

## **Institutional Responses to Climate Change and the Reproduction of Social Vulnerability in Hampton Roads, Virginia**

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**Abstract:** This paper presents research results from a case study investigating institutional responses to climate change within the coastal, urban, and industrialized context of Hampton Roads, Virginia. Through the lens of political ecology, I investigated the socio-political landscape in which institutional adaptation activities (e.g. planning and decision-making) are unfolding, seeking to understand how the needs of the previously identified most vulnerable social groups to climate change impacts were being addressed. Data gathered from semi-structured interviews with key institutional actors and direct participant observation at regional adaptation forums, produced empirical evidence that regional adaptation planning efforts are producing and reproducing social vulnerability to climate change for the region's most vulnerable, the poor. Linking to Schwartz's value theory, this paper argues that this adaptation outcome is due to dominant institutional attitudes of distrust, insecurity, and uncertainty and their materialization in procedural dimensions of climate change planning. The findings of this research raise broader concerns regarding adaptation equity for Hampton Roads, and may be insightful to local level adaptation planning elsewhere.

## *I. Introduction*

As anthropogenic climate change enters into a socially stratified world its myriad impacts are experienced disproportionately across and within global societies. The IPCC finds that, with a *very high* degree of scientific certainty human economic activity is the primary driver of modern climate change (2014). The anthropogenic forcing of climate change impacts experienced today have been primarily fueled by economic activities of the *global North*. Although the global poor have contributed far less to the drivers of anthropogenic climate change to date than their wealthier counterparts, they are often recognized as disproportionately experiencing the worst of climate change impacts, as well as being those least able to cope with and adjust to the damages suffered (IPCC 2014:955; Schipper 2007). The awareness of climate change inequalities is often discussed within the framing of a global north and global south dichotomy. However, Kates (2000) and Sen (2000) both distinctly point out that poor countries are not the unit of analysis here, but rather poor people themselves, within and across the so-called *developed* and *developing* world.

Against this backdrop of inequities inherent in social adaptation to climate change, this paper presents a case study investigating the process of adaptation in the context of a wealthy United States region known as Hampton Roads, Virginia. This *first world* politically and geographically defined coastal area is comprised of 16 municipalities who face climate-related flooding challenges. As the region embarks on community level adaption to expected (and arguably experienced) climate change impacts, this paper explores the socio-political landscape in which adaption actions are playing out. This research responds to a scientific call for greater social science engagement in climate change scholarship, and aims to contribute to the growing body of empirical evidence of the adaptation process itself (Agrawal et al., 2012). Additionally, heeding the advice of Agrawal et al. this study strives to be “especially attentive to scale, equity, and ethical issues because, despite the global character of climate change, its consequences are produced, experienced and responded to at the local level and disproportionately by those with the least capacity to adjust” (2012: 329).

In this paper I present ethnographic findings of dominant institutional actor perceptions and knowledges in the adaptation planning process in Hampton Roads. These findings give insights into how top-down adaption is imagined, implemented, and legitimized and its relevance for climate change vulnerable populations. This research is an essential step towards

understanding how and why adaptation outcomes occur, be they *successful* or otherwise. As Marino and Ribot (2013) state, the ecological conditions, distribution of assets, and systems of power that place certain communities at risk in the face of climate change can also place them at risk in the face of policy and planning responses. In this vein, this study seeks to understand the asymmetrical power-relations that facilitate the procedural and distributive dimensions of adaptation planning.

After an assessment of climate governmentality in Hampton Roads, this study draws upon Schwartz's value theory (1992:1994) to understand how observed institutional attitudes of distrust, uncertainty, and insecurity are underpinning adaptation decision-making that is motivated by values of 'power' and 'security' and is resulting in unfavorable adaptation opportunities for the region's most vulnerable and at-risk populations. Through inequitable processes of inclusion and exclusion this study finds that adaptation decision-making in Hampton Roads is producing a downward spiral of vulnerability for those who are already the most vulnerable to the climate change impacts- the poor and marginalized social groups.

## *II. Background*

### **Climate Change Impacts in the Context of Hampton Roads Virginia**

*I had been driving along I-64 for nearly three hours, when suddenly the interstate transitioned into a tunnel diving below the waters of the Chesapeake Bay. Uncertain of how long or how well engineered the tunnel was, I was relieved to see the light of day re-appear at the other end relatively quickly. However, the interstate did not return to solid ground for nearly two more miles as it continued on as a bridge hovering just slightly above the water. To one side, I saw the Chesapeake Bay, and looking inland, there was Willoughby Bay and tributaries winding their way through infrastructure and coastal marshlands as they left the terrestrial environment and entered the oceanic. There were beachfront homes along a narrow peninsula called Willoughby Spit and noticeable dredging, shipping, and naval activities bustling within the natural harbor. This was Hampton Roads. Immediately upon my arrival, the relationship between the seawaters and the built environment were evident,*

*illuminating understanding of how sea level rise could pose such a threat to this society. This is a land where many of the 1.6 million residents live along a densely populated coastal fringe of the landscape and will experience risks to human security and infrastructure under projected sea-level rise and storm-surge related impacts.*

*(Field Notes, 3/12/2013)*

For the 1.6 million residents of Hampton Roads, a coastal region of Southeast Virginia comprised of ten-cities and 16 counties, flooding caused by high tides and intense coastal storms is nothing new. However, flooding risks have been increasing as a direct result of three factors: 1) the biophysical effects of climate change (warming of surface water temperatures, sea level rise, and increases in the frequency and intensity of heavy precipitation storms), 2) the local geomorphology (shallow slope and land subsidence), and 3) the human impacts of urbanization and population growth (Klienosky et al. 2006). Previous climate vulnerability studies conducted within the region find that a significant percentage of developed lands and wetlands in Hampton Roads are currently at risk of flooding, and assuming unchanged land-cover distribution, risks to both of these land-cover types will increase substantially with future sea level rise (ibid).

