addition Jamaica has a long history of government rent-seeking (Gray 2004, Wilson 2011), and "relief efforts in Jamaica following hurricane Gilbert in 1988 were rife with partisan politics and corruption" (Wisner et al 2004, pp.244). Persistent issues of local Councillors' engagement being limited to election periods, when tangible project outputs are proximate, or when funding is available ("they appear when the goodies are around" (R8)), were raised frequently. Respondents also claimed partisan politics remains a significant problem in post-disaster relief distribution, for example:

> "Sometimes the MLSS[3] has some difficulties with the political people, who say 'oh our area is badly hit, please send stuff down here'" (R1)

Such behaviour has resulted in low public trust in government actors (Williams-Raynor 2011), reported as a significant barrier in engaging community members in ZCs:

> "Given the political culture, if you are red and I am green, and you are part of this disaster committee, automatically those who are green see it as an agent of the red political agenda" (R3)

> "They [residents] might feel that a particular party is coming to the meeting, so I'm not coming" (R16)

ODPEM has attempted to depoliticize by constructing its own identity as a neutral 'force for good' (5.1.1), and re-defining hazards as *spatial* problems shared across political divides (R3). However Allen (2003, 2006) emphasises community-scale approaches are most effective at depoliticizing DRM, and given the partiality of grassroots participation in DRM, the success of such tactics might be limited. In addition the PDC remains institutionally politicized due to its membership of Councillors, and elected Chair (the Mayor).

Political will

Pelling states "in hazardous areas conflicting interests and a lack of political will to resolve them seems to be at the base of many failures to apply knowledge effectively" (2003a, pp.77). This statement is supported by the following quotation linking politicization, personal commitment, and failure to act:

> "I don't understand how they [the PC] can say this is ok, that it [a collapsed bridge] can remain like this. But the problem is the council is run by politicians… they are the powers that be" (R16)

This quotation indicates that even politicians with power may be reluctant to act upon it, reflecting a form of ideological disempowerment, closely linked to issues of ownership

[3] Ministry of Labour and Social Security , responsible for the delivery of state aid

outlined in 5.2.1. The quotation also illustrates the frustration and distrust generated by DRM politicization, and it is this political culture of 'them' versus 'us' which renders social capital as such an important force for social stability.

5.3.2 Trust, informal networks and social capital

As Häkli and Minca (2009) state, the manifestation of social networks must be viewed as a function of the particular historical, cultural and political context. Several respondents highlighted the importance of 'Jamaican community spirit' in times of disaster – "people come together in case of disaster, believe me. That's how Jamaican people are, they come together" (R16). This might seem surprising given the aforementioned context of low levels of public trust. However, Gray (2004) suggests that the cultural familiarity of the Jamaican political *milieu* means whilst the public are suspicious of the state, they are not precluded from forming close social bonds, supported by (Siisiäinen 2009) who argues similarly that social capital is enhanced where people understand 'the system'. Factors contributing to social capital between Portland DRM actors follow.

Leadership quality

As Pelling et al (2008) state, 'shadow systems' of informal networks support overall system effectiveness. Interview data and observation suggest the personal characteristics of the Regional Coordinator (north) and Parish Disaster Coordinator, who work at the interface between national, Parish, and community scales, have an extremely nourishing effect. Pelling outlines the 'paradoxical' challenge for leaders to ensure both representation and accountability: "leadership must be deeply rooted in the local community; however, to gain resources to pursue a community's wishes leadership must have substantial linkages with external institutions" (2003b, pp.87). Fortunately both individuals have excellent communication and relationship management skills, remarked upon thus:

> "She [Mrs Lewis] is the sort of person who adjusts from here [high] to here [low] to make sure that the message is presented appropriately" (R15)

This quality is vital in the position as 'bridging point' between the different levels of governance, and likely accounts in part for the strength of ODPEM's reputation amongst communities (section 5.1.1).

