Noosa Climate Action Plan: An Example of Collaborative Climate Governance?

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Abstract: Evidence of climate change is overwhelming and South East Queensland is highly vulnerable to its impacts. The need for a collaborative approach for developing and implementing effective local climate change adaptation plans has been widely acknowledged in the literature, yet, on the ground examples are still limited in number. Noosa Climate Action Plan (NCAP) is a unique community driven plan which combines top-down and bottom-up approaches and is supported by a wide range of stakeholders.

This paper evaluates the NCAP process in order to evaluate its success as a collaborative planning process. In order to accomplish this, first a review of the relevant literature identified factors that make collaborations successful. Then the NCAP process was analysed against these criteria using document review and in-depth interviews with well-informed participants of the planning process. The findings of this research reveal the presence of many of the factors identified from the literature in the NCAP process and these are viewed as important factors in the success of this process by the participants.

Introduction

The need for a collaborative approach for climate adaptation has been widely acknowledged (IPCC 2007, 2014; UNEP 1998; Rissik and Reis 2013). Yet, on the ground examples are limited in number. NCAP is developed by the community and the government, supported by South East Queensland (SEQ) Catchments Limited and the University of the Sunshine Coast (NBL 2012a). This community-based plan is known as 'Climate Proofing' and is recommended by the Intergovernmental Panel on Climate Change (IPCC), European Union, the World Bank and the Asian Development Bank. The Climate Proofing process combines top-down and bottom-up approaches to adaptation to ensure shared responsibility, successful governance and effective monitoring for 'continued improvement' (NBL 2012a p.11).

This paper examines NCAP as a unique community driven plan (NBL 2012a) in order to evaluate its success as a collaborative planning process, whether a combination of top-down and bottom-up approaches can be successful in climate governance and if so what factors are important in the success of such a collaborative process. Consequently this research conducts a desktop study to identify a set of criteria by reviewing the relevant literature and the secondary data available to the research team. Ansell and Gash's (2008) meta-analysis of 137 cases of collaboration and many other studies (Blanco 2006; Dedekorkut 2004; Elkington 2006; Johnston et al. 2010, Silvia 2011) display related preconditions of successful collaboration. In-depth semi-structured interviews are designed to collect primary data from the participants in the planning process or observers who are experts in climate change and collaborative governance. The results of this research will show whether the NCAP process has generated the opportunities to exercise a successful collaborative process and whether there were factors which were not addressed throughout the process. In order to do so this research aims to find the most comprehensive answer to the research question 'How successful is the Noosa Climate Action Plan as an example of collaborative planning?'

Literature Review

Collaborative Climate Governance

The adverse changes in the climate (IPCC 2014), extreme weather events and natural disasters have an enormous impact on Australia's economy, social fabric and environment (CSIRO 2014). 85% of Australian population live near the coast (DCC 2009) which creates a high risk and exposure to impacts of climate change (IPCC 2014, McGranahan et al. 2007) such as submergence, coastal flooding and coastal erosion due to relative sea level rise (Lenton et al. 2008).

The amount of extreme weather event damages on Queensland economy has been rapidly increasing in recent years. SEQ is one of the fastest growing regions in Australia and between 2001 and 2011 Brisbane's population has increased by 27%, making it the fastest growing capital city (Australian Bureau of Statistics (ABS) 2008; 2014). Coastal development of 200 kms along with the increasing impacts of climate change and sea level rise have become key issues in this heavily populated area

(Abel et al. 2011; Dedekorkut et al. 2010; McDonald 2010; Noosa Biosphere 2010; Wang et al. 2010; Waterman 2009; Waterman et al. 2009). The cost of coastal flooding caused by storm surges and cyclones around Queensland has increased in the last decade (Queensland Government 2011). Cyclone Ingrid caused approximately $2 million worth of damages in 2005 while the damage from floods and Cyclone Larry in 2006 was estimated to be over $500 million. 2010-2011 floods and Cyclone Yasi reduced the Queensland Gross State Product (GSP) by $6 billion in 2010–11 (Queensland Government 2011). Climate Council of Australia (2014) estimates the cost of coastal flooding in SEQ will double by 2030 and quadruple by 2070.