As sea level rise is understood to be experienced disproportionately across the world's oceans (Sallenger 2012), Hampton Roads is projected to experience a rise that is approximately three to four times greater than the global average (USGS 2012). Furthermore, different geographic areas of Hampton Roads will experience greater amounts of exposure and sensitivity to the aforementioned risks than will others. Due to the differentially experienced climate change impacts coupled with a deeply socially stratified regional landscape, vulnerability is likewise disproportionately experienced among Hampton Roads inhabitants.

The pre-existing social inequalities within Hampton Roads create uneven geographies of differentially experienced levels of adaptive capacity. According to Klienosky et al. (2006) the segments of Hampton Roads most likely to experience storm-surge floods were identified through a vulnerability assessment grounded in spatial statistical methods as the same areas where the most socially vulnerable population segments live – identified in the study as people of color, the poor, elderly, and disabled.

## **Adaptation in Hampton Roads**

As current risks of flooding in Hampton Roads threaten human safety and livelihood security and encroach upon the region's globally significant maritime economy, notably the U.S. Norfolk Naval Base and the U.S.' third largest shipping port, climate change impacts already have the potential to render this region dysfunctional, a threat that will only be exacerbated by future climate change. With this growing local awareness, regional scientists, decision makers, multi-scalar government officials, and NGO stakeholders are preventatively planning how to best cope with and adapt to unprecedented environmental changes. The first formal regional adaptation effort that attempts to bring together all 16 municipalities to collaborate over region-wide adaptation efforts was organized through a series of *Sea Level Rise and Adaptation Forums*. The Adaptation Forums result form a joint effort between the Hampton Roads Planning District Commission (the regional planning agency), Old Dominion University, and Virginia Sea Grant.

## **Case Study Rationale and Research Questions**

Hampton Roads was deemed a suitable case study to empirically investigate adaptation as the region is (1) currently experiencing flooding impacts of sea-level-rise and increasing storm-surge due to climate change, (2) is comprised of a strikingly socially stratified landscape, and (3) has recently engaged in region-wide top-down adaptation planning. Given the region's qualifying characteristics, this research was able to investigate the primary research question asking: *what role do formal institutional actors play in the social process of adaptation to climate change in Hampton Roads, Virginia?* By posing this inquiry, this research seeks to understand how a decentralized and diffuse adaptation apparatus functions and makes decisions of community level adaptation. To gain insights into the institutional process of adaptation I posed two additional supporting questions:

- 1) What are institutional attitudes and beliefs regarding adaptation to climate change in Hampton Roads?
- 2) What stakeholder groups have a voice in regional adaptation in Hampton Roads, and why?

As this research understands adaption as a social process, investigating the ends of adaptation (solutions) alone is argued to be insufficient. Through this study I investigate the means of

adaptation – and thus the adaptation process itself. This requires asking those who determine community level responses to climate change and social change decisions - the politically and economically empowered - how they imagine climate change and *successful* adaptation. Therefore, this study investigated the imaginaries of the social elites, illuminating the institutional frames through which community level adaptation is happening in Hampton Roads from a top-down perspective. This case study is designed to gain insights into the ways in which institutional attitudes and values create opportunities, as well as constraints and limitations, to enhancing adaptive capacity (the ability to adapt) for the vulnerable populations within a society.

### *III. Relevant Literature*

Agrawal (2008) suggests that adaptation to climate change is inevitably local and that institutions can influence adaptation and climate vulnerability in critical ways. First, they can structure impacts and vulnerability; second, they are often the mediators between individual and collective responses to climate impacts and thereby shape outcomes of adaptation; and lastly, they govern the delivery and access to external adaptation resources. However, the extent to which climate change development can be carried out ethically, democratically, and effectively is of considerable dispute (Oliver-Smith, 2009a). Matters of procedural and distributional justice are central to dimensions of equity and effectiveness within adaptation planning.

As this study investigates dimensions of equity within the adaptation process, its focus is on matters of *procedural justice*, which is concerned with the fairness and the transparency of the processes by which decisions are made, within the context of adaptation to climate change related impacts. According to Paavola & Adger (2002), recognition, participation, and legitimacy are common concepts within procedural justice. Central dilemmas of procedural justice in adaptation to climate change include (Paavola & Adger 2002 p.8):

- Whose interests are taken into account in planning and decisions related to adaptation, and how?
- Who can participate in planning and decisions related to adaptation, and how?
- How much influence do different parties have on plans and decisions, and on what basis?

Heijmans (in Bankoff et al. 2004) argues that, “if we are serious about addressing vulnerabilities, then people’s participation should be made part of an empowerment process: joint assessment of

capacities and vulnerabilities build awareness.” Furthermore, the inclusion process should reach beyond consultation and providing information, and should be robust, including participants in all stages of decision-making that will impact them or their livelihoods (Heijmans in Bankoff et al. 2004).