The value of personality

As argued in section 2.2.3, trust is required between government and citizens for effective disaster prevention (Wisner et al 2004). Observing Mrs Lewis at length revealed the depth of her personal relationships with ZCs, for example in every village she stopped to greet persons and was warmly received. The value of her acquired position as 'nexus' of social capital, representing a mid-point between social networks in Portland, is manifest in her role as gatekeeper not only for myself, but between different communities, and between communities, local government and ODPEM. By association with her "enthusiasm and zeal" (R20), DRM in Portland has derived a huge amount of support, illustrated in the admiration with which respondents spoke of her work:

> "Denise Lewis is a fabulous lady, a real go-getter. There are a lot of issues with the PDCs, but Portland is the only parish that can boast 38 ZCs" (R4)

> "A lot [of Portland's success] has to do with her work, because she sleeps, she eats, she everything: disaster" (R15)

Whilst the strength of Mrs Lewis' connection with 'her' ZCs is highly valuable in linking communities into the national governance system, respondents spoke of the challenge of balancing 'personal touch' against over-reliance on an individual, for example:

> "Some Parishes depend too much on the personality in place there, but the Parish people, they know their community… I suppose because of the close interaction, because it's just so few persons trying to do such a large job, that the relationships are very close" (R6)

Such data suggest the weak formal accountability chain between ZCs and Councillors (5.2.2) is counteracted by the strength of the relationship between the Parish Disaster Coordinator and Portland communities, for example communities have faith in Mrs Lewis to act in their interests ("I believe if we have meetings Mrs Lewis will take it higher, she's really organised", R19). This supports Tompkins et al's (2008) argument that leadership quality is a key determinant of effective DRM.

However whilst her voice carries weight due to others' personal respect, her position holds no formal enforcement power (R15). Therefore this form of accountability to ZCs, which is highly contingent on her personal characteristics, is unsustainable. The HFA Interim Progress Report drew a similar conclusion, stating that "participation by some agencies has not been mainstreamed and is more aligned with a person rather than a post. This affects the quality and continuity of participation" (ODPEM 2008, pp.6). System reliance on an individual rather than formal structure has potential to introduce instability and scale fluidity, as a result of shifting relative strengths of cross-scalar relationships tied to personal relationships.

6. Discussion

The arguments presented indicate a power asymmetry between the national and the local. Whilst ODPEM are relatively empowered, trusted and respected, local government suffers from high politicization and low ownership (constituting low ideological empowerment), and inadequate resourcing (constituting low material empowerment). ZCs are disconnected from fully participating in the system through partial representation and consultation. This discussion engages these observations with core principles of the politics of scale outlined in chapter 2.

6.1 Scalar politics and spatial tactics

Section 2.1.3 introduced public participation as a key mechanism to construct "empowering, inclusive, and even emancipatory counter geographies" for local actors (Brenner 1998, pp21). However, as illustrated (5.2.3), ZCs participation in Jamaican DRM governance is partial, with limited capacity to 'reach' policy-makers. This significantly weakens potential for bottom-up challenges to inequitable power. As one respondent stated:

> "The government here needs to be really persuaded… It's not due to a lack of advocacy from the grassroots, that is strongly present" (R17)

ZC disconnect and isolation could constitute a 'spatial tactic' (Brenner 1997) by the central government, similarly observed (but not labelled as such) by Pelling in urban contexts. He states local involvement "is likely to meet with resistance from local authorities and political parties, whose domination over urban development is facilitated through the maintenance of relationships of dependency and patronage and through institutionalized [sic] cultures of rent-seeking" (2003b, pp.85). This nod to the influence of political culture is echoed by Gray (2004), who describes the Jamaican state as 'parasitic', concerned primarily with extending both the depth and spatial extent of its power. One respondent explicitly attributed community disempowerment to the deliberate actions of a self-interested state by denying access to education:

> "It was part of a historical political strategy in my opinion, where you control the masses by almost keeping them uneducated, unable to build that empowerment to demand certain rights. Then you can control them" (R3)

This directly supports Pelling's (2003b) observation that information enables power, and can be used as a tactic to exclude groups from decision-making. The outcome of this strategy is a highly, and inequitably, scaled system of governance in which the state is present at all levels whilst ZCs are trapped at a level of engagement limited solely to the community scale. However further research is required at the national government level to more fully understand both the motivations at the centre and micro-dynamics of empowerment at community level.

6.2 Scale-jumping as political strategy?

Scale-jumping was introduced in section 2.1.1(b) as a mechanism of political strategy (Brown and Purcell 2005). Interpreted thus, the 'jump' from the national to the local level in DRM project implementation could be interpreted as a deliberate move to retain centralised control over project direction. The data strongly support this argument:

> "Members of parliament don't want powerful local councillors, because they feel like they are diluting their authority. So there is no interest in strengthening local government, they see them as competing political factions. It is good for them to leave it as it is, and that is the political culture that has been pervasive throughout the years" (R3)

Here the failure to devolve, and stalling of the local government reform process, is interpreted as a direct product of central government motive, albeit not necessarily of ODPEM's.