Climate Change is a 'super wicked problem' (Lazarus 2009) and tackling such a complex problem requires involvement of both the state and non-state organisations (Ansell and Gash 2008; Betsill and Bulkeley 2006; CSIRO 2014). Collaborative governance has been identified as one of the most efficient and effective approaches to adapt to the impacts of climate change (IPCC 2014; Snover et al. 2007). However, developing and implementing effective local climate change adaptation plans may be beyond the capacity of many local governments due to lack of information, local expertise, financial resources, and political support (Allman et al. 2004; Tribbia and Moser 2008), lack of clear roles and responsibilities for local government (Amundsen et al. 2010), an absence of statutory obligations (Tang et al. 2010), constraints on local governments manifesting from the interplay between policies and regulations within broader governance frameworks (Urwin and Jordan 2008), more fundamental limitations (Lindseth 2004) such as 'ill-prepared local governments internationally for the complex challenges of climate change' (Moser and Luers 2008, p. 310), and shortfalls in practice-relevant research to support the development of local adaptation plans (Moser 2010).

Responses to climate change have started internationally with Agenda 21 in 1992 as a non-binding plan, under the authority of the United Nations (UN) Framework Convention on Climate Change (UNFCCC) (1992). This initiative emphasised sustainability and promoting community's rights in decision making processes at the local level 'through themes of inclusion, local knowledge, empowerment and capacity building' (Summerville 2008). Attention towards the importance of the local jurisdictions to develop local climate action plans gained significant traction since the mid-1990s (O'Riordan and Jager 1996). The initiative has been modified at subsequent UN conferences and local government's role in addressing climate change was reinforced in 2002 when Local Action 21 advanced Local Agenda 21 from agenda to action (Baker et al. 2012). However, it is essential to realise the policy gaps between local action plans and (inter)- national policy frameworks (vertical integration) in climate change governance (Corfee-Morlot 2009), as adaptation needs to be both implemented locally and informed by larger scale of (inter)-national policies and directions (IPCC 2014). This further confirms the need for collaboration of state and non-state organisations from local to (inter) national level.

Factors that Make Collaborations Successful

Collaborative governance is about incorporating stakeholders into 'mutual and consensus-oriented decision-making' (Ansell and Gash 2008 p. 546), to obtain a collective goal that is unachievable by a single entity alone (Silvia 2011), but through producing 'a high quality agreement' (Innes and Booher 1999 p.419) by effective leadership (Dedekorkut 2004; Silvia 2011), combining top-down and bottom-up approaches and filling the gap in between by building on local knowledge (Blanco 2006). Collaboration literature indicates that a number of factors increase the likelihood of the success of collaborative processes. All the factors are interrelated and some of them cannot be realized individually. However, to facilitate successful collaborative governance evaluation and analysis these factors can be organised into three categories as stakeholder factors, resource factors and institutional arrangement factors as illustrated in Table 1 (Dedekorkut 2004; Gray 1989).

Table 1. Factors influencing success of collaborations

Factor Type	Success Factors
Stakeholder Factors	Broad spectrum of stakeholders
	Directly engaged stakeholders
	Maximising stakeholders' incentives
	Joint commitment to share representation
	Building trust
	Mutual respect
	Building up confidence among the stakeholders
	Collective goals
	Strong relationship of stakeholders
	Effective leadership
Resource Factors	Sharing resources and responsibilities jointly
	Facilitating adaptive and learning capacity
	Building up local experience, knowledge and citizen capacity
	Technical information availability
Institutional Arrangement Factors	Combining top-down and bottom-up approaches
	Fair distribution of power
	Attaining equity in decision making
	Transparency, clear and consistent ground rules and process
	Effective governance structure
	Mutual and consensus-oriented decision-making
	Activeness in program delivery
	Joint involvement in a structured engagement
	Identifying clear roles

Stakeholder Related Factors

Directly engaged stakeholders in all the stages of decision-making process (Ansell and Gash 2008; Freeman 1997; Leach et al. 2002), will have joint involvement in a structured engagement to share resource and responsibilities (Padilla and Daigle 1998; Walter and Petr 2000) and strive some degree of consensus (Connick and Innes 2003; Seidenfeld 2000). Unique demands of the community can be achieved (Larson and Hicks 2004) by including key stakeholders in collective decision-making (Chrislip and Larson 1994; Freeman 1997; Hicks et al. 2008; Roussos and Fawcett 2000).

