BRITISH ACADEMY OF MANAGEMENT

BAM CONFERENCE

3RD-5TH SEPTEMBER
ASTON UNIVERSITY BIRMINGHAM UNITED KINGDOM

This paper is from the BAM2019 Conference Proceedings

An Integrated Conceptual Framework of Collective Climate Action: Examining Local Government Accountability and the Socio-Psychological Processes of Citizen Participation

Mr Brett Quayle
PhD Candidate, Victoria University, Melbourne, Victoria, Australia
Email: brett.quayle1@live.vu.edu.au

Professor Elisabeth Wilson-Evered
College of Business, Victoria University, Melbourne, Victoria, Australia
Email: Elisabeth.Wilson-Evered@vu.edu.au

Associate Professor Nick Scuilli
College of Business, Victoria University, Melbourne, Victoria, Australia
Email: Nick.Sciulli@vu.edu.au

Abstract

Climate change response is a social contract that requires collective action, which can be enhanced through human agency. Management research is needed to examine how institutions at various levels are accountable for climate change while considering the social and behavioural contexts when engaging with the community. This paper seeks to conceptualise collective actions on local climate change response through an integrated model of local government accountability and human agency through psychological adaptation. Empirical evidence was systematically appraised to support the development of a framework and theoretical propositions intended for future research are presented. The conceptual model emphasises the important role of citizen participation in community climate change response at both the institutional and community levels.

Track 22: Public Management and Governance

Word Count: 6,537

1. Introduction

The multiple perspectives on and characteristics of climate change render the area a significant research challenge. One perspective that has received some multidisciplinary attention is the matter of who is accountable for designing and implementing policy and instigating and monitoring behaviour change (Cassotta, 2016; Gaventa, 2002; Vigoda-Gadot, 2007). This paper seeks to contribute to that debate by drawing on theory and empirical evidence to support the development of a framework which integrates local government response through accountability and community-level climate change response through human agency – the fundamental premise that shared beliefs can lead to action (Bandura, 2000).

Climate change response implies both adaptation and mitigation. Adaptation involves taking actions to manage the risks from future climate impacts, care for communities and to bolster the resilience of the economy (Nelson, Adger & Brown, 2007); whereas mitigation refers to the efforts to reduce or prevent greenhouse gas emissions (IPCC, 2014). Although representing separate elements of climate action, adaptation and mitigation are interlinked and require a coordinated response at multiple levels of society to achieve a sustainable future (Laukkonen, Blanco, Lenhart, Keiner, Cavric & Kinuthia-Njenga, 2009).

Climate change is a global problem that requires the engagement of multiple actors at all levels of society (Scavenius & Rayner, 2016). Although the 2015 Paris Climate Agreement represents a formalised agreement for participating nations to cut emissions at a national level there is still considerable contention amongst policymakers, decision-makers and citizens on how society should address climate change (Head, 2014). Climate change response is not simply an issue that can only be dealt with at the global level; local and regional action is necessary for the lasting social and institutional change to keep the global temperature below two degrees by the end of the 21st century (Moloney, Fünfgeld & Granberg, 2018). Collective action on climate change that is undertaken locally is not only crucial, it can provide a community with a sense of agency amongst citizens (Karlsson & Hovelsrud, 2015) and is an important determinant of citizens' relationships with governing institutions (Smith & Mayer, 2018). Collective action involves making decisions that forego short-term material benefits in favour of outcomes that are jointly shared and affect everyone involved; though the study of collective action in the context of climate change requires a more nuanced understanding of human behaviour (Ostrom, 2010).

Local and community level actions – through individual interactions – can be particularly powerful with influencing the decisions that are made to adjust to a changing climate. However, current climate change policy and research under-emphasises the social attributes associated with individual and community climate change response, including symbolic and psychological factors (Adger, Barnett, Chapin & Ellemor, 2011). Further, local governments are in a unique position to engage in grass roots' understanding of climate impacts as they are responsible for a range of community services and assets (van den Berg & Coenan, 2012). However, several institutional constraints coalesce to restrict action including lack of information and resource limitations (Measham, Gorddard, Preston, Smith, Brooke, Withycombe & Morrison, 2011), as well as a lack of accountability metrics (Cooper & Pearce, 2011) and articulation of responsibilities (Mukheibir et al, 2013; Nalau Preston & Maloney, 2015). More research is required to determine effective climate change response, considerations of the social context (i.e., the cultural values, psychological processes, language, and ethics) and institutional context (i.e., governance structures and the rules that shape human behaviour) are necessary to operate the key levers of local climate change response (Jones et al, 2014; Scavenius & Lindberg, 2016).

Viewed through the prism of a social contract (Adger, Quinn, Lorenzoni, Murphy & Sweeney, 2013), collective action on climate change is an implied agreement between governing institutions and citizens, where this relationship is articulated through human agency (O'Brien, Hayward & Berkes, 2009). Aside from electoral participation, little is known of how citizen perspectives and knowledge can be used to provide oversight to local government decision making (Bovens, Goodin & Schillemans, 2014). Conversely, it is unclear whether community engagement or behaviour change interventions by local governments are currently effective (Boxelaar, Paine & Beilin, 2006), particularly on the issue of climate change response (Lorenzoni, Nicholson-Cole &Whitmarsh, 2007; Smith & Mayer, 2018). Important questions as to the role of local government in providing the oversight to collective climate change action.

Accountability for climate change response is complex so a simplistic approach to claim that local governments are accountable for climate change is unlikely to activate the right levers. The question arises about who in local government and the community it serves is accountable *for what*, *to whom* and *through what means?* (MacDonald, 2014). Importantly, local government accountability can be strengthened through integrating citizen perceptions and actions that are based on behavioural science research (Grimmelikhuijsen, Jilke, Olsen & Tummers, 2016; Vigoda-Gadot, 2006); where psychological adaptation – the ability of an individual to cope with and assess the threat of climate change (Reser, Bradley & Ellul, 2014) – influences the degree to which citizens act in response to climate change. According to Wouters, Ninio, Doherty, and Cissé (2015), an integration of citizen participation with social contracts and accountability can lead to successful policy implementation.

Empirical evidence suggests that effective climate change response involves the collective actions from the state interlinked with the expectations of citizens about the collective risk and their individual responsibility (Hoff, 2017). This article seeks to conceptualise collective action on local climate change through an integrated model of accountability and psychological adaptation. Local government climate change response will be examined through an accountability lens, while citizen climate change response will be examined via psychological adaptation. A conceptual framework and literature review are presented highlighting how local government and citizen actions on climate change are collectively enabled. Areas for future research and theorising are subsequently outlined.

2. The wickedness of local level climate action

Given the scale of the issue, there is difficulty in determining who or what is ultimately responsible for undertaking action against climate change in local communities and whether such actions are an individual or collective responsibility. As climate change has the potential to impact on all segments of society, it is a shared responsibility with both societal and political implications (Eriksen, Nightingale & Eakin, 2015). For that reason, climate change is a "wicked" public policy issue (Pollitt, 2015). Moreover, wicked problems are complex and complicated, which demand an ongoing process of appraisal and redefinition – climate change is a "wicked" issue as there are no clearly defined solutions, where new consequences and problems are forever emerging (Marshall, 2014). To date, however, there is limited current empirical evidence that has examined how the notion of shared responsibility of climate change has been managed. Climate change response represents a wicked public policy issue (Pollitt, 2015), as the solutions proposed thus far have been difficult to implement, where such issues are highly complex social issues with not readily identifiable solutions (Ney & Werwij, 2015). The wicked problem of climate change will require both government intervention and active citizen participation, where

a deeper examination of the institutional settings within local councils and of citizen behaviour is required (Walls, 2018).

The significance of local government in climate change response has been emphasised due to its proximity to the built environment (van den Berg & Coenan, 2012). However, several macro-level policy issues and organisational barriers restrict what can be actioned at the local level (Lawrence, Sullivan, Lash, Ide, Cameron & McGlinchey, 2015), including conflicting policies and unclear boundaries for responsibilities at state and federal government that restrict initiatives (Booth & Cox, 2012). Despite these institutional barriers, existing research has pointed to the internal mechanisms that facilitate climate change response within local government. For instance, transparency, internal coordination and autonomy (Validvieso, Andersson & Villena- Roldán, 2017), and the inclusion of political champions (Pasquini & Shearing, 2014) and environmental awareness amongst leaders within councils (Orderud & Kelman, 2011).