Such a tactic is strengthened by constructing ODPEM's identity as both 'trusted deliverer of DRM' and 'expert in DRM', relative to the reported low level of technical DRM expertise held at local government level. As Kelly (1999) argues the power of discourse lies in its power to legitimise the mutual constitution of perception and reality. Thus failure to decentralise the *identity* of 'DRM-giver' creates a cycle of positive reinforcement between

discourse and human practice (McMaster and Sheppard 2004) in which knowledge and power gradients between the centre and local government – and by extension ODPEM and PDCs – are maintained in favour of the centre.

7. Conclusions

"Scale demarcates the sites of social contest, the object as well as the resolution of contest… It is geographical scale that defines the boundaries and bounds the identities around which control is exerted and contested" (Smith 1992, pp.66)

This research has presented a response to arguments that in-situ, cross-scale analysis of governance regimes is necessary to understand the disaster vulnerability construction. By applying principles from politics of scale literature, in particular Smith (1992), Marston (2000) and Delaney and Leitner (1997), it has sought to better understand processes contributing to relative actor empowerment and by extension the perpetuation of power inequity, using a case study of decentralised DRM in Portland, Jamaica. The project has three conclusions:

1. *Top-down scale-jumping perpetuates power asymmetry between national and local scales*

High politicization, low ownership of DRM principles and incomplete democratic decentralisation (Pacheco 2004) of resources have contributed to weaknesses at local government level, such that the PDC is neither ideologically nor materially empowered to deliver on its DRM responsibilities. As a result ODPEM tends to 'scale-jump' from the top-down, working directly with communities rather than disseminating projects via the PC. This reinforces community perceptions that DRM is 'ODPRM's business', fails to force the PC to acknowledge its responsibilities, and does not induce ZCs to demand local government reform from the bottom-up. As a result, relations between ODPEM and the PCs are reinforced and reconstituted; a scalar dynamic of hegemony as conceived by Brown and Purcell (2005).

The data suggest scale-jumping is a 'spatial tactic' on the part of central government, with local government weakness providing self-reinforcing legitimisation for centralised control. As Smith (above) and Kelly (1999) explain, identity, scale and power are mutually constitutive, thus construction of ODPEM as 'good' and 'trusted' versus that of local

government as 'weak' and 'corrupt' reinforces material power asymmetry between the national and the local.

2. *Partiality of grassroots participation restricts 'upward' challenges to the power asymmetry*

The power asymmetry is compounded by failure to decentralise DRM decision-making. Community mobilisation is hindered by disempowerment of ZCs, a result of limited and exclusive community participation in DRM project development and poor representation of community interests. These weak connections maintain 'gaps' between ZCs and other scales of DRM governance similar to those observed by Pelling (2003a) in Guyana. The failure of bottom-up claims to entitlements and system reform, combined with low political will, allows low downward accountability to continue.

3. *Informal networks constitute a 'band-aid solution' for weak chains of accountability*

Despite these weaknesses, the system 'works'. The research suggests that, as Pelling et al (2008) did, informal relationships based on trust are highly nourishing to the system, by substituting for non-enforcement of formal up- and down-ward accountability chains. This was most visible between ZCs and the PDC, where the personal charm of the Parish Disaster Coordinator facilitates a vital link.

Whilst effective at present, dependence of ZCs on an individual as opposed to 'real' integration into the system represents a 'band-aid solution' to the problems aforementioned. Despite the efforts of Mrs Lewis, lack of accountability and unenforced standards allow DRM to remain highly politicized; issues which require tackling at the root.

Wider implications: Politics of scale as an analytical framework for geographical enquiry

The results of this research support calls by Batterbury and Fernando (2005) that cross-scale analysis aids in-depth understanding of environmental governance regimes, in agreement with Neumann (2009) that greater engagement with the politics of scale literature adds texture to political ecological analysis of power relations. The results confirm findings by

Allen (2003, 2006), Mohan and Stokke (2000) and Blaikie (2006) that local actors cannot operate sustainably in isolation from 'higher level' actors.

Most importantly, however, the research confirms Brown and Purcell's hypothesis that "scale literature offers political ecology a theoretical way out of the local trap" (2005, pp.607). The primary benefit of a scalar approach was found to be its demand for attention to dynamics at and between all scales, focusing the mind on a systems approach to help identify areas of relative strength and weakness. Its weakness lies, perhaps, in the lack of analytical depth of each *individual* scale which may be achieved, however this may be attained through further research.