Additionally, inclusive participation is argued to foster the building of social capital through actor networking, risk sharing, information sharing, and building reciprocal bonds of trust (Adger 2003). This is important in the context of adaptation to climate change as Burton, Kates and White (1993) argue that social capital is the necessary “glue” for adaptive capacity, particularly in dealing with unforeseen and periodic hazardous events (cited in Adger 2003: 392). Social capital is understood as a key determinant of adaptive capacity. “At its core, social capital theory provides an explanation for how individuals use their relationships to other actors in societies for their own and collective good” (Adger 2003:389). Bebbington (1999) and others have argued that social capital brings with it an inherent capability to gain access to resources and hence to enhance the security of livelihoods and well-being (Adger 2003: 391). In this sense, social capital, in enhancing security and reducing risk directly or through interactions with the state, market and other parts of the civil society, is likely to be a key element in any strategy for adapting to climatic hazards (Ibid). The importance of climate and adaptation governance in facilitating adaptive capacity relates to the importance of providing an inclusive participatory and transparent decision-making approach. Social capital, like human capital, will increase for the members of society who are engaged in the process of adaptation itself.

Oliver-Smith argues that a fully participatory decision-making approach is often best applied to social challenges characterized by complexity, deep uncertainty, and conflicts among values (Oliver-Smith, 2009b). While climate adaptation would appear to epitomize such challenges, truly participatory approaches to adaptation planning remain relatively unusual and not standard practice (Preston, 2009).

In an attempt to understand the process of adaptation planning and gain insights into why certain stakeholder groups are included and excluded from adaptation decision-making in Hampton Roads, this study draws upon Schwartz’s (1992) value theory to understand the institutional values and attitudes that underpin adaptation decision-making and their implications on adaptive capacity.

Schwartz (1992) suggests that dominant values motivate action, and function as standards for judging and justifying action. According to Schwartz (1994), *values* are defined as “desirable transitional goals, varying in importance, that serve as guiding principles in the life of a person or other social entity. Implicit in this definition of values as goals is that (1) they serve the interests of some social entity, (2) they can motivate action- giving it direction and emotional intensity, (3) they function as standards for judging and justifying action, and (4) they are acquired both through socialization to dominant group values and through the unique learning experiences of individuals” (1994: 21).

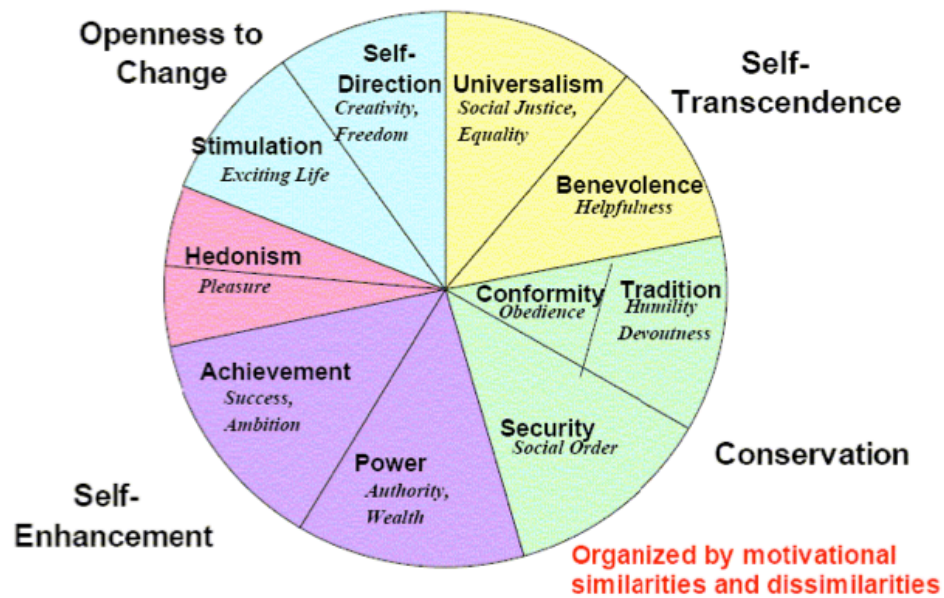
As ‘adaptation’ is understood as a goal-related construct, it is also an expression of values in a specific life domain. Therefore, it is reasonable to suggest that a diversity in decision-maker values will result in different adaptation visions, projects, objectives and prioritizations. This study draws upon Schwartz’s (1992) framework of ten motivational types of values (Table 3.1), and identifies the dominant motivational values at play in the context of adaptation planning in Hampton Roads.

**Table 3.1 Definition of values and motives (Schwartz, 1992).**

VALUE	DEFINITION AND UNDERLYING MOTIVES
<b>Power</b>	Social status and prestige, control or dominance over people and resources (social power, authority, wealth)
<b>Achievement</b>	Personal success through demonstrating competence according to social standards (successful, capable, ambitious, influential)
<b>Hedonism</b>	Pleasure and sensuous gratification for oneself (pleasure, enjoying life)
<b>Stimulation</b>	Excitement, novelty, and challenge in life (daring, a varied life, an exciting life)
<b>Self-direction</b>	Independent thought and action choosing, creating, exploring (creativity, freedom, independent, curious, choosing own goals)
<b>Universalism</b>	Understanding, appreciation, tolerance and protection of the welfare of all people and of nature (broadminded, wisdom, social justice, equality, a world at peace, a world of beauty, unity with nature, protecting the environment)
<b>Benevolence</b>	Preservation and enhancement of the welfare of people with whom one is in frequent personal contact (helpful, honest, forgiving, loyal, responsible)
<b>Tradition</b>	Respect, commitment, and acceptance of the customs and ideas that traditional culture or religion provides the self (humble, accepting my portion in life, devout, respect for tradition, moderate)
<b>Conformity</b>	Restraint of actions, inclinations, and impulses likely to upset or harm others and violate social expectations or norms (politeness, obedient, self-discipline, honoring parents and elders)
<b>Security</b>	Safety, harmony, and stability of society, of relationships, and of self (family security, national security, social order, clean, reciprocation of favors)



Influenced by Rokeach’s intuition “that at least some types of values might be interdependent because they stand in opposition to one another” (Schwartz 1992: 23) (Figure 3.2). Schwartz’s theory goes beyond a simple identification of value types and presents a structural relationship between diverse values. The validity of assuming incompatible values is understood when the pursuit of each type of value has psychological, practical, and social consequences that may conflict or may be compatible with the pursuit of other value types.