Conversely, partnerships between local government and the community, as well as with other levels of government have also been proposed as an approach to overcome the current institutional barriers facing local governments (Moloney & Fünfgeld, 2015; Lubell, 2015, ref). Partnerships are integral with the governance of climate change response as this enables policy implementation, service provision and advocacy with diverse stakeholders at multiple scales. However, not all partnerships may be perceived as legitimate, where the interests of local community members may not always be considered in collaboration with local governments (Broto, Macucule, Boyd, Ensor & Allen, 2015). According to Bäckstrand (2008), the most important form type of partnerships regarding climate change are non-hierarchical and involve civil society actors, whereby partnerships is a key demonstration of accountability.

The involvement of community members is an important component with how local governments act on climate change. For example, when engaging with the local community, information that is localised and context-specific provides the necessary scope for decision-makers, which in turn can facilitate trust building in working with multiple stakeholders in managing current and future climate risks (Jones et al, 2014). Climate action that involves community members does not solely focus on individual behaviour change, but rather the social practices shared amongst all residents (Hausknost, Haas, Hielscher, Schäfer, Leitner, Kunze & Mandl, 2018). Research that has examined local perspectives of climate change response has, however, been limited to date due to a lack of methodological precision (Reyes- Garcia et al, 2016) while there is a need to further research the role of citizen participation in local climate action (McQuaid, Vanderbeck, Valentine, Liu, Chen, Zheng & Diprose, 2018).

3. Theoretical background/rationale

Climate change response is a social contract (Stehr & von Storch, 1995) whereby a social contract is a bidirectional relationship involving community expectations tied with the capacity of political institutions to fulfil these expectations; such a social contract must also be perceived to be legitimate by those involved (Blackburn & Pelling, 2018). In the case of climate change response, the public has an expectation that governing institutions – local governments, in particular – will act on climate change, while local government have an expectation that its constituents will behave in certain ways. As a means of legitimising a governing authority, social contract theory stipulates that human behaviour should be regulated by agreements which are mutually beneficial, where obligations are made for accepting certain conditions (O'Brien, et al,

2009). Currently, there is a great deal of uncertainty of who should respond to climate change and how this can be achieved. A social contract provides a means to make explicit the agreements about accountabilities surrounding collective climate change response (Adger et al, 2011).

According to O'Brien and colleagues (2009), existing social contracts must be conceived differently when considering climate change response and noted this will be determined by the role of human agency. Human agency is a concept derived from social cognitive theory that recognises human functioning as a product of three determinants: individual perception, the behaviour an individual engages in, and the environmental forces that encroach on an individual's perceptions and behaviours (Bandura, 2018). According to this theory, humans do not have direct control over the institutional practices that affect their lives, where governments have a role in providing the conditions for local-level action on climate change. Accordingly, human agency underpins much of what constitutes collective action, where there is a greater need to identify how and why individuals act on climate change within the confines of their social structure (Cleaver, 2007).

Effective climate response is possible; where new strategies are needed that include focusing on decentralised local government in service planning and delivery, community support toward a more sustainable socioeconomic system (Head, 2014), and public-sector staff that understand scientific issues and work closely with experts (Pollitt, 2015). However, implementing these solutions will require inventive scientific solutions through drawing on multiple disciplines and perspectives within the community (Ney & Werwij, 2015). A social contract exists whereby local governments are expected to be accountable to its constituents. Conversely, it is prudent for decision makers to have knowledge of how people behave and form attitudes in relation to climate change. By examining the transactions between an individual's psychological processes and their social setting, researchers can apply existing psychological constructs and theories to specific environmental concerns (Swim et al, 2011). Insights from psychological science yield the capacity to enhance public policymaking about climate change (Van der Linden, Maibach and Leiserowitz, 2015).

There is a lack of conceptual clarity from researchers on terms used, nor are there any multi-disciplinary conceptual frameworks that examine climate change response across different scales, particularly regarding the human and social dimensions in local contexts (McDowell, Ford & Jones, 2016; Ostrom, 2010; Räsänen et al, 2016). This paper will unpack the concepts and suggest a theoretical and conceptual alignment and extension. Undertaking multidisciplinary research (accounting and psychology) offers, a novel insight into collective climate actions and could contribute to a deeper understanding of the nexus of accountability and psychology adaptation (Gray, 2010; O'Dwyer and Unerman, 2014, Thomson, 2014). The empirical evidence to support the conceptual model and offer propositions of how the concepts are linked is subsequently developed.

4. Literature Review

Climate change response must be articulated comprehensively and transparently (Runhaar, Uittenbroek, Rijswick, Mees, Driessen & Gilissen, 2015), particularly within the context of collective local actions. A thorough examination of the literature is undertaken to identify and characterise what is known and not known, and to identify current research opportunities to explore 'wicked' societal problems (Ford, Berrang-Ford & Paterson, 2011). To

that end, the methodological process of a systematic literature review will be applied to appraise and synthesise the quality of the research evidence for inclusion in this literature review, as well as to assist in identifying research gaps. Originally applied in the health sciences, the systematic literature review methodology has since been adapted to management research as a way of enhancing the methodological rigour of literature searches. Although the current research is a traditional literature review, a systematic approach to analysing the existing literature was adopted using the guidelines of Tranfield, Denyer and Smart (2003). This approach includes five steps: identification of keywords and search terms; selection of studies; study quality assessment; data extraction and monitoring progress; and data synthesis.

Firstly, keywords and search terms were identified. Since the focus was on developing a theoretical framework on collective climate action in local communities, keywords were chosen as follows:

- Local government accountability: accountability, local government, citizen participation, collective action.
- Citizen climate actions: citizen participation, psychology, social norms, behaviour, collective action.
- Climate change response: adaptation, mitigation, environmental, sustainability

The studies were identified by entering the abovementioned keywords through the following sources from the authors' university library system: academic databases (e.g., Academic Search Premier, Scopus, Business Source Complete, Science Direct); international organisations (e.g., OCED, World Bank); and government reports (e.g., reports from CSIRO and the three tiers of government). Studies had to be peer-reviewed and only in the English language, but there was no restriction on publication date. Articles were included if the abovementioned keywords were in the titles or abstracts.

The contents of the remaining articles were subsequently entered into a Microsoft Excel spreadsheet and categorised as per the codebook technique for content analysis developed by Laplume, Sonpar and Litz (2008). The content of each article was organised by year of publication, author, article title, article type (i.e., journal, book chapter, or government report), data source (i.e. primary or secondary), methodology (i.e., quantitative, qualitative, mixed methods, or theoretical), focus (i.e., organisational, individual, or mixed) contributions stated in the article, findings stated in the article. The codebook also contained the Scimago ranking of an article's associated journal, as well as the number of Google Scholar citations of each article, where number of citations provides an indication of current academic interest (Dumay, Bernardi, Guthrie & Demartini, 2016). Of the remaining articles selected, 25 journal articles contained primary data, 18 journal articles used secondary data and there were a further two articles from the grey literature (i.e., IPCC and World Bank).

The quality of journal articles was also determined by the Scimago ranking of the journal (Mingers & Yang, 2016). As highlighted in Table 1, 45 articles from 26 journals were included in the literature review, where a high proportion of journals ($n = 21$) had a Q1 Scimago rank, indicating that the selected articles were from prestigious journals. The types of journals included were focused on Business, Management and Accounting ($n = 10$), Environmental Science ($n = 8$), Social Science ($n = 5$) and Psychology ($n = 3$). This approach ensured that all research areas were well-represented for a multidisciplinary focus.