Future studies should consider replicating the methodology in additional Jamaican parishes to triangulate findings, possibly undertaking a rural-urban comparison to highlight the influence of socio-economics on scalar dynamics. Additional research is also recommended into the use of 'top-down' scale-jumping as a mechanism of state control, which has received little attention in existing literature.

Appendix A: List of all data sources

Interviews

Level of governance	Respondent position and organisation (non-chronological, in rough order of seniority)
National	Director General Ronald Jackson, ODPEM
	Senior Director of Hazard Mitigation and Weather Services, Department of Local Government
	Senior Director of Preparedness and Emergency Management, ODPEM
	Director, Mitigation and Planning Division, ODPEM
	Mitigation Project Officer, Mitigation and Planning Division, ODPEM
	Building Disaster Resilient Communities Project[4] Manager, ODPEM
Regional	Regional Coordinator (north), ODPEM
	Regional Coordinator (east), ODPEM
Parish	Chairman of Portland PDC: Mayor Patterson
	Denise Lewis, Portland Parish Disaster Coordinator, Parish Council
	PDC member: Jamaica Public Services representative
	PDC member: Adventist Development Relief Agency (ADRA) representative
	PDC member: Superintendent, Portland Police Department
	PDC member: Superintendent, Portland Fire Service
	PDC member: Ministry of Health representative
	Chairman, Kingston and St Andrews Branch (KSAB), Jamaican Red Cross
	Acting Director, Kingston and St Andrews Branch (KSAB), Jamaican Red Cross
Community	Chairman, Windsor Zonal Committee, Portland
	Vice-Chairman, Fellowship Zonal Committee, Portland
	Skibo Mitigation Project: Participant 1
	Skibo Mitigation Project: Participant 2

[4] See Appendix B

Group interviews

Group interview 1 (5 participants)	Skibo, Portland Location: Village Church, Skibo, Portland
Group interview 2 (18 participants)	Manchioneal, Portland Location: School Hall, Manchioneal, Portland

Participant Observation

13.06.11	**PDC Meeting** Location: Parish Council, Port Antonio, Portland Present: PDC members, Parish Disaster Coordinator, Mayor of Portland (Chair)
15.06.11	**Skibo ZC Meeting** Location: Village Church, Skibo, Portland Present: Skibo ZC members, Parish Disaster Coordinator, ZC Chairperson
16.06.11	**Manchioneal ZC Meeting** Location: School Hall, Manchioneal, Portland Present: Manchioneal ZC members, Parish Disaster Coordinator, ZC Chairperson
21.06.11	**Skibo Mitigation Project[5] meeting and transect walk** Location: Skibo, Portland Present: Skibo ZC members and residents, ODPEM Regional Coordinator (north), ODPEM Mitigation Project Officer

[5] See Appendix B

Appendix B: Current internationally-funded DRM projects

Natural Hazard Management in Urban Coastal Areas

This project is funded by the Inter-American Development Bank, currently being implemented. It seeks to strengthen disaster risk reduction in 28 communities across Jamaica, two selected from each parish. Planned outputs include strengthened capacity of ODPEM and implementing partners, community mobilisation, and vulnerability reduction of coastal communities through structural mitigation projects (ODPEM 2010).

Building Disaster Resilient Communities (BDRC)

This project is funded by the Canadian International Development Agency. It is a three-year project, currently underway. It aims to strengthen inter-agency partnerships between levels of government (i.e. ODPEM and local government, and local government and ZCs), and between government and non-government agencies. The main outputs so far have been establishing at least one ZC in every parish, and delivery of community training programmes (ODPEM 2011, personal communication with BDRC Project Manager).

Skibo Mitigation Project

This project is funded by Africa Caribbean Pacific – European Union (ACP-EU) through the Caribbean Disaster Emergency Management Agency (CDEMA) which is undertaking eight pilot projects across the Caribbean. Jamaica was selected for the implementation of a single project, and ODPEM selected Skibo on the basis of their Vulnerability Assessment Ranking Index. Skibo has a budget of approximately US$55,000 for the mitigation project, plus some $500 for mobilisation and capacity building (e.g. training workshops). The launch meeting held on 21 June 2011 was the first time the community had been informed of the project, and followed on from the ZC meeting held the following week which was intended to help mobilise and motivate the community, since community support is a pre-requisite to project implementation. The meeting consisted of I) focus group to identify perceived hazards in the local area, ii) a brainstorming session to generate and rank potential mitigation projects, and iii) a transect walk and hazard map drawing to more accurately capture hazard information (personal communication with Mitigation Project Officer).