**Figure 3.2 Schwartz’s Value Theory (1994). Organizational structure of motivational values.**

Figure 3.2 shows Schwartz’s structure of value relations. Those, which are closer together along the circular continuum, are more compatible, whereas those further across from one another are in direct opposition or competition. In collective adaptation action certain types of values may facilitate a more equitable process such as value of ‘benevolence’, ‘universalism’, and ‘self-direction’ that stand in opposition to other competing values of ‘achievement’, ‘power’ and ‘security’. This paper integrates empirical findings of dominant institutional attitudes and values present in the adaptation planning process and follows them through as they materialize in stakeholder exclusion.

## *IV. Methodology*

### **Data Collection**

As stated in the literature, ethnographic approaches such as participant observation “can most brightly illuminate the relationships between structure, agency and geographic context” (Herbert, 2000, p. 550). Thus, qualitative ethnographic methods including participant observations and semi-structured interviews were the primary ways by which the research-seeking insights into local institutional responses to climate change - were perused.

The PI observed two Hampton Roads regional adaptation forums, both organized by Old Dominion University’s (ODU) Climate Change and Sea Level Rise Adaptation Initiative (CCSLRAI) in Hampton Roads. The CCSLRAI jointly hosted a series of ‘Sea Level Rise and Adaptation forums’ in tandem with Virginia Sea Grant at the Virginia Institute of Marine Science (VIMS), and the Hampton Roads (regional) Planning District Commission (HRPDC). According to the CCSLRAI’s website, the main objectives of the forums were to ultimately enable the most effective and efficient local government adaptation activities by bringing together regional stakeholders to work together on adapting the region to flooding issues caused by sea level rise, among other things (Old Dominion University, 2013).

Observational methods allowed for a vantage point, a place both geographical and social, at which I could position myself to obtain empirical evidence and gain holistic insights into the institutional adaptation process. The adaptation literature suggests that to best understand the empirics of adaptation, “scholars must observe and document adaptation actions and build critical qualitative and quantitative databases to test and explore theories about vulnerability and adaptation” (Agrawal et al., 2012). The series of private formal regional adaptation forums that brought together regional scientists, and outside scientific ‘experts’; local, state and national government officials; and other regional stakeholders including NGO’s and businesses, to discuss adaptation in a regional scope, allowed for adaptation quasi-governance actions to be empirically observed and documented.

Through both direct and participant observation at two adaptation forums I gained insights into the power relations within this contextual setting. I relied upon a carefully constructed observation chart (Appendix A) to keep my observations in the field focused and systematic so that they then were replicated at each observed forum. This ethnographic method helped to inform a rich understanding of social and political underpinnings of institutional

responses to climate change in Hampton Roads. Moreover, insights into how science informs adaptation policy and what relationships existed between the social actors in each sector emerged. Observations of adaptation discourse at the forums also yielded insights in institutional conventional wisdoms, the local climate change narrative, and what types of knowledges local institutional actors deem legitimate.

In addition to observation, seven in-depth semi-structured interviews and five informal interviews were conducted with institutional actors who represented top-down perspectives in policy, planning, and decision-making for place-based regional adaptation. Interviews bridged the gap between the observed actions of adaptation and the underlying drivers and outcomes of institutional adaptation in Hampton Roads. Based on recommendations from the literature, 11 primary questions, with sub-questions or prompts nested below each one, were designed to gain insights into the regional construction of adaptation activities (Dunn in Hay, 2010). Though the interview questions required some degree of predetermined order, they nicely allowed for flexibility within the way the informants addressed the issues (Dunn in Hay, 2010), and informants were often passionate and engaged enough with the research topic that the anticipated hour-long interview sessions often extended out to one-and-a-half to two hours in length. The same set of semi-structured interview questions (Appendix B) were posed to all key informants allowing for a systematic comparison of interview data during the analysis phase. This approach allowed for a qualitative investigation of the social processes of adaptation by illuminating the underpinning logics of local decision-making, i.e. process of inclusion/exclusion, institutional perceptions of climate change and flood risk, institutional values, and institutional prioritization and allocation of adaptation projects.

Key interview informants were identified through ethnographic research methods. During observation at the adaptation forums, I was able to identify actors involved in the regional adaptation process, build initial rapport with them, and subsequently gain access to in-depth future interviews. Additional informants later emerged through snowball sampling, a method by which my initial informants recommended other institutional actors who had not been in attendance at the adaptation forums, that could also inform the study. Additionally, one follow-up interview was also conducted to investigate details of another adaptation forum meeting I was not able to attend.

## **Data Analysis**

Moving beyond data collection and into data analysis, Watson and Till (2010) said that, as we work through, reflect upon, and analyze our primary recorded and material data, we develop questions and insights about our work and begin the difficult task of representing our data. Data analysis was done through coding interview and observation data using descriptive, reflective, and interpretive/analytical codes. Although initial codes were established, the coding process relied mostly upon an inductive coding approach, such as in grounded theory, in which the objective is to generate theories from empirical data (Cope in Hay, 2010). In the end 30 codes had been implemented through an iterative process of revision. These codes were systematically applied to the transcribed data and helped to highlight similarities and differences within the interview and observation results.