Table 1. *Database, Journal Name and type included in literature review*

Count	Database	Journal	Journal type	Scimago rank
2	Social Sciences Citation Index	Accounting, Auditing & Accountability Journal	Business, Management and Accounting	Q1
2	Science Direct	Accounting, Organizations and Society	Business, Management and Accounting	Q1
2	Academic OneFile	American Psychologist	Psychology	Q1
1	Scopus	Analyses of Social Issues and Public Policy	Social Sciences	Q2
1	Business Source Complete	Australasian Accounting, Business and Finance Journal	Business, Management and Accounting	Q3
2	Business Source Complete	British Journal of Management	Business, Management and Accounting	Q1
1	Academic OneFile	Development Policy Review	Social Sciences	Q1
1	Business Source Complete	European Law Journal	Social Sciences	Q1
5	Science Direct	Global Environmental Change	Environmental Science	Q1
2	Business Source Complete	Global Environmental Politics	Environmental Science	Q1
1	Science Direct	Habitat International	Environmental Science	Q1
1	Business Source Complete	International Journal of Management Reviews	Business, Management and Accounting	Q1
1	Scopus	International Journal of Public Administration	Business, Management and Accounting	Q1
1	Academic OneFile	Journal of Bioeconomics	Social Sciences	Q2
1	JSTOR Journals	Journal of Environment & Development	Environmental Science	Q1
1	Scopus	Journal of Environmental Planning and Management	Environmental Science	Q1
7	Science Direct	Journal of Environmental Psychology	Psychology	Q1
1	Business Source Complete	Journal of Organisational Behaviour	Business, Management and Accounting	Q1
1	Business Source Complete	Journal of Public Budgeting, Accounting and Financial Management	Business, Management and Accounting	Q3
1	Scopus	Mitigation and Adaptation Strategies for Global Change	Environmental Science	Q1
1	Social Sciences Citation Index	Personality and Social Psychology Bulletin	Psychology	Q1
1	Scopus	Public Performance and Management Review	Business, Management and Accounting	Q1
1	Science Direct	Science of the Total Environment	Environmental Science	Q1
1	Scopus	Social and Environmental Accountability Journal	Business, Management and Accounting	Q2
1	Scopus	Wiley Interdisciplinary Reviews: Climate Change	Environmental Science	Q1
2	Science Direct	World Development	Social Sciences	Q1

Given the current research aim was to conceptualise collective climate actions across multiple levels (i.e., citizen level and institutional level), appropriate analytical techniques were applied to provide greater conceptual clarity at each level (Yammarino & Dansereau, 2011). These articles were analysed via a multiple-level analysis – an analytical approach useful for theory building in which different levels such as persons, dyads, groups, or organisations are assessed for its similarities and differences (Dansereau, Alutto & Yammarino, 1984). Within the context of climate change response, concepts from each article were subsequently organised and structured according to the institutional level (i.e. local government accountability), the community level (i.e. civic participation, social norms), or individual level (i.e., psychological adaptation, individual perception).

A preliminary analysis was subsequently undertaken to synthesise and integrate salient themes based on the remaining 45 articles using an inductive approach (Tranfield et al, 2003). Twenty-three articles had an organisational-level focus; where most journals articles were from highly ranked Q1 journals (16/29). Ten of the organisationally focused articles included primary data using qualitative research methodology; five of these articles used primary data examining accountability through the case study approach in local governments, while the remaining articles focused on leadership, citizen participation and climate change response. The remaining 13 articles with an organisational focus contained secondary data where concepts were developed based on theoretical perspectives. Most of these articles analysed existing literature through an accountability lens, that resulted in a conceptual framework and a research agenda.

Seventeen articles contained a focus on individual responses to climate change, where 12 articles contained primary data using quantitative research methodology. Many of these articles used the survey method to identify antecedents of environmental behaviours, but also tested social norms; while the remaining five articles contained secondary data focusing on reviewing the antecedents of environmental behaviours and beliefs. A further five articles had a multi-level focus that included both institutional and citizen level analyses; where some articles included an institutional-level case study and a survey or interview with citizens. Themes were subsequently identified according to each level of focus and are articulated in the next section.

5. Conceptual framework
5.1. Local government accountability

One approach of more clearly defining the social contract of collective climate action at a local institutional level is through the accountability processes and mechanisms of public administration settings. The process of accountability – through a commitment to transparency, external monitoring and self-reporting – has been put forward as a means of ensuring compliance in responding to climate change at an institutional level, though research is unclear on how actors at various levels should be held to account (Cassotta, 2016; Zengerling, 2018). Accountability involves the responsibility of taking certain actions and providing an account of those actions and, while it predominantly falls under the realm of financial accountability, it is by no means limited to a financial account (Gray, Adams & Owens, 1996). Bovens (2007) describes accountability in a narrow sense as the relationship between an actor and a forum, whereby the actor is expected to be answerable to the forum. Accountability is characterised either as a virtue (i.e., a desirable state of professional conduct, leadership, organisations, etc.) or mechanism (i.e., the social, political, or administrative systems, and structural processes, organisational structure, performance measurement and reporting etc.) within the accountability literature (Hall, Frink &

Buckley, 2017); where accountability can be either conducted formally (e.g., an inquest, jury, public election) or informally (e.g., the media, civic action).

Current methods of accountability are not conducive to addressing climate change response in local government settings as there is a focus on monitoring and enforcing existing functions and processes into existing organisational objectives that do not prioritise environmental objectives (Kramarz & Park, 2016). Further, climate change information that is reported by local governments is often limited (Measham et al, 2011), where it is important to be seen to be 'doing something' even though the actions may be superficial. For instance, a case study by Cooper and Pearce (2010) highlighted the value of including climate change performance indicators in local government areas, which have raised its profile amongst decision makers and stakeholders; though there were concerns of the accuracy, appropriateness and timeliness of these indicators in terms of the level of accountability amongst stakeholders. A hybrid approach to accountability – through integrating multiple disciplines and perspectives (Doherty, Haugh & Lyon, 2014; Goetz & Jenkins, 2001) – may identify novel approaches to how local governments are accountable for its response to climate change.

Firstly, a key tenet of local government accountability is through the information reported, which should be transparent and measurable. This requirement is essential as the community has, through the social contract, a right to clear and transparent information about environmental actions that influence society (Gray, 1992). However, traditional accountability mechanisms thus far have tended to focus on financial outcomes and emissions targets, whilst omitting other aspects of climate change response including adaptation and mitigation, as well as environmental and social capital (Gray, 1992; Hudaya, Smark, Watts & Silaen 2015; Milne & Grubnic, 2011). Information that is localised and context-specific may provide the necessary scope for decision-makers, which in turn can facilitate trust building in working with multiple stakeholders in managing current and future climate risks (Smith & Mayer, 2018). Limited research has examined the accuracy, appropriateness and efficacy of climate change information in local governments (Cooper & Pearce, 2011).

Nalau and colleagues (2014) recommended that local governments should more clearly articulate its responsibilities on climate action, embed climate change considerations through all council operations, and to be actively engaged in climate change research. To that end, the hybridisation of environmental or social objectives into existing management practices has been proposed (Gibassier & Alcouffe, 2018; Pasquini & Shearing, 2014). For instance, a hybrid model of accounting and sustainability was empirically examined in a comparative case study on a British local council and an environmental agency. Results identified that the methods used to embed environmental processes into the organisation must be carefully developed and evaluated for its effectiveness, where it was also integral that these methods were grounded in the local context (Thomson, Grubnic & Georgakopoulos, 2014). There is a need to unpack what this might look like in different public administration settings and to provide operational specification.

The process of accountability can facilitate effective leadership (Summerill, Simon & Smith, 2010) while effective leadership can strengthen accountability mechanisms. The capacity of leaders within local government to make decisions is a form of accountability (Bovens et al, 2014; Wang, Van Wart & Lebredo, 2014) and there is a need to apply this leadership capacity to climate change response. For example, according to Jones and colleagues (2014) an iterative

process involving scoping, analysis, implementation and review is necessary in making effective decisions that respond to the risks associated with climate change. Underlying this process is an understanding of the social context (i.e., the cultural values, psychological processes, language, and ethics) and institutional context (i.e., governance structures and the rules that shape human behaviour), as well as region-specific and indigenous knowledge. Leaders must also be able to cultivate innovative solutions to meet and improve organisational performance (Garcia-Morales, Llorens-Montest & Verdu-Jover, 2008). Preliminary research has shown that the ability of leaders within local public administrations to cultivate relationships with stakeholders was important in mediating a climate adaptation project (Mees & Driessen, 2018). Although several constraints exist in local government such as adhering to governmental hierarchical control, leaders are accountable through the relationships formed with stakeholders (Hall et al, 2017) and by the consideration of climate risks in decision-making. However, it is unclear as to what constitutes an accountable leader in the contexts of climate change response and public administration.