Appendix C: Portland Parish Disaster Committee membership

1. The Custos - Honorary Chairman
2. The Mayor – Chairman
3. Secretary/Manager (Parish Council)
4. The Parish Disaster Coordinator (Parish Council)
5. Parish Councillors
6. The Senior Police Officer
7. The Senior Fire Brigade Officer
8. The Senior Medical Officer at the Hospital
9. The Medical Officer of Health
10. The Senior Poor Relief Officer/Inspector of Poor
11. The Superintendent (Public Works Department)
12. The Parish Managers for Public Utilities, including: Jamaica Public Services (JPS), National Water Commission (NWC), National Works Agency (NWA)
13. The Parish Managers of Central Government entities
14. Representatives of Service Clubs and Voluntary Organisations (partners of MLSS): Royal Agricultural Development Agency (RADA), Red Cross, Salvation Army, Adventist Development Relief Agency (ADRA)
15. Representatives of the Chamber of Commerce and Private Sector
16. Representatives of HAM/CB Clubs
17. Representatives of JIS
18. Parish Manager - Ministry of Labour, Social Security and Sports

Sources: ODPEM 1997, personal communication with Portland Parish Disaster Coordinator

Appendix D: Confirmation of ethical approval

From: sshl@kcl.ac.uk [sshl@kcl.ac.uk]

Sent: 08 May 2011 13:39

To: Blackburn, Sophie

Cc: Pelling, Mark

Subject: Online Submission of Application for Ethical Approval

Dear Sophie Blackburn,

KCL/10-11_727 "Realities of decentralised disaster risk reduction governance: A case study of 'political capital' between actors in Jamaica"[6]

I am pleased to inform you that full approval for your project has been granted by the GGS Research Ethics Panel. Any specific conditions of approval are laid out at the end of this email which should be followed in addition to the standard terms and conditions of approval:

- Ethical approval is granted for a period of one year from the date of this email. You will not receive a reminder that your approval is about to lapse so it is your responsibility to apply for an extension prior to the project lapsing if you need one (see below for instructions).
- You should report any untoward events or unforeseen ethical problems arising from the project to the panel Chairman within a week of the occurrence. Information about the panel may be accessed at: http://www.kcl.ac.uk/research/ethics/applicants/sshl/panels/.
- If you wish to change your project or request an extension of approval you will need to submit a new application with an attachment indicating the changes you want to make (a proforma document to help you with this is available at:

[6] Note: Only the title of this dissertation has changed slightly since application. All aims and content including methodology match that outlined in the original application.

http://www.kcl.ac.uk/research/ethics/applicants/modifications.html).

- All research should be conducted in accordance with the King's College London Guidelines on Good Practice in Academic Research available at: http://www.kcl.ac.uk/college/policyzone/index.php?id=247&searched=good+practice&advsearch=allwords&highlight=ajaxSearch_highlight+ajaxSearch_highlight1+ajaxSearch_highlight2

If you require signed confirmation of your approval please forward this email to sshl@kcl.ac.uk indicating why it is required and the address you would like it to be sent to. Please would you also note that we may, for the purposes of audit, contact you from time to time to ascertain the status of your research.

We wish you every success with this work.

With best wishes

Yours Sincerely,
GGS Reviewer

Conditions of approval (if blank there are no specific conditions):

[BLANK]

References

Adger, N., Arnell, N. and Tompkins, E. (2005) "Successful Adaptation to Climate Change across Scales", *Global Environmental Change,* 15, pp.77-86

Adger, N., Lorenzoni, I. and O'Brien, K. (2009) "Adaptation Now", in N. Adger, I. Lorenzoni and K. O'Brien (eds) *Adapting to Climate Change: Thresholds, Values, Governance*, Cambridge: Cambridge University Press, pp.1-22

Ahrens, J. and Rudolph, P. (2006) "The Importance of Governance in Risk Reduction and Disaster Management", *Journal of Contingencies and Crisis Management,* 14 (4), pp.207-220

Allen, K. (2003) "Vulnerability reduction and the community-based approach: A Philippines study", in Pelling, M. (eds) *Natural Disasters and Development in a Globalizing World*, Routledge: London, pp.170-184

Allen, K. (2006) "Community-based disaster preparedness and climate adaptation: local capacity-building in the Philippines", *Disasters*, 30 (1), pp.81-101

Batterbury, S. and Fernando, J. (2006) "Rescaling Governance and the Impacts of Political and Environmental Decentralization: An Introduction", *World Development,* 34 (11), pp. 1851‑1863