Through this qualitative methodological approach consisting of observations and interviews, insight into the power relations between those who have agency in community level adaptation to climate change in Hampton Roads emerged.

## *V. Results: Hierarchies of Power in Adaptation Governmentality*

After a brief section contextualizing the observed Adaptation Forums that this research study investigated, I offer a narrative form of the research results presenting quotes from institutional actors that when taken collectively help to answer the overarching research question inquiring: *what role do institutional actors play in the social process of adaptation to climate change in Hampton Roads?* Moreover, to shed light on such a broad research question the following sections will more acutely address the two supporting questions, thereby identifying 1) institutional attitudes and beliefs regarding adaptation to climate change and 2) processes of inclusion and exclusion in stakeholder engagement within adaptation planning in Hampton Roads.

## **Contextualizing the Sea Level Rise and Adaptation Forums**

By contrasting observation and interview data disparities in word and deed have been identified as they relate to the purpose of the Sea Level Rise and Adaptation forums. The

objective of the forums is critical to understand if insights pertaining to equitable participation in the process of adaptation are to be discussed. According to the Adaptation Forum's website, the

*“forum is a regional dialogue among municipalities committed to adopting effective adaptation designs and plans, tailored to the needs of our communities in the face of rising sea levels due to climate change. The Forum will be composed of academic institutions and local, regional, state and Federal agency officials with authority and responsibility for critical infrastructure and facilities in Hampton Roads”*

*(ODU website 2013)*

The local institutional discourse of the forums demonstrates that they are perceived as politically benign, insofar as decision-making does not take place here. During interviews with institutional actors, informants repeatedly made claims that the adaptation forums are not a decision-making place, but rather an information-sharing place for invited guests. As one informant states:

*“The forum is not a decision-making place, it is an information sharing place where best management practices can be shared, it is supposed to be a place to get tips. It is not the regional strategic planning place, it is the information sharing place”*

- Key Informant, Virginia Institute of Marine Science

So, why then would observation of these forums be selected to investigate adaptation planning and decision-making in Hampton Roads? It is important to note that the forum indeed is not a formal decision-making place, but also that there actually is no regional strategic planning place for adaptation in Hampton Roads. Rather, the Adaptation Forums served the unique function of being the only meeting place for invited stakeholders across the region's 16 municipalities to openly collaborate about adaptation to sea level rise and flooding issues at this time. Observational data from the adaptation forums confirms the informant's statement that decision-making does not happen in this setting, at least not formally. However, through

participation at two Adaptation Forums I find that the forums are spaces where constellations of formal institutional actors come together to share best practice management and regionally relevant information thereby reproducing climate change narratives and social norms (e.g. quality and quantity of stakeholder engagement, legitimate forms of knowledge) that influence adaptation decision-making. In this formal, invited stakeholder space, early stages of planning and decision-making took shape as problem identification became a critical component. The very notion of climate change was perceived in official views of local planners and decision-makers as being politically sensitive. The avoidance of the term thereby socially constructed the biophysical issue of sea level rise itself. As engaged institutional stakeholders largely avoided saying *climate change*, adaptation discourse is relegated to concerns of managing flooding risks solely, as opposed to taking a more holistic socio-ecological systems approach. In this way, those in attendance at the Adaptation Forums experienced agency over the local climate development narrative itself.

One forum stakeholder, whose work for a regional non-profit addresses climate change impacts, elaborated, saying that,

*“we got out of the conversation about climate change because it was so controversial, and it’s not necessary for us... necessarily.”*

– Key Informant, Wetlands Watch

Another local institutional actor who presented at the March 13<sup>th</sup> Adaptation Forum claimed:

*“we very early on found out that climate change just got a bunch of people arguing about things [...] but the same people will not argue about sea level rise”*

–Portsmouth City Official

Investigating the regional climate change discourse outside of the forum setting, I gained further insights during an in-depth interview with one of the sponsors of the Adaptation Forums. The informant stated:

*“I recognize that there are people doing this in a strategic way because saying climate change gets you into fights you really don’t want to have”*

– Key Informant, Virginia Institute of Marine Science

An avoidance of climate change discourse, largely due to fear of opposition and conflict, is the overwhelming sentiment of local-level institutional actors who have a seat at the adaptation table in Hampton Roads. The same invited forum stakeholders who have significant influence over the framing of place-based issues of climate change impacts also have significant influence over envisioning adaptation options.

Additionally, as a participant observer, I have directly witnessed that the forum’s unspoken, and perhaps unintended function, is actually to provide a formal space for social actor networking among politically elite and highly educated social groups, thereby facilitating the development of hierarchical relationships, and uneven power-relations within the context of planning for climate change.

This networking can be understood through public expressions of praise and recognition that were given repeatedly throughout both observed forums - often bolstering the reputation of the same institutions or institutional actors over and over again. The term “shout-out” was frequently used by presenters and stakeholders during the forum, identifying certain community leaders. A *shout-out* according to Urban Dictionary (2013) is slang for a public expression to acknowledge someone or to make someone’s presence known; a positive public acknowledgement of a friend; or, to acknowledge with respect. A documented friendly exchange between stakeholders after the forum recorded:

*“Thanks for the shout out, you scratch my back I’ll scratch yours”*

– NGO Forum Stakeholder

The influence of *shout outs* and public displays of recognition was further evident from interviews conducted after the adaptation forums. Interview informants in post-forum meetings mentioned all of the names of the people who were giving or receiving *shout outs* at the adaptation forums. These interview results show that there was either a lasting impression on forum attendees of the social actors recognized through *shout outs*, or that those given public recognition already had political clout among the regional participants. Through this informed understanding, I suggest that the forums are not only a place for invited stakeholders to share

information, but rather they are constructs of an “inner circle” political process, fostering participation between an elite corps of scientists, decision-makers, and institutional actors and reinforcing social networks of trust, authority, and power.