Resource Related Factors

Successful collaboration is by facilitating adaptive and learning capacity (Agarwal 2010; Gupta et al. 2008; 2010), transforming coping capacity into adaptive capacity (Berman et al. 2012), moving from advocacy to program delivery with local stakeholders (Kolk and Pinkse 2010; Worthington and Pipa 2010; Ziervogel and Zermoglio 2009) and connecting citizens to global sources of knowledge and information (Agarwal 2010; Cuthill 2005; Gupta et al. 2008; 2010; IPCC 2014; Lyons et al. 2001; WBI 2011) to have fair and informed deliberation and communal work (Blaxter 2003; Cuthill 2003, 2001; Gaventa 2001; Wallis and Dollery 2002) between the community and the government. Lack of stakeholder's commitment and accountability is deeply rooted within the structure of collaboration (Ansell and Gash 2008; Dedekorkut 2004; Gray 1989; Rosenbloom and Gong 2013; Warner 2006) which increases fraud in government outsourcing. Collaborative governance requires shared authority and resources (Padilla and Daigle 1998; Rosenbloom and Gong 2013; Walter and Petr 2000) to increase coproduction which can be used against the misuse and abuse of power and resources (Rosenbloom and Gong 2013).

Institutional Arrangement Related Factors

Institutional development and interconnectedness are vital in adaptation to complex and changing climate risks, especially extreme events (IPCC 2014), by combining top-down and bottom-up approaches, fair distribution of power, equity in decision making, clarity of ground rules and roles, effective governance structure, mutual and consensus-oriented decision-making (Amundsen et al. 2010; Dedekorkut 2004; Fung and Wright 2001, 2003; Levine 1984; Moser & Luers, 2008; Rosenbloom and Gong 2013; Tang et al. 2010).

Fairly equal distribution of power, authority and ability to access the resources as well as technical information is expected in multilevel institutional arrangements within a complex interaction of different actors in which state and non-state actors work in distinctive ways to provide public goods without the state having the central or the most important role (Ansell and Gash 2008; Betsill and Bulkeley 2006).

However, coordination between different administrative levels is becoming increasingly challenging in climate change governance (Corfee-Morlot et al. 2009; Few et al. 2007; Glaas and Juhola 2013; IPCC 2014; Keskitalo 2009; Measham et al. 2011; Nilsson et al. 2004; Pahl-Wostl 2007; Robinson and Berkes 2011; Rodima-Taylor et al. 2012; Sietz et al. 2011; Urwin and Jordan 2008). Traditional top-down decision-making processes have become insufficient and bottom-up approaches may bridge this gap by building on local experiences and knowledge (Blanco 2006). As Hurricane Katrina of 2005 in the United States and the European heat wave of 2003 demonstrate elements like strong institutions alone are not good enough to reduce vulnerability if the adaptation instruments are not translated into actions (IPCC 2007).

Methodology

This research uses an in depth case study methodology involving archival research and qualitative data collected through in-person, semi-structured interviews. An evaluation framework was developed through a literature review and was used to guide the analysis of the data collected from the secondary sources and semi structured interviews.

The list of potential interviewees was drawn from the Noosa Biosphere Reserve (NBR) website and represented different sectors (see Table 2). A total of eight participants from five different organisations and two independent individuals were interviewed. Half of the interviewees were former or current contributors involved in NCAP (internal experts) and the other half were experts who were not directly involved in the plan or the NBR (external experts) but were knowledgeable about the process. The majority (75%) of the interviewees stated that they are not participating as representatives of their home organisations in this research but rather sharing their personal experiences and knowledge. However, through including participants affiliated with a diverse range of organizations we have aimed to cover the wide range of perspectives in the data collection process. The gender distribution among the participants unintentionally ended up being equal.