Blaikie, P. (2006) "Is Small Really Beautiful? Community-based natural resource management in Malawi and Botswana", *World Development,* 34 (11), pp.1942-1957

Brenner, N. (1997) "State territorial restructuring and the production of spatial scale: urban and regional planning in the Federal Republic of Germany, 1960-1990", *Political Geography*, 16, pp.273-306

Brenner, N. (1998) "Between fixity and motion: accumulation, territorial organization and the historical geography of spatial scales", *Environment and Planning D: Society and Space,* 16 (4), pp.459 – 481

Brenner, N. (2001) "The Limits to Scale? Methodological reflections on scalar structuration", *Progress in Human Geography,* 25, pp.591-614

Brown, C. and Purcell, M. (2005) "There's nothing inherent about scale: political ecology, the local trap, and the politics of development in the Brazilian Amazon", *Geoforum,* 36, pp.607-624

Bryant, R. and Bailey, S. (1997) "Third World Political Ecology", London: Routledge

Cannon, T. (2008) "Reducing people's vulnerability to natural hazards: Communities and resilience", UNU-WIDER Research Paper No.2008/34

Chambers, R. (1995) "Poverty and livelihoods: whose reality counts?", *Environment and Urbanization*, 7 (1), pp.173-204

Cox, K. (1998) "Spaces of dependence, spaces of engagement and the politics of scale, or: looking for local politics", *Political Geography*, 17 (I), pp.l-23

Crowards, T. (2000) "Comparative Vulnerability to Natural Disasters in the Caribbean", *Caribbean Development Bank Staff Working Paper (number 1/100),* presented at the OAS/USDE-NOAA/CSC Workshop on Vulnerability Assessment Techniques Charleston, South Carolina, March 20-22, 2000, available at www.mona.uwi.edu

Delaney, D. and Leitner, H. (1997) "The political construction of scale", *Political Geography,* 16(2), pp.93-97

Crang, M. (1997) "Analyzing [sic] Qualitative Materials", in R. Flowerdew and D. Martin (eds) (1997) *Methods in Human Geography: A guide for students doing a research project*, Essex: Addison Wesley Longman, pp.183-196

Gayle, D. (1986) "The Small Developing State: Comparing Political Economies in Costa Rica, Singapore and Jamaica", Hampshire: Gower Publishing Ltd

Geertz, C. (1973) "Thick Description: Toward an interpretive theory of culture", in *The Interpretation of Cultures*, New York: Basic Books

Gray, O. (2004) "Demeaned but Empowered: The social power of the urban poor in Jamaica", Kingston: UWI Press

Häkli, J. and Minca, C. (2009) "Introduction", in Häkli, J. and Minca, C. (eds) *Social Capital and Urban Networks of Trust,* Farnham: Ashgate

Harrald, J. (2006) "Agility and Discipline: Critical Success Factors for Disaster Response", *The Annals of the American Academy of Political and Social Science*, 604, pp.256-272

Jonas, A. (2006) "Pro scale: further reflections on the 'scale debate' in human geography", *Transactions of the Institute of British Geographers.,* 31, pp.399-406

Jones, E. (2011) "Then and now: A 30-year journey from the 'leading edge'", *Environmental Hazards,* Special Issue: Reducing disaster risks: Progress and challenges in the Caribbean region, 10 (1), pp.30-41

Kelly, P. (1999) "The geographies and politics of globalization", *Progress in Human Geography,* 23 (3), pp.379-400

Larson, A. (2002) "Natural resources and development in Nicaragua: Are Local Governments up to the job?", *World Development,* **30** (1): 17-31

Leitner, H. (2004) "The Politics of Scale and Networks of Spatial Connectivity: Transnational interurban networks and the rescaling of political governance in Europe", in **Sheppard, E. and McMaster, B. (eds)** *Scale and Geographic Inquiry: Nature, Society, and Method*, Oxford: Blackwell Publishing, pp.236-255

Longhurst, R. (2003) "Semi-Structured Interviews and Focus Groups", in Clifford, N. and Valentine, G. (eds) *Key Methods in Geography,* London: Sage, pp.117-132

Marston, S. (2000) "The social construction of scale", *Progress in Human Geography,* 24 (2), pp.291-242

Marston, S. (2004) "A long way from home: Domesticating the social production of scale", in Sheppard, E. and McMaster, B. (eds) "Scale and Geographic Inquiry: Nature, Society, and Method", Oxford: Blackwell Publishing, pp.170-191