When inquiring, “*who gets invited to participate in the Adaptation Forums?*” informally to an attending NGO informant during an adaptation forum, the informant responded with, “*who they are comfortable with.*” *They*, in this statement refers to the inner circle of elite stakeholders – those who the forum directors legitimize as belonging in attendance at the forums.

The act of selecting institutions and social actors to include in the regional adaptation forums raises concerns of procedural justice and equitable stakeholder participation. The actors invited to the regional adaptation forums have agency over institutional perceptions of the locally experienced impacts and vulnerabilities to sea level rise and flooding. By exclusionary actions, a non-forum-participant stakeholder will not experience the same opportunities of participation in the adaptation process. Non-participants experience differential access to such things as regional knowledge sharing and social-actor networking; and their climate-related views and opinions are silenced through exclusionary decisions. Framed in Sen’s *Development as Freedom (2000)* argument, development [argued here as adaptation] in this way creates *unfreedoms* for the excluded social groups perpetuating inequalities and thus vulnerability to the climate change risks. Hence, it is important to at least be given the opportunity through political freedoms to engage in the Adaptation Forums if one is to have agency in regional climate-related adaptation decisions.

### **Procedural Justice: processes of inclusions and exclusion**

This section specifically reports on data gathered from fieldwork pertaining to the supportive research question: *who is included and who is excluded from adaptation planning and decision-making in Hampton Roads, and Why?*

When inquiring what social groups within Hampton Roads are in need of adaptation, and therefore would have a stake in the adaptation process, one of the architects of the forum replied:

*“who isn’t? There’s coastal property, there’s transportation that’s vulnerable, there’s going to be a level of adaptation that almost everyone will have to figure out.”*

– Virginia Institute of Marine Science



When further inquiring, *what population segments do you think are the most vulnerable to sea level rise and flooding risks in Hampton Roads?*, the informant stated:

*“There is very little question. It’s the low-income, elderly, retirement or assisted communities- not the high-end retirement communities. Also, the ethnic minorities [...]. These folks are not showing up at meeting nor are they talked about.”*

–Key Informant, Virginia Institute of Marine Science

Despite what was a notably common institutional perception of who is vulnerable to climate change impacts, and who has a stake in adaptation in the community, research results show that there is a deliberate choice to not include those at the greatest risks to the Adaption Forums. This study presents evidence that process of inclusion and exclusion in the process of adaptation goes beyond logistical planning and budgetary constraints but rather is rooted in institutional actor perceptions of the general public, elected political officials, business sectors, and community outsiders.

#### *Avoidance of Political Turmoil and the Exclusion of Elected Officials*

Both interview and observational data identifies a strong desire to avoid political turmoil as one rationale for not including elected officials in the regional forums. According to one of the three forum directors, the forum is

*“targeted to all the members of the HRPDC (Hampton Roads Planning District Commission), emergency management, planners, decision-makers at the city level - the professionals, not elected officials.”*

–Key Informant, Virginia Institute of Marine Science

Upon further investigation, the key informant stated,

*“We didn’t want the professionals to be at the table with their elected boss there. We thought it could limit and inhibit what the professional staff could talk about because of*

*the political sensitivities of our own climate” [Also] “they [forum stakeholders] don’t want to have Tea Party leaders screaming at them”*

–Key Informant, Virginia Institute of Marine Science

This statement gives insights into the perceptions of the architects of the adaptation forums and how they went about making decisions of who should be originally invited. Observational data from the March 13<sup>th</sup> adaptation forum illustrates a candid stakeholder interaction between one of the forum’s co-directors and an invited guest that reinforces the notion of elected official exclusion.

*“We know it’s [adaptation to sea level rise] a sensitive issue so we don’t want to limit the discussion because of having officials in attendance. We want to create a safe environment”*

– Forum Speaker, Old Dominion University

[In response] *“I would encourage you to keep the forum that way because I can honestly tell you a lot of us in this room would not be saying half of what we are saying otherwise [if our elected officials were here]”*

- Invited Forum Stakeholder, City Emergency Management Official

It is with this informed understanding of the political sensitivity around sea level rise and adaptation to climate change that elected officials are excluded from the Sea Level Rise and Adaptation Forum series in an attempt to avoid potential political turmoil.

### *Anxieties Over Public Responses and the Exclusion of Adaptation Subjects*

In addition to the intentional exclusion of elected officials from the adaptation forum meetings, only limited invitation was extended to the general public. The null to minimal public engagement and participation could be due to multiple factors such as practicalities of funding and facility requirements for a forum much larger in scope. However, with the following data I

suggest that the major barrier to a transparent and inclusive adaptation process is more a function of dominant institutional actor beliefs and attitudes than material limitations.

Through observation at the July 10<sup>th</sup> Adaptation Forum, interesting results emerged from a panel discussion held about “lessons learned” in regards to communicating risk to the general public. A stakeholder in the forum audience, a former city planner, shared her perceptions on how the public perceives government in an adversarial relationship stating that:

*“I think sometimes there’s a controversial relationship that goes on between public and private, and people have this ...they don’t think of you as human, they think of someone [government actor] as the enemy that is trying to control them”*

- Invited Forum Stakeholder, Wetlands Watch

Another invited stakeholder, offering an institutional perspective, identified the relationship between the local citizenry and the local governments as a “fight” during the previous adaptation forum on March 13<sup>th</sup>, 2013.