Hybrid accountability also exists through citizen engagement, where citizen-driven actions can provide oversight to local governments (Ebdon, 2002; Goetz & Jenkins, 2001). Further, Bernauer and colleagues (2016) postulate that the collective involvement of citizens on social issues such as climate change can have an impact on the accountability of government institutions within different contexts. Involvement of the public and wider community is necessary for several reasons – to achieve behavioural change through education, informing policy design through public knowledge and participation, and changing the systems through which greenhouse gas emissions are produced. Community engagement and insights detailing public responsiveness to governments and corporations can strengthen accountability of public institutions, particularly through enhancing service delivery (Muchadenyika, 2017). Citizen participation is necessary (Gaventa & Barrett, 2012), particularly when governing institutions are unresponsive when it comes to issues like climate change (Fox, 2015). There is also evidence to suggest that perceptions of fairness and government performance by citizens can influence the effectiveness of climate action (Hoff, 2017), though the operationalisation of citizen perceptions within local governments has not always been clear (Ho, 2007). Although there are questions about how citizens should be involved, there is a need for research to examine the role of community in climate change policy implementation (Newell, 2008). Civic involvement plays a vital role in the actions of local government, where citizen participation is proposed as a mechanism of accountability (Bovens et al, 2014).

Proposition 1: local government accountability for climate action is a combination of climate change information that is transparent and measurable, where this information is harnessed through leadership and which environmental initiatives are embedded within organisational processes. Local governments will be held to account by these actions, but also through the level of interaction with its citizens; where local government decision makers incorporate behavioural science research into planning and decision making (Vigoda-Gadot, 2006).

5.2. Human agency through psychological adaptation

According to O'Brien and colleagues (2007), existing social contracts must be conceived differently when considering climate change response and noted this will be determined by the role of human agency. As previously mentioned, human agency purports that beliefs lead to action and is the result of individual perception, individual behaviours, and the surrounding

norms that shape those perceptions and behaviours (Bandura, 2018). Examination of individual perceptions, actions and normative beliefs, therefore, is integral to exploring the social contract of collective climate action within local settings. Decision makers must consider social norms when engaging with the citizens that may be affected by climate change.

However, Adger and colleagues (2011) argued that climate change policy under-emphasises the symbolic and psychological aspects of settlements, places and risks to them. Social norms have been shown to be effective in shaping pro-environmental behaviour in previous research when examined with other psychological factors such as perceived behavioural control (Bamberg, Rees & Seebauer, 2015), personal responsibility (Buchanan and Russo, 2015; Dwyer, Maki & Rothman, 2015) and commitment to action (Terrier & Marfaing, 2015). Identifying social norms are based on a person's estimates of specific behaviours in comparison to other reference groups (e.g., friends or other Australian citizens), which is characterised as a person's normative beliefs. While employing social norms can be highly influential in messages that ask people to change their conservation behaviours, recent research suggests that people minimise the influence of normative beliefs on their individual behaviour (Nolan, Schultz, Cialdini, Goldstein & Griskevicius, 2008).

Underpinning social norms surrounding climate change are individual perceptions and actions, which tend to be important factors in determining whether people take collective action in preparing for climate impacts (Capstick, Whitmarsh, Poortinga, Pidgeon & Upham, 2014; Price, Walker & Boschetti, 2013; Wolf, Allice & Bell, 2013). For example, perceptions of local vulnerabilities to climate risk are an important factor in the adoption of climate change policies (Wiest, Raymond & Clawson, 2015). Psychological determinants of climate risk perception include a variety of factors such as experience, emotional responses, norms, values and knowledge (Van der Linden et al, 2015). Actions that follow from climate change perception can be informed by different processes (Weber, 2010). Based on an analysis of 57 samples within the existing environmental psychological literature between 1995 and 2006, eight determinants of pro-environmental behaviour were identified: problem awareness, internal attribution, social norm, feelings of guilt, perceived behavioural control, attitude, intention, and behaviour (Bamberg & Moser, 2007). However, a significant portion of the variance of these relationships was unexplained, suggesting that more research is needed into the nature of other influential factors.

Psychological adaptation is a term used to describe the changes and adjustments in thinking, feeling and general understanding in response to climate change; which includes internal psychological processes (e.g., risk appraisal, coping appraisal, responsibility attribution and decision making) and external behavioural responses (e.g., community engagement; Reser & Swim, 2016). A study examined the psychological processes related to climate change (including psychological adaptation) by implementing an anonymous survey over two time periods (2010 and 2011) to assess Australian participants' direct and indirect experience with climate change impacts (Bradley & Reser, 2016). The authors found that psychological adaptation was positively correlated with self-reported tendencies to cope with climate change. In addition, regression analyses revealed that psychological adaptation was significantly predicted by education, perceived responsibility to act, distress and country or birth. Additional research (Patchen, 2010; Swim et al, 2009) showed that people attribute personal responsibility when they perceive they have contributed to climate change and view it as a shared responsibility. Empirical evidence demonstrates that psychological adaptation can be influenced by direct

experience with climate change as well as play an important mediating role on pro-environmental behaviour (Reser, Bradley & Ellul, 2012). In sum, psychological adaptation has been shown to aid an individual's ability to cope with and assess the threat of climate change; however, attribution of responsibility and risk perception influences the degree to which a person can cope. The authors of this study also highlighted that further research is needed to examine the psychosocial process responses to climate change across multiple perspectives.

An individual's environmental actions can vary greatly, where this can be influenced by many external factors such as social norms and institutional interventions (Alisat & Riemer, 2015). Social norms can also contribute to the way in which people appraise and cope with an environmental threat. Truelove, Carrico and Thabrew (2015) found that efficacy beliefs, coupled with normative beliefs, significantly predicted the behavioural intentions of a group of paddy farmers in Sri Lanka. Efficacy beliefs and norms also explained far greater variance than sociodemographic variables (e.g., age, gender or ethnicity). The authors of this study asserted that interventions promoting beliefs and efficacy could lead to a successful adoption of environmental behaviours.

Much of the extant literature focusing on measurements of pro-environmental behaviour has focused on individual-level behaviour, though little research has examined pro-environmental behaviour in the context of social identification as a collective social issue (Bamberg et al, 2015). While such an association will need to be tested in future research, collective environmental actions are a combination of individual perceptions and psychological adaptation, which are influenced by perceived social norms. Considerations of community values and perceptions when enacting climate policy is essential to be perceived as legitimate (Wolf, Alice & Bell), where research that examines human behaviour through a psychological lens may shed light on how best local governments can engage with its residents (Weber, 2010).

Proposition 2: When an individual perceives that they can cope with a threat (i.e., psychological adaptation is high), they will intend to take protective action; whereas if they believe that they are unable to cope with the threat (i.e., psychological adaptation is low), then maladaptive actions will be taken to reduce the threat. Psychological adaptation is further influenced by individual perceptions on climate change, while normative beliefs (i.e., how one appraises their actions in comparison to perceived group norms) will also strengthen the degree to which an individual appraises an environmental threat and acts.

5.3. Citizen participation through collective climate action

Community-level collective climate action is a social contract as defined by human agency and is a combination of institutional factors and social factors (O'Brien et al, 2009). We contend that, at the institutional level, local governments are held to account through their action on climate change by four key factors: 1) climate-focused leadership (Mees & Driessen, 2018), 2) integration of objectives throughout the organisation (Pasquini & Shearing, 2014), 3) information that is transparent and measurable (Cooper & Pearce, 2011), and 4) citizen perceptions and actions (Goetz & Jenkins, 2001). Underlying local government accountability equates with human agency, which is articulated by how citizens perceive and act on climate change. At the community level, human agency is determined by psychological adaptation – the capacity of an individual to cope with and respond to the risks associated with climate change. Psychological adaptation is shaped by an individual's perceptions (i.e. attribution of responsibility, climate change knowledge and risk perception) and social norms. Through this

literature review, a conception of climate change response at the institutional level and community is proposed and, while the levels of analysis are different, there is alignment among these concepts as illustrated in Figure 1 and explained next.