Marston, S., Jones, J. and Woodward, K. (2005) "Human geography without scale", *Transactions of the Institute of British Geographers,* 30, pp.416-432

Mayoux, L. (2006) "Quantitative, Qualitative or Participatory? Which Method, for What and When?", in Desai, V. and Potter, R. (eds) *Doing Development Research,* London: Sage, pp. 115-129

McCarthy, J. (**2005)** "Scale, Sovereignty, and Strategy in Environmental Governance", *Antipode*, 37 (4), pp. 731-753

McCracken, G. (1988) "The Long Interview", *Qualitative Research Methods Series (Volume 13),* London: Sage

McMaster, B. and Sheppard, E. (2004) "Introduction: Scale and Geographic Inquiry", in Sheppard, E. and McMaster, B. (eds) *Scale and Geographic Inquiry: Nature, Society, and Method*, Oxford: Blackwell Publishing, pp.1-22

Mohan, G. and Stokke, K. (2000) "Participatory development and empowerment: The dangers of localism", *Third World Quarterly*, 21 (2), pp.247-268

Mohammad, R. (2001) "Insiders' and/or 'Outsiders': Positionality, theory and praxis", in Limb, M. and Dwyer, C. (eds) *Qualitative Methodologies for Geographers: Issues and Debates,* London: Arnold, pp. 101-107

Moore, A. (2008) "Rethinking scale as a geographical category: from analysis to practice", *Progress in Human Geography*, 32, pp.203-225

Neumann, R. (2009) "Political ecology: theorizing scale", *Progress in Human Geography*, 33(3), pp.398-406

Newstead, C., Reid, C. and Sparke, M. (2003) "The cultural geography of scale", in Anderson, K., Domosh, M., Pile, S. and Thrift, N. (eds) *Handbook of Cultural Geography*, London: Sage, pp.485-497

Odendahl, T. and Shaw, A. (2002) "Interviewing Elites", in Gubrium, J. and Holstein, J. (eds) *Handbook of Interview Research: Context and Method,* California: Sage, pp. 219-316

Osei, P. (2005) "Policy Responses, Institutional Networks Management and Post Hurricane Ivan Reconstruction in Jamaica", *Proceedings of APETT's 18th Annual Technical Conference on Engineering Infrastructure*, Planning and Development for Disaster Preparedness and Mitigation, 13-15th April 2005, pp.113-122

ODPEM (1997) "National Disaster Action Plan for Jamaica", obtained on request via personal communication with ODPEM, June 2011

ODPEM (2008) "Jamaica: Interim National Progress Report on the Implementation of the Hyogo Framework for Action", An HFA Monitor Update, accessed on 05/05/11 from www.preventionweb.net/english/countries/americas/jam/

ODPEM (2010) "Risk Assessments for 28 Vulnerable Communities", Natural Hazard Management in Urban Coastal Areas project concept note, obtained on request via personal communication with ODPEM, June 2011

ODPEM (2011) "Building Disaster Resilient Communities (BDRC) Project Brief", obtained on request via personal communication with ODPEM, June 2011

Pacheco, P. (2004) "What lies behind decentralisation? Forest, powers and actors in lowland Bolivia", European Journal of Development Research, 16 (1)

Parry, M. et al (2007) "Climate Change 2007: Impacts, Adaptation and Vulnerability", Working Group II Contribution to the Fourth Assessment Report of the Intergovernmental Panel on Climate Change, Cambridge University Press: Cambridge

Pelling, M. (2003a) "Toward a Political Ecology of Urban Environmental Risk: The case of Guyana", in K. Zimmerer and T. Bassett (eds) *Political Ecology: An integrative approach to geography and environment-development studies,* New York: The Guildford Press, pp.73-93

Pelling, M. (2003b) "The Vulnerability of Cities: Natural Disasters and Social Resilience", London: Earthscan

Pelling, M., High, C., Dearing, J. and Smith, D. (2008) "Shadow spaces for social learning: A relational understanding of adaptive capacity to climate change within organisations", *Environment and Planning A*, 40, pp.867-884

Pelling, M. and Uitto, J. (2001) "Small island developing states: natural disaster vulnerability and global change", *Environmental Hazards,* 3, pp.49-62

Putnam, R. (1993) "Making Democracy Work: Civic Traditions in Modern Italy", Princeton: Princeton University Press

Reid-Henry, S. (2003) "Under the Microscope. Fieldwork Practice and Cuba's Biotechnology Industry: A Reflexive Affair?", *Singapore Journal of Tropical Geography,* 24 (2), pp.184-197