*“for example, when you’re recommending raising a house you’re having to fight the citizens, then your elected officials, and then the special interest groups and that is really hard”*

– Invited Forum Stakeholder, City Floodplain Manager

Additional anxieties over engaging the general public in the Adaptation Forums are rooted in prior negative experiences during public meetings. To address this issue, the July 10<sup>th</sup> Adaptation Forum organized a panel discussion regarding experience with prior public meetings and focused on the topic of “how to deal with meeting disrupters”. The meeting opened up with four panelists discussing previous experiences:

*“for us, that is our biggest problem, how to deal with meeting disrupters”*

- Forum Panelist 1, Hampton City Official

*“meeting disrupters happen with everything we do”*

- Forum Panelist 2, Portsmouth City Official

A former city council member attending the forum recalls meeting disrupters as “scary” and stated that:

*“... I have also heard horror stories about public meetings”*

This sentiment of poorly behaving public actors is echoed by another panelists’ recollection of physical threats made at a public flood meeting. The panelist further stated in regards to the public meeting disrupters (the general public):

*“if you can’t be civilized and have a discussion using a civilized voice then that’s a real problem”*

– Hampton City Official

These statements made by institutional actors illustrate how the general public is perceived as lacking awareness, understanding and civility. These formal institutional actor perceptions of the general public reinforce attitudes of fear and anxiety over the inclusion of the general public at future Adaptation Forums and stages of planning.

Though the Adaptation Forums overall exclude the engagement of the general public, two public outreach forums were held in order to comply with the guidelines of the National Sea Grant award, which provided funding for the forums. One of the public meetings was held in October of 2013 and the other has not yet been planned. After the first public forum in October, follow-up interviews with institutional actors who had been in attendance were conducted in order to learn more about the inclusion of the general public. One key informant describe the October public adaptation forum as the following:

*“About 40 people were there, but probably half or more were professionals in the field [...] basically all the people who go to all the other forums”*

– Key Informant, Wetlands Watch

Additionally, the informant shared:

*“I am pretty sure, the people that were attending were the people who have already drunk the cool-aid, it’s the people who are already on the mailing list working on sea level rise or the professionals who are already working on sea level rise.”*

– Key Informant, Wetlands Watch

Interview results show that there is an awareness among the inner-circle stakeholders that advertisement for the public forum received little attention. One key informant shared that,

*“there was a little bit of a glitch, I think they [forum organizers] forgot about it until last week [less than one week before event]. It [public forum announcement] was sent to all the forum participants and Dr. Smith asked forum participants to mail it out to those on their mailing lists. [...] I think it was just by email and word of mouth between people who are already interested in the subject”*

– Key Informant, Wetlands Watch

These interview statements revealed that the public attendance was primarily limited to friends, co-workers, or acquaintances of members of the original forum stakeholder group, and failed to reach far beyond the inner-circle of stakeholders to bring in those with different views on the flooding related regional risks. It also failed to reach the at-risk and vulnerable populations of Hampton Roads. This ad-hoc approach to organizing the public forum reflects the lack of an earnest attempt to engage with the region’s most at-risk and vulnerable populations.

These findings require sensitivity when acknowledging Klienosky et al.’s (2006) vulnerability assessment mentioned previously, that found the most at risk (of flooding and sea level rise) segments of the population in Hampton Roads are also the most socially vulnerable population segments, the poor, elderly, minority groups, and the disabled (i.e. those with the least amount of adaptive capacity). These social groups are least likely to be able to cope with and adapt to climate change impacts, yet they are largely neglected in the regional adaptation efforts.

Other sentiments about collaborating with sectors of the general public were also obvious during the March Adaptation Forum when stakeholders openly discussed who should be invited

to the required public forums. When one of the directors of the Adaptation Forum asked the invited participants (amounting to over 50 guests), “*who are some audiences that need to hear the message?*” responses such as this came back:

*“We have a certain group of people that we automatically think of communicating to, real estate and bankers, but they are also the folks that don’t necessarily see themselves as audiences to hear about sea level rise and the effects of the area”*

- Invited Forum Stakeholder

The discussion continued between two stakeholders at the forum with:

*“Should we invite someone from real estate? The ones I know are fairly open to it.*

–Forum Stakeholder, Old Dominion University

[In response] *“Yeah, but their knowledge level is surprisingly low”*

- Forum Stakeholder, City of Hampton Official

These candid statements were unique and revealing, as they enable a window into how institutional actors perceive other stakeholders’ risk perceptions. Overwhelmingly, institutional actors view the general public and some business sectors as naïve, disinterested, or not well educated enough to comprehend the issue of sea level rise and local flooding issues. Through a process known as ‘othering’ these institutional actor perceptions legitimized the exclusion of certain business sectors and the public from the forums’ attendance.

### *Distrust of Outsiders*

Lastly, the engaged institutional stakeholders and Adaptation Forum organizers also showed reservations toward the inclusion of community “outsiders” at the meetings. One invited stakeholder at the July 10<sup>th</sup> Adaptation Forum stated,

*“one of the things that’s happened is that you’re getting all of these people from outside of the area that are coming in that want to do stories, or study it, or whatever, and you can send mixed signals”*

– Invited Forum Stakeholder, Wetlands Watch

Expressed in the key informant’s statement is a desire to be accurately represented and a perceived threat that adaptation efforts in Hampton Roads will be misrepresented. This stakeholder perception is something I have tried to be reflexive of in my own study while conducting research in this place. As an outside researcher, I have attempted to be reflexive of my positionality during data collection, data analysis, and through the process of writing up.