While local government accountability has been examined through the lens of social contracts, human agency can also be applied to how local governments are held to account. For instance, citizen perceptions and actions not only provide the mechanisms for human agency but are also a mechanism of accountability in overseeing local government climate change response. Further, a key tenet of accountability is answerability, whereby local governments must be answerable to the citizens that elect their representatives (Ebdon, 2002). Psychological adaptation is also intuitively linked with social contracts, whereby the social contract between citizens and government help shape the norms that guides human behaviour (e.g., a community of pro-environmental citizens with explicit behaviours). Further, human agency can dictate the degree to which organisational actors are accountable (e.g. demonstrated by accountable leadership or stakeholder engagement; Hall et al, 2015). Figure 1 provides an overview of the main concepts described in the literature review and the associated conceptual links within the context of community-level collective climate actions.

	Social contracts	*Human agency*
Accountability	- Clear responsibilities of participating actors are articulated - Information must be transparent - Sanctions are imposed if rules are violated	- The types of decisions made will be influenced by the individual perceptions of leaders - Stakeholder relationships formed internally and externally to an organisation will influence the types of decisions made
Psychological adaptation	- Perceived level of individual responsibility will influence individual environmental actions - Individual behaviours are influenced by social contracts/norms - Individuals behave in socially approved ways	- Individual perception influences how the threat of climate change is appraised - Social norms influence how an individual respond to climate risks - Pro-environmental behaviours are influenced by psychological adaptation and social norms

Figure 1. Conceptual definitions and associations

Climate change will impact all segments of society, so examining how citizen participation, social contracts and accountability each play complementary roles in the delivery of services that respond to climate change is essential (Wouters, et al, 2015). Preliminary research has also identified that the expediency of local climate actions involves intermediary organisations such as local governments that engage with multiple stakeholders, both upwards, downwards, and in-between levels (Goworek, Land, Burt, Zundel, Saren, Parker & Lambe, 2018). The connection of community level and institutional level action is integral, where citizen

participation traverses both levels and provides the link to collective climate actions. Although conceptually distinct, citizen participation is an example of human agency (i.e., citizen beliefs that collective actions can lead to change) and as a social contract (i.e., individuals will receive protection from governing institutions if certain behaviours are adhered to). Collective climate action within communities is reliant on citizens that not only demonstrate environmental behaviours but whom also engage with local governments to enact change.

   Proposition 3: Citizen participation is the intersection of institutional level and social responses to climate change. Psychological adaptation informs how citizens respond to climate change, who in turn apply pressure to local governments to act on climate change. Further, local government actions on climate change shape individual perceptions and the decisions to act. Collective actions on climate change are successful in the local context when accountability in local governments is demonstrated internally – through transparent information, embedded organisational processes and climate-focused leadership – and externally – through citizen participation, which is viewed through a social-psychological lens (Figure 2).
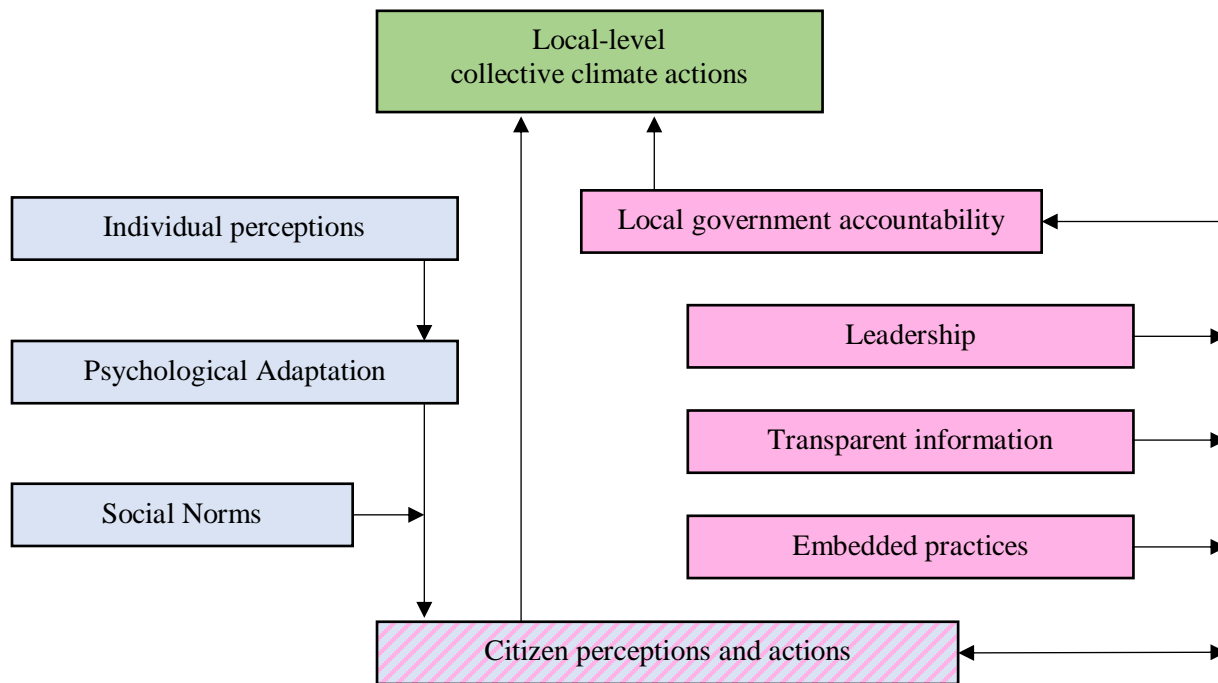

Figure 2. Conceptual framework of community-level collective climate actions.

6. Discussion and Future Research Agenda

   The framework presented makes note of the unique role that citizen perceptions and action have in enabling human agency to drive collection climate actions. The examination of citizen perceptions and actions through psychological adaptation and social norms offers a novel insight on how local governments may improve its approach to community engagement, but also as a means of how citizens hold local governments to account. Through the conceptual framework developed in this article, several research avenues are proposed. Notably, there is an urgent need to provide operational specification on accountability within local government climate change response. Specifically, the role of the accountable leader warrants empirical

investigation. There is also a need to more closely examine the role of psychological adaptation and normative beliefs with influencing environmental actions. Finally, research is needed that examines how actors at various levels of society attribute responsibility for climate change and how accountability is determined.

The current paper contributes to theory and practice through undertaking a literature review and providing theoretical propositions aimed at addressing the wicked public policy issue of climate change response. The integration of accountability and psychological theoretical concepts provide a novel insight into collective climate action in local communities, by examining the complex interplay of social contracts and human agency in how climate policy is enacted in local government and how and why citizens act in response to climate change. The current paper is exploratory and, as such, has provided theoretical propositions that will contribute to future research within the field of social and environmental accounting (Parker, 2011) and by specifically focusing on the localness of environmental accounting practices – an area that has been lacking empirical enquiry (Lehman & Kuruppu, 2017). As accountability is an evolving and complex concept (Mulgan, 2000), future research should aim to extend the constructs proposed through a qualitative analysis of local government accountability that is grounded in the lived experience of different actors that are enacting climate change response locally. Future research should also build on existing behavioural science studies that have quantitatively assessed the psychological constructs proposed in this paper with citizens in local communities, to extend the concept of collective actions on climate change. The constructs proposed through an analysis of multiple levels (Dansereau, Alutto & Yammarino, 1984) has pointed to the need to further understand the importance of citizen participation in local climate action in its many guises.

The implementation of climate policy can be enhanced through integrating community perceptions, social contracts and accountability processes (Wouters, et al, 2015). This article sought to explain how this interactive process can be applied to community-level climate change action. As a social contract, collective climate action is only effective when citizens and government both taking meaningful steps to respond to climate change. While accepting the importance of individual perception, psychological adaptation and social norms in contributing to citizen actions, human agency is nonetheless shaped by the external environment, and local governments have the capacity – and the obligation – to provide the conditions that enable collective climate action. Key elements of local government accountability currently proposed include leadership, transparent information, embedded organisational practices and citizen participation. The onus is not only on the citizens, nor is it solely up to local governments to bear the burden of responsibility on climate action. It is reasonable, therefore, for citizens to expect certain behaviours from its governing institutions and vice-versa. However, more research is needed to more fully understand collective climate actions as a social contract, as community engagement – through human agency – is essential to local government accountability.