Table 2. Potential candidates and interviewees

Organisation	Number of candidates	Number of participants
Noosa Biosphere Reserve	5	2
Sunshine Coast Council	2	1
SEQ Catchment	1	1
University Researchers	4	3
Chamber of Commerce	2	1
Noosa Tourism	2	0
Local Government Insurer	1	0
Environmental Lawyer	1	0
Total	18	8
Internal experts	8	4
External experts	10	4

The interviews were carried out with open-ended questions keeping pace with the main themes listed in Table 1 to guide the conversations. The interview protocol covered four parts of developing background context, sharing interviewee's expertise, focus on main factors and finally brief closing statement and additional recommendations. Participants were encouraged to freely share their thoughts on public participation, climate change governance and effective leadership as well as their experience in the NCAP plan making process. Thematic analysis was used to analyse the interview responses. Thematic analysis is a constant progress of classifying, comparing, grouping and refining to create and then clarify the definition of categories, or themes, within the data (Fossey et al. 2002). The raw data from interview transcripts and notes were analysed to identify thematic patterns in participant's responses. Interview transcripts were read again and again and analytically categorised into themes in the style of inductive and grounded theory approach (Burnard 2004). Three step coding of open coding, axial coding and reflective coding which involves summarising the whole data into themes and conceptual categories, grouping them and then reflecting on them to find similarities and differences to be able to label them properly was used in the analysis.

Noosa Biosphere Reserve and Noosa Climate Action Plan

The concept of biosphere reserve was introduced by United Nations Educational, Scientific and Cultural Organization (UNESCO) in 1974 to obtain a balance between the conflicting goals of socio-

economic benefits and biodiversity values and enhancing sustainable development. Since then many planners and policymakers have realised the correlation of conservation, development and international collaboration which are the essential aspects of biosphere reserves (UNESCO 2009).

The Noosa Biosphere Reserve was registered by UNESCO in September 2007, in recognition of the commitment of the community to environmental excellence, strong sense of community involvement and community co-ordination in pursuit of ecologically sustainable development (NBL, 2009). The Noosa Biosphere Reserve is the first designated site in Queensland, one of 14 UNESCO Man and Biosphere Reserves in Australia, and of 580 worldwide (Figure 1). The Noosa Biosphere area is based on the local government boundary of the Noosa Shire with a population of 50,000 people and covers 1500 sq kms of land that includes farms, towns, bushlands, national parks, coastlines and much of the Noosa River catchment (see Figure 2). In addition, the biosphere extends to a 3 kilometre strip of adjacent offshore waters (NBL 2012a). Noosa Biosphere Reserve has a high level of biodiversity and natural landscapes of great significance in a very confined physical area. It is home for more than 626 vertebrate species, 13 types of ecosystems including rainforest, heathlands and eucalypt forest as well as extensive system of freshwater, brackish and saline lakes, marshes and estuarine wetlands associated with the Noosa River and 25 percent of Queensland mangrove plant species are found within the biosphere (NBL 2012a).

Figure 1. Noosa Biosphere Reserve Location (Noosa Biosphere Ltd 2014)

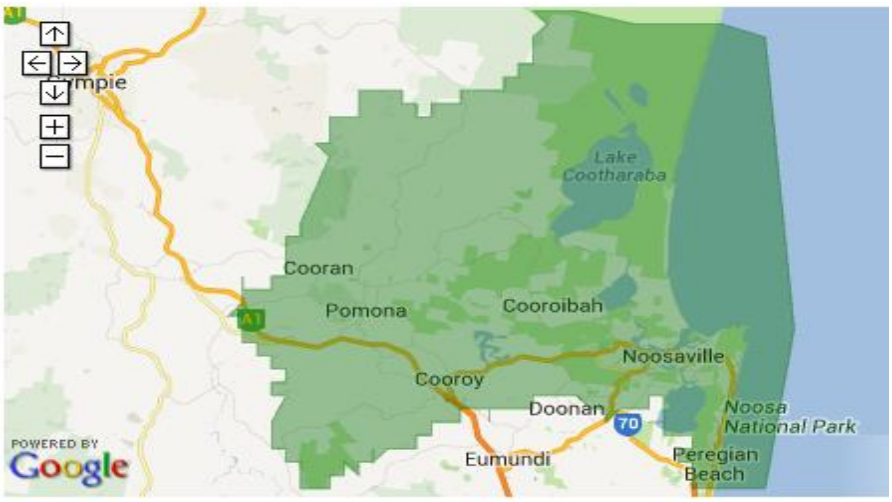

Figure 2. Noosa Biosphere Reserve Area (Noosa Biosphere Ltd 2014)