Through personal experiences as an outsider researching the social process of adaptation in this community, I have direct insights into the community’s suspicion and reluctance towards them. When attempting to conduct a survey at the July 10<sup>th</sup> adaptation forum, I found great resistance. Up until proposing a survey, I had been warmly welcomed into the community. Once I had inquired about administering a survey to the forum attendees, a sharp response came across saying “we do not want polling done at the forum.” I obliged, but later on asked one of the forum directors why this was the case. He replied,

*“There is a bit of sensitivity in the community to being in the fish bowl, to being the guinea pig. They don’t want outside judgments... why are you guys having so much trouble adapting... they don’t want to be studied, ... or have others say we have solutions for you. The universities and local institutions and scientists want to be the source of science and adaptation solutions. [...] I think that people are suspicious of social science- why are you asking the questions? They don’t want to be studied. The forum is new, they don’t have enough to be confident in what they are or who they are. They don’t want to become a science experiment.”*

Although difficult to accept as a researcher studying the power relations within this landscape, the rejection of the survey and explanation given brought about their own unexpected insights into the attitudes and perceptions of the institutional actors. This experience revealed the infancy

of climate governance in Hampton Roads, a resistance to outsider perceptions and judgments, and a desire to adapt autonomously using regional capabilities.

## *VI. Linking to Value Theory*

Institutional actor attitudes of distrust, insecurity, and uncertainty have been reoccurring themes throughout the research results, from the attitudes circumventing institutional climate change discourse to those underpinning matters of procedural justice in the adaptation process. Situating this research finding in Schwartz's Value Theory (1992 & 1994), I infer that institutional actors are informing decision-making and responding to place-based sea level rise and flooding from motivational values striving for 'power' and 'security'.

Observation and interview data suggests that elite anxieties are perpetuating efforts to control relationships through processes of inclusion and exclusion. The control or domination over resources and relationships may have negative and inequitable implications for the population segments most at risk in Hampton Roads. For example, the exclusion of the most socially vulnerable social groups from regional adaptation forums in Hampton Roads may produce negative consequences from a procedural and environmental justice standpoint. This insight into the current process of adaptation in Hampton Roads is of concern when considering the fact that vulnerability is driven by inadvertent or deliberate human actions that reinforces self-interest (or values of self-enhancement in Schwartz's framework) and the unequal distribution of power (Adger 2006).

According to Schwartz (1992), motivational values pertaining to "self-enhancement" include 'power' and 'authority' and are closely related to values of 'security which strive for control over resources and relationships. These motivational values are in direct opposition to values emphasizing acceptance of others as equals, concern for the welfare of others, and values pertaining to environmental justice (Schwartz, 1994, 24) (see Figure 3.2 in Relevant Literature section). Within the context of adaptation, motivational values of "power" and "security" were frequently recorded in the actions and statements of institutional actors in Hampton Roads. The dominance of these values in decisions over stakeholder inclusion have been recorded as overriding institutional actors' values of equity, environmental justice, and freedom.

The dominant institutional actor values of 'power' and 'security' are argued here to have negative implications on the adaptive capacity of the most vulnerable social groups in Hampton



Roads. As discussed previously social capital is key to adaptive capacity. However, through exclusionary decisions of the powerful regional adaptation stakeholders, the regions most at-risk members are denied the same access to social capital building as they become largely excluded from the process of adaptation. As social capital is created through actor interactions, the excluded social groups: the elected officials, general public, business sectors, and community outsiders, do not have the same access to enhancing social capital, and thus adaptive capacity, as do the inner-circle group of included stakeholders. Since the already marginalized social groups, the poor and ethnic minorities, are those most vulnerable to the climate change impacts in Hampton Roads, the current adaptation process in Hampton Roads is argued here to be reproducing social inequalities and vulnerabilities as it denies these social groups new political freedoms.

## *VII. Conclusion*

Although the adaptation forums observed in Hampton Roads are not apparatuses for formal decision-making, I argue that they play an important role in the early formation of adaptation decision-making in Hampton Roads. Therefore the lack of a genuine participatory approach in adaptation efforts in Hampton Roads would indicate that, reducing vulnerability of the most at-risk social groups to climate change impacts is not prioritized within institutional adaptation efforts.

Through the lens of procedural justice, people have the right to be involved in equitable decision-making processes that affect their lives, and participation from all community stakeholders can aid in fostering trust and building social capital (Paavola and Adger 2002). To address the original research question, this study presents the case that formal institutional actors play a key role in the social process of adaptation – as the mediators of social capital.

Institutional perceptions and received wisdoms (sometimes referred to as *best practices or lessons learned*) of the invited stakeholders largely determined who was included and excluded in the regional adaptation forums, and they appear to be underpinned by institutional attitudes of distrust, insecurity, and uncertainty, thus facilitating an exclusionary social process of adaptation to climate change in Hampton Roads. Through the exclusion of certain stakeholders, the politically empowered operate in a control-and-command governance style, in which those in the ‘inner circle’ maintain power through enabling their own access to decision-

making, influencing decision-making, power assertion, information sharing, actor networking, and by building reciprocal bonds of trust, while simultaneously restricting access of the excluded stakeholders. The expression of dominant institutional actor values of ‘power’ and ‘security’ is reinforcing existing inequalities and creating political ‘unfreedoms’ for the most vulnerable population segments in Hampton Roads.

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