References

Adger, W. N., Barnett, J., Chapin, F. S., & Ellemor, H. (2011). This Must Be the Place: Underrepresentation of Identity and Meaning in Climate Change Decision-Making. *Global Environmental Politics*, *11*, 1–25. doi:10.1162/glep_a_00051

Adger, W. N., Quinn, T., Lorenzoni, I., Murphy, C., & Sweeney, J. (2013). Changing social contracts in climate-change adaptation, *Nature Climate Change*, *3*, 330–333. doi: 10.1038/nclimate1751

Alisat, S., & Riemer, M. (2015). The environmental action scale: Development and psychometric evaluation. *Journal of Environmental Psychology*, *43*, 13-23. doi:10.1016/j.jenvp.2015.05.006

Bäckstrand, K. (2008). Accountability of Networked Climate Governance: The Rise of Transnational Climate Partnerships. *Global Environmental Politics*, *8*, 74-102. doi:10.1162/glep.2008.8.3.74

Bamberg, S., & Moser, G. (2007). Twenty years after Hines, Hungerford, and Tomera: A new meta-analysis of psycho-social determinants of pro-environmental behaviour. Journal of Environmental Psychology(1), 14.

Bamberg, S., Rees, J., & Seebauer, S. (2015). Collective climate action: Determinants of participation intention in community-based pro-environmental initiatives. Journal of Environmental Psychology, 43, 155-165. doi:10.1016/j.jenvp.2015.06.006

Bandura, A. (2000). Exercise of Human Agency Through Collective Efficacy. *Current Directions in Psychological Science*, *9*, 75–78. doi:10.1111/1467-8721.00064

Bandura, A. (2018). Toward a Psychology of Human Agency: Pathways and Reflections. Perspectives on Psychological Science, 13(2), 130-136. doi:10.1177/1745691617699280

Bernauer, T., Gampfer, R., Meng, T., & Su, Y.-S. (2016). Could more civil society involvement increase public support for climate policy-making? Evidence from a survey experiment in China. Global Environmental Change, 40, 1-12. doi:10.1016/j.gloenvcha.2016.06.001

van den Berg, M. and Coenen, F., 2012. Integrating climate change adaptation into Dutch local policies and the role of contextual factors. *Local Environment: The International Journal of Justice and Sustainability*, *17*, 441–460. doi: 10.1080/13549839.2012.678313

Blackburn, S., & Pelling, M. (2018). The political impacts of adaptation actions: Social contracts, a research agenda. *Wiley Interdisciplinary Reviews: Climate Change*, *9*, e549. doi:10.1002/wcc.549

Bovens, M. (2007). Analysing and Assessing Accountability: A Conceptual Framework, *European Law Journal, 13,* 447-468. doi:10.1111/j.1468-0386.2007.00378.x

Bovens, M., Goodin, R. E. & Schillemans, T. (2014). *The Oxford Handbook of Public Accountability* [Electronic Version]

Boxelaar, L., Paine, M., & Beilin, R. (2006). Community engagement and public administration: Of silos, overlays and technologies of government. *Australian Journal of Public Administration*, *65*, 113–126. doi:10.1111/j.1467-8500.2006.00476.x

Broto, V. C., Macucule, D. A., Boyd, E., Ensor, J., & Allen, C. (2015). Building collaborative partnerships for climate change action in Maputo, Mozambique. *Environment and Planning A*, *47*, 571–587. doi:10.1068/a140070p

Buchanan, K., & Russo, R. (2015). Going the extra green mile: When others' actions fall short of their responsibility. Journal of Environmental Psychology, 42, 82-93. doi:10.1016/j.jenvp.2015.03.002

Capstick, S., Whitmarsh, L., Poortinga, W., Pidgeon, N., & Upham, P. (2015). International trends in public perceptions of climate change over the past quarter century. *Wiley Interdisciplinary Reviews: Climate Change*, *6*, 35-61. doi:10.1002/wcc.321

Cassotta, S. (2016). The Paris Agreement in Logic of Multi-regulatory Governance: A Step Forward to a New Concept of "Global Progressive Adaptive-Mitigation"? *European Energy & Environmental Law Review*, *25*(6), 196-212.

Cleaver, F. (2007). Understanding Agency in Collective Action. *Journal of Human Development*, *8*, 223–244. doi:10.1080/14649880701371067

Cooper, S., & Pearce, G. (2011). Climate change performance measurement, control and accountability in English local authority areas. *Accounting, Auditing and Accountability Journal*, *24*, 1097-1118. doi:10.1108/09513571111184779

Dansereau, F., Alutto, J. A., & Yammarino, F. J. (1984). *Theory testing in organizational behavior : the varient approach*. Englewood Cliffs, N.J.:Prentice-Hall

Doherty, B., Haugh, H., & Lyon, F. (2014). Social Enterprises as Hybrid Organizations: A Review and Research Agenda. *International Journal of Management Reviews*, *16*, 417-436. doi:10.1111/ijmr.12028

Dumay, J., Bernardi, C., Guthrie, J., & Demartini, P. (2016). Integrated reporting: A structured literature review. *Accounting Forum*, *40*, 166–185. doi:10.1016/j.accfor.2016.06.001

Dwyer, P. C., Maki, A., & Rothman, A. J. (2015). Promoting energy conservation behavior in public settings: The influence of social norms and personal responsibility. *Journal of Environmental Psychology*, *41*, 30-34. doi:10.1016/j.jenvp.2014.11.002

Ebdon, C. (2002). Beyond the Public Hearing: Citizen Participation in the Local Government Budget Process, *Journal of Public Budgeting, Accounting & Financial Management*, *14*, 273-294. doi:10.1108/jpbafm-14-02-2002-b006

Eran, V.-G. (2007). Citizens' Perceptions of Politics and Ethics in Public Administration: A Five-Year National Study of Their Relationship to Satisfaction with Services, Trust in Governance, and Voice Orientations. *Journal of Public Administration Research and Theory*, *17*, 285-305. doi:10.1093/jopart/muj018

Ford, J. D., Berrang-Ford, L., & Paterson, J. (2011). A systematic review of observed climate change adaptation in developed nations. *Climatic Change*, *106*, 327–336. doi:10.1007/s10584-011-0045-5

Fox, J. A. (2015). Social Accountability: What Does the Evidence Really Say? *World Development*, *72*, 346-361. doi:10.1016/j.worlddev.2015.03.011

Garcia-Morales, V. J., Llorens-Montest, F. J., & Verdu-Jover, A. J. (2008). The Effects of Transformational Leadership on Organizational Performance through Knowledge and Innovation. *British Journal of Management*, *19*, 299-319. doi:10.1111/j.1467-8551.2007.00547.x

Gaventa, J. (2002). Exploring Citizenship, Participation and Accountability. IDS Bulletin, 33(2), 1–14. doi:10.1111/j.1759-5436.2002.tb00020.x

Gaventa, J., & Barrett, G. (2012). Mapping the Outcomes of Citizen Engagement. *World Development*, *40*, 2399–2410. doi:10.1016/j.worlddev.2012.05.014

Gibassier, D., & Alcouffe, S. (2018). Environmental Management Accounting: The Missing Link to Sustainability? *Social and Environmental Accountability Journal*, *38*, 1-18. doi:10.1080/0969160X.2018.1437057

Goworek, H., Land, C., Burt, G., Zundel, M., Saren, M., Parker, M., & Lambe, B. (2018). Scaling Sustainability: Regulation and Resilience in Managerial Responses to Climate Change. *British Journal of Management*, *29*, 266–278. doi:10.1111/1467-8551.12274

Gray, R. (1992). Accounting and environmentalism: an exploration of the challenge of gently accounting for accountability, transparency and sustainability, *Accounting, Organizations and Society*, *17*, 399-425. doi:10.1016/0361-3682(92)90038-t

Gray, R. (2010). A re-evaluation of social, environmental and sustainability accounting: An exploration of an emerging trans-disciplinary field? *Sustainability Accounting, Management and Policy Journal*, *1*, 11-32. doi:10.1108/20408021011059205