Robotham, D. (2003) "Crime and Public Policy in Jamaica" in A. Harriott (eds) Understanding Crime in Jamaica: New challenges for public policy, pp.197-138

Sahay, R., Robinson, D. and Cashin, P. (2006) "The Caribbean: From Vulnerability to Sustained Growth", Washington: IMF

Siisiäinen, M. (2009) "New and Old Associations as Trusting Networks: Tracing social capital in Jyväskylä", in J. Häkli and C. Minca (eds) *Social Capital and Urban Networks of Trust,* Farnham: Ashgate, pp.267-294

Skelton, T. (2001) "Cross-cultural research: Issues of power, positionality and 'race'", in Limb, M. and Dwyer, C. (eds) *Qualitative Methodologies for Geographers: Issues and Debates,* London: Arnold, pp.87-100

Smith, N. (1992) "Contours of a Spatialized Politics: Homeless Vehicles and the Production of Geographical Scale", *Social Text*, 33, pp.54-81

Smith, N. (2004) "Scale Bending and the Fate of the National", in Sheppard, E. and McMaster, B. (eds) "Scale and Geographic Inquiry: Nature, Society, and Method", Oxford: Blackwell Publishing, pp.192-212

Swyngedouw, E. (2004) "Scaled Geographies: Nature, Place, and the Politics of Scale", in Sheppard, E. and McMaster, B. (eds) *Scale and Geographic Inquiry: Nature, Society, and Method*, Oxford: Blackwell Publishing, pp.1-22

Swyngedouw, E. and Heynen, N. (2003) "Urban Political Ecology, Justice and the Politics of Scale", *Antipode*, 35 (5), 898–918

Tompkins, E., Lemos, M. and Boyd, E. (2008) "A Less Disastrous Disaster: Managing response to climate-driven hazards in the Cayman Islands and north-east Brazil", *Global Environmental Change,* 18 (4), pp.736-745

UNFCCC (2007) "Vulnerability and Adaptation to Climate Change in Small Island Developing States", *Background paper for the expert meeting on adaptation for small island developing states on 5 to 7 February 2007,* accessed at http://unfccc.int on 29/08/11

UNISDR (2009) "Global assessment report on disaster risk reduction", United Nations International Strategy for Disaster Reduction Secretariat (UNISDR), available at www.preventionweb.net/english/hyogo/gar/report/index.php?id=9413

van Aalst, M., Cannon, T. and Burton, I. (2008) "Community-level adaptation to climate change: The potential role of participatory community risk assessment", *Global Environmental Change*, 18, pp.165-179

van Donge, J.K. (2006) "Ethnography and Participant Observation", in Desai, V. and Potter, R. (eds) *Doing Development Research*, London: Sage, pp.181-188

Valentine, G. (1997) "Tell me about…: Using interviews as a research methodology", in Flowerdew, R. and Martin, D. (eds) *Methods in Human Geography: A guide for students doing a research project,* Essex: Addison Wesley Longman, pp.110-126

Williams, G. (2004) "Evaluating Participatory Development: Tyranny, power and (re)politicisation", *Third World Quarterly,* 25 (3), pp.557-578

Williams-Raynor, P. (2011) "Honesty doesn't live here anymore", *Jamaica Observer,* 31 July, www.jamaicaobserver.com [Accessed on 29/08/11]

Wilson, N. (2011) "Too much corruption in Jamaica, says Gloudon", *Jamaica Observer*, 21 June, www.jamaicaobserver.com [Accessed on 29/08/11]

Wisner, B. (2001) "Risk and the Neoliberal State: Why post-Mitch lessons didn't reduce El Salvador's Earthquake Losses", *Disasters,* 25 (3), pp.251-268

Wisner, B., Blaikie, P., Cannon, T. and Davis, I. (2004) "At Risk: Natural hazards, people's vulnerability and disasters (2nd edition)", London: Routledge

Zimmerer, K. and Bassett, T. (2003) "Approaching Political Ecology: Society, Nature, and Scale in Human-Environment Studies", in K. Zimmerer and T. Bassett (eds) *Political Ecology: An integrative approach to geography and environment-development studies,* New York: The Guildford Press, pp.1-25

Websites consulted

CDEMA - www.cdema.org [Last accessed 30/08/11]

ODPEM - www.odpem.org.jm [Last accessed 30/08/11]

Jamaica Risk Profile, PreventionWeb – www.preventionweb.net [Last accessed 10/08/11]