Gray, R., Adams, C., & Owen, D. (1996). *Accounting & accountability: changes and challenges in corporate social and environmental reporting*. New York: Prentice Hall

Grimmelikhuijsen, S., Jilke, S., Olsen, A. L., & Tummers, L. (2016). Behavioral Public Administration: Combining Insights from Public Administration and Psychology. *Public Administration Review*, *77*, 45–56. doi:10.1111/puar.12609

Hall, A. T., Frink, D. D., & Buckley, M. R. (2015). An accountability account: A review and synthesis of the theoretical and empirical research on felt accountability. *Journal of Organizational Behavior*, *38*, 204–224. doi:10.1002/job.2052

Hausknost, D., Haas, W., Hielscher, S., Schäfer, M., Leitner, M., Kunze, I., & Mandl, S. (2018). Investigating patterns of local climate governance: How low-carbon municipalities and intentional communities intervene in social practices. *Environmental Policy and Governance*, *28*, 371-382. doi:10.1002/eet.1804

Head, B. W. (2014). Evidence, Uncertainty, and Wicked Problems in Climate Change Decision Making in Australia. *Environment and Planning C: Government and Policy*, *32*, 663–679. doi:10.1068/c1240

Ho, A. T. (2007). Exploring the roles of citizens in performance measurement. *International Journal of Public Administration*, *30*, 1157-1177. doi:10.1080/01900690701225341

Hoff, J. (2015). The role of civil society actors in climate change response. In T. B. B. Scavenius & S. Rayner (2017), *Institutional Capacity for Climate Change Response: A New*

Approach to Climate Politics [Electronic version] (pp. 98-112). Retrieved from http://search.ebscohost.com

Hudaya, M., Smark, C., Watts, T., & Silaen, P. (2015). The Use of Accountability Reports and the Accountability Forum: Evidence from an Indonesian Local Government. *Australasian Accounting, Business and Finance Journal*, *9*, 57–70. doi:10.14453/aabfj.v9i4.5

Goetz, A. M., & Jenkins, R. (2001). Hybrid Forms of Accountability: Citizen engagement in institutions of public-sector oversight in India. *Public Management Review*, *3*, 363–383. doi:10.1080/14616670110051957

Intergovernmental Panel on Climate Change (2014). *Climate Change 2014: Synthesis Report* (Contribution of Working Groups I, II and III to the Fifth Assessment Report of the Intergovernmental Panel on Climate Change). Retrieved from http://www.ipcc.ch/report/ar5/syr/

Jones, R., Patwardan, A., Cohen, S., Dessai, S., Lammel, A., Lempert, R., Mirza, M. & von Storch, H. (2014). *Foundations for decision making* (Climate Change 2014: Impacts, Adaptation, and Vulnerability. Part A: Global and Sectoral Aspects. Contribution of Working Group II to the Fifth Assessment Report of the Intergovernmental Panel on Climate Change). Retrieved from https://www.ipcc.ch/report/ar5/wg2/

Karlsson, M., & Hovelsrud, G. K. (2015). Local collective action: Adaptation to coastal erosion in the Monkey River Village, Belize. *Global Environmental Change*, *32*, 96–107. doi:10.1016/j.gloenvcha.2015.03.002

Kramarz, T., & Park, S. (2016). Accountability in Global Environmental Governance: A Meaningful Tool for Action? *Global Environmental Politics*, *16*, 1-21. doi:10.1162/GLEP_a_00349

Laukkonen, J., Blanco, P. K., Lenhart, J., Keiner, M., Cavric, B., & Kinuthia-Njenga, C. (2009). Combining climate change adaptation and mitigation measures at the local level. *Habitat International*, *33*, 287–292. doi:10.1016/j.habitatint.2008.10.003

Lorenzoni, I., Nicholson-Cole, S., & Whitmarsh, L. (2007). Barriers perceived to engaging with climate change among the UK public and their policy implications. *Global Environmental Change*, *17*, 445–459. doi:10.1016/j.gloenvcha.2007.01.004

Lehman, G., & Kuruppu, S. C. (2017). A framework for social and environmental accounting research. Accounting Forum, 41, 3, pp. 139-146. doi:10.1016/j.accfor.2017.07.001

Lubell, M. (2015). Collaborative partnerships in complex institutional systems. *Current Opinion in Environmental Sustainability*, *12*, 41–47. Doi:10.1016/j.cosust.2014.08.011

Macdonald, K. (2014). The Meaning and Purposes of Transnational Accountability. *Australian Journal of Public Administration*, *73*, 426–436. doi:10.1111/1467-8500.12107

McDowell, G., Ford, J., & Jones, J. (2016). Community-level climate change vulnerability research: trends, progress, and future directions. *Environmental Research Letters*, *11*, 033001. doi:10.1088/1748-9326/11/3/033001

McQuaid, K., Vanderbeck, R. M., Valentine, G., Liu, C., Chen, L., Zhang, M., & Diprose, K. (2018). Urban climate change, livelihood vulnerability and narratives of generational responsibility in Jinja, Uganda. *Africa*, *88*, 11-37. doi:10.1017/S000197201000547

Measham, T. G., Gorddard, R., Preston, B. L., Smith, T. F., Brooke, C., Withycombe, G., & Morrison, C. (2011). Adapting to climate change through local municipal planning: Barriers and challenges. *Mitigation and Adaptation Strategies for Global Change*, *16*, 889–909. doi:4433/10.1007/s11027-011-9301-2

Mees, H., & Driessen, P. (2018). A framework for assessing the accountability of local governance arrangements for adaptation to climate change. *Journal of Environmental Planning and Management*, *1-21*. doi:10.1080/09640568.2018.1428184

Milne, M. J., & Grubnic, S. (2011). Climate change accounting research: keeping it interesting and different. *Accounting, Auditing & Accountability Journal*, *24*, 948-977. doi:10.1108/09513571111184715

Mingers, J., & Yang, L. (2017). Evaluating journal quality: A review of journal citation indicators and ranking in business and management. *European Journal of Operational Research*, *257*, 323-337. doi:10.1016/j.ejor.2016.07.058

Moloney, M., Fünfgeld, H. & Granberg, M. (2018). *Local Action on Climate Change : Opportunities and Constraints*. Retrieved from https://ebookcentral.proquest.com

Muchadenyika, D. (2017). Civil society, social accountability and service delivery in Zimbabwe. *Development Policy Review*, *35*, 178-195. doi:10.1111/dpr.12242

Mukheibir, P., Kuruppu, N., Gero, A., & Herriman, J. (2013). Overcoming cross-scale challenges to climate change adaptation for local government: a focus on Australia. *Climatic Change*, *121*, 271–283. doi:10.1007/s10584-013-0880-7

Mulgan. (2000). Accountability: An ever-expanding concept? *Public Administration, 78*(3) 555-573.

Nalau, J., Preston, B. L., & Maloney, M. C. (2015). Is adaptation a local responsibility? *Environmental Science & Policy*, *48*, 89–98. doi:10.1016/j.envsci.2014.12.011

Nelson, D. R., Adger, W. N., & Brown, K. (2007). Adaptation to Environmental Change: Contributions of a Resilience Framework. *Annual Review of Environment and Resources*, *32*, 395–419. doi:10.1146/annurev.energy.32.051807.090348

Newell, P. (2008). Civil Society, Corporate Accountability and the Politics of Climate Change. *Global Environmental Politics*, *8*, 122–153. doi:10.1162/glep.2008.8.3.122

Ney, S., & Verweij, M. (2015). Messy institutions for wicked problems: How to generate clumsy solutions? *Environment and Planning C: Government and Policy*, *33*, 1679–1696. doi:10.1177/0263774x15614450

Nolan, J. M., Schultz, P. W., Cialdini, R. B., Goldstein, N. J., & Griskevicius, V. (2008). Normative social influence is underdetected. *Personality and Social Psychology Bulletin*, *34*, 913-923. doi:10.1177/0146167208316691

O'Brien, K., Hayward, B., & Berkes, F. (2009). Rethinking Social Contracts: Building Resilience in a Changing Climate. *Ecology and Society*, *14*. doi:10.5751/es-03027-140212

O'Dwyer, B., & Unerman, J. (2014). Realizing the potential of interdisciplinarity in accounting research. Accounting, *Auditing & Accountability Journal*, *27*, 1227–1232. doi:10.1108/aaaj-07-2014-1756

Orderud, G. I. & Kelman, I. (2011). Norwegian mayoral awareness of and attitudes towards climate change, *International Journal of Environmental Studies*, *68*, 667-668. doi:10.1080/00207233.2011.587648

Ostrom, E. (2010). Polycentric systems for coping with collective action and global environmental change. *Global Environmental Change*, *20*, 550–557. doi:10.1016/j.gloenvcha.2010.07.004

Parker, L. D. (2008). Interpreting interpretive accounting research, *Critical perspectives on accounting, 19*, 909-914. doi:10.1016/j.cpa.2007.03.013

Pasquini, L. & Shearing, C. (2014). Municipalities, Politics, and Climate Change: An Example of the Process of Institutionalizing an Environmental Agenda Within Local Government. *Journal of Environment & Development*, *23*, 271. doi:10.2139/ssrn.2674011

Patchen, M. (2010). What Shapes Public Reactions to Climate Change? Overview of Research and Policy Implications. *Analyses of Social Issues and Public Policy*, *10*, 47-68. doi:10.1111/j.1530-2415.2009.01201.x

Price, J. C., Walker, I. A., & Boschetti, F. (2014). Measuring cultural values and beliefs about environment to identify their role in climate change responses. *Journal of Environmental Psychology*, *37*, 8-20. doi:10.1016/j.jenvp.2013.10.001

Räsänen, A., Juhola, S., Nygren, A., Käkönen, M., Kallio, M., Monge, A., & Kanninen, M. (2016). Climate change, multiple stressors and human vulnerability: a systematic review. *Regional Environmental Change*, *16*, 2291–2302. doi:10.1007/s10113-016-0974-7

Reyes-Garcia, V., Fernández-Llamazares, A., Guèze, M., Garcés, A., Mallo, M., Vila-Gómez, M. & Vilaseca, M. (2016). Local indicators of climate change - the potential contribution of local knowledge to climate research, Wiley Interdisciplinary Reviews: Climate Change, 7, 109-124. doi:10.1002/wcc.374

Runhaar, H. A. C., Uittenbroek, C. J., van Rijswick, H. F. M. W., Mees, H. L. P., Driessen, P. P. J. & Gilissen, H. K. (2015). Prepared for climate change? A method for the ex-ante assessment of formal responsibilities for climate adaptation, *Regional Environmental Change*, *16*, 1389-1400. doi:10.1007/s10113-015-0866-2

Scavenius, T. B. B. & Lindberg, M. R. (2015). The double gap between climate values and action. In T. B. B. Scavenius & S. Rayner (Eds.), *Institutional Capacity for Climate Change Response: A New Approach to Climate Politics* [Electronic version] (pp. 77-83). Retrieved from http://search.ebscohost.com

Smith, E. K., & Mayer, A. (2018). A social trap for the climate? Collective action, trust and climate change risk perception in 35 countries. *Global Environmental Change*, *49*, 140–153. doi:10.1016/j.gloenvcha.2018.02.014

Smith, T.F., Preston, B.L., Gorddard, R., Brooke, C., Measham, T.G., Withycombe, G., Beveridge B. and Morrison, C. (2008). Regional workshop synthesis report: Sydney

Coastal Councils vulnerability to climate change: Part 1, Systems approach to regional climate change adaptation strategies. CSIRO and Sydney Coastal Councils Group, Sydney, p. 64.

Stehr, N., & von Storch, H. (1995). The social construct of climate and climate change. *Climate Research*, *5*, 99–105. doi:10.3354/cr005099

Summerill, C., Pollard, S. J. T., & Smith, J. A. (2010). The role of organizational culture and leadership in water safety plan implementation for improved risk management. *Science of the Total Environment*, *408*, 4319-4327. doi:10.1016/j.scitotenv.2010.06.043

Swim, J. K., Stern, P. C., Doherty, T. J., Clayton, S., Reser, J. P., Weber, E. U., . . . Howard, G. S. (2011). Psychology's contributions to understanding and addressing global climate change. *American Psychologist*, *66*, 241-250. doi:10.1037/a0023220

Takao, Y. (2012). Making climate change policy work at the local level: capacity-building for decentralized policymaking in Japan. *Pacific Affairs*, *85*, 767-788. doi.org/10.5509/2012854767

Terrier, L., & Marfaing, B. (2015). Using social norms and commitment to promote pro-environmental behavior among hotel guests. *Journal of Environmental Psychology*, *44*, 10-15. doi:10.1016/j.jenvp.2015.09.001

Thomson, I. (2014). Mapping the terrain of sustainability and accounting for sustainability. In J. Bebbington, J. Unerman, & B. O'Dwyer (Eds.), *Sustainability Accounting and Accountability* (pp. 15-29). Retrieved from https://ebookcentral.proquest.com

Thomson, I., Grubnic, S. & Georgakopoulos, G. (2014). Exploring accounting-sustainability hybridisation in the UK public sector, *Accounting, Organizations and Society*, *39*, 453–476. doi: doi.org/10.1016/j.aos.2014.02.003

Tranfield, D., Denyer, D., & Smart, P. (2003). Towards a Methodology for Developing Evidence-Informed Management Knowledge by Means of Systematic Review. *British Journal of Management*, *14*, 207–222. doi:10.1111/1467-8551.00375

Torney, D. (2016). The global governance of climate change: G7, G20, and UN leadership. By John J. Kirton and Ella Kokotsis. *International Affairs*, *92*, 1272-1273. doi:10.1111/1468-2346.12725

Truelove, H. B., Carrico, A. R., & Thabrew, L. (2015). A socio-psychological model for analyzing climate change adaptation: A case study of Sri Lankan paddy farmers. *Global Environmental Change*, *31*, 85-97. doi:10.1016/j.gloenvcha.2014.12.010

Van der Linden, S., Maibach, E., & Leiserowitz, A. (2015). Improving Public Engagement With Climate Change. *Perspectives on Psychological Science*, *10*, 758–763. doi:10.1177/1745691615598516

Vigoda-Gadot, E. (2007). Citizens' Perceptions of Politics and Ethics in Public Administration: A Five-Year National Study of Their Relationship to Satisfaction with Services, Trust in Governance, and Voice Orientations. *Journal of Public Administration Research and Theory: J-PART*, *17*, 285. doi:10.1093/jopart/muj018

Wang, X., Van Wart, M., & Lebredo, N. (2014). Sustainability Leadership in a Local Government Context. *Public Performance & Management Review*, *37*, 339–364. doi:10.2753/pmr1530-9576370301

Weber, E. U. (2010). What shapes perceptions of climate change? New research since 2010. *Wiley Interdisciplinary Reviews: Climate Change*, *7*, 125-134. doi:10.1002/wcc.377

Wiest, S. L., Raymond, L., & Clawson, R. A. (2015). Framing, partisan predispositions, and public opinion on climate change. *Global Environmental Change Part A: Human & Policy Dimensions*, *31*, 187-198. doi:10.1016/j.gloenvcha.2014.12.006

Wolf, J., Allice, I., & Bell, T. (2013). Values, climate change, and implications for adaptation: Evidence from two communities in Labrador, Canada. *Global Environmental Change*, *23*, 548-562. doi:10.1016/j.gloenvcha.2012.11.007

Wouters, J., Ninio, A., Doherty, T. & Cissé, H. (2015) Improving Delivery in Development: The Role of Voice, Social Contract, and Accountability. *The World Bank Legal Review*, *6*, 3-35. doi:10.1596/978-1-4648-0378-9

Yammarino, F. J., & Dansereau, F. (2011). Multi-level issues in evolutionary theory, organization science, and leadership. *The Leadership Quarterly*, *22*, 1042–1057. doi:10.1016/j.leaqua.2011.09.002

Zengerling, C. (2018). Action on climate change mitigation in German and Chinese cities – A search for emerging patterns of accountability. *Habitat International*, *75*, 147–153. doi:10.1016/j.habitatint.2018.03.008