Noosa Biosphere Limited (NBL) was developed by the former Noosa Council as a community board model. This governing body of Noosa Biosphere Reserve engaged a diverse board of directors from community volunteers, local government and partner organisations to manage and promote the biosphere reserve. The Governance Board directors include three community directors, six directors from community sector boards and two councillors from the Sunshine Coast Regional Council prior to de-amalgamation of Noosa from Sunshine Coast Regional Council. There were 60 active community volunteers across the Governance Board, Cultural Board, Economic Board, Environment Board, Education Research and Development Board and Social Board (NBL 2012a). NBL has prepared a summary of projects and activities for each year with a strong focus on practical projects, community engagement and best practice sustainable development, driven by a high motivation to foster a network of collaborators (NBL 2012b). The NCAP along with Eco-Tourism and Eco-Education for international visitors and many other projects were introduced by NBL.

Noosa Climate Action Plan is only one of the many products of NBR with the intention to directly connect talented innovators of Noosa region and beyond to collaborate and accelerate sustainable development in this region. The NCAP incorporates seven actions at this point in time and they are all open for further discussion and input. These actions cover areas of health and lifestyle, economy, emergency management, biodiversity, agriculture, coastal management, and infrastructure and planning. A list of issues has been identified in each action area with suggested actions to address the issue. Responsible parties and potential collaborators are suggested as well as a timeline and high, medium or low priorities for each action.

Results

Stakeholder Factors

The literature review has highlighted a number of stakeholder factors to increase success in collaborative process and primary and secondary data collected through the case study of NCAP indicates the presence of these in the process. Projects and activities of NBR have had a strong focus on community engagement to foster a network of collaborators (NBL 2012b). NCAP is supported by a range of stakeholders (NBL 2012a) and majority of the internal experts mentioned that they had great experience by having different stakeholders running various workshops, presentations, projects and programs in the process of creating the NCAP. One of the external experts had doubt whether it is even possible to attain or aim for a broad spectrum of stakeholders in collaborative climate governance. The main intention of the NCAP as a collective work of NBR was to directly connect talented innovators of the Noosa region and beyond to collaborate and accelerate sustainable development in this region (NBL 2012a). Direct engagement of well accepted associates was mentioned by all the internal experts while one of the external experts admitted the need for it especially in terms of service delivery. Majority of the participants agreed that it is an achievable mission in this process and the internal experts agreed that it was present in this case.

Long-term incentives embedded in many socio-economic actions of the NCAP to help people change to a more efficient lifestyle as well as economic growth of the region (NBL 2012a) has been noted by most of the interviewees, especially by the external experts yet they were especially concerned with disincentives effects like lack of information. An external expert criticised the governance system which is lacking in this regard and suggested that ‘there are a lot of disincentives for actually empowering people to make decisions particularly around climate change decisions’. These reflections illustrate incentives can appear in different forms of financial assistance, empowering stakeholders to influence decision and developments or other forms of resources like exchanging information. However, incentives in one form or another have been present in the NACP process.

Document review of the process shows that joint commitment and effective partnership between the stakeholders was certainly present in the past and has been raised again as an important issue by the new Noosa Shire Council and the community creating a joint venture of the NBR working group to review the NBR management model (Noosa Council 2014, pp.25-33). It is the most repeated theme among stakeholder factors by majority of the interviewees. One of the internal experts was not sure if the new council has shown enough commitment to keep important projects up and running. While another internal expert mentioned that commitment has been renewed by Noosa Council coming back to the Biosphere programs as a result of de-amalgamation. Meanwhile, one of the external experts emphasised the importance of joint commitment to have a better outcome. These responses illustrate that joint commitment to share representation was viewed as an important factor for the success of the NCAP process by both expert groups however, the level of commitment shown is arguable as there were conflicting perceptions to the level of commitment in the process but the local council has shown

desire on their part by facilitating more community ownership through the new Biosphere model to increase joint involvement and share representation in future.

Secondary data shows that building trust between the community and the local council has been identified as one of the priority actions in the NCAP and three out of five interviewees who have admitted the significance of building trust are internal experts. They are certain that trust is needed both in other stakeholders and the process itself and they acknowledged that trust between the community and the local government is deeply rooted into the local adaptation. Interview data suggest that there has been a significant amount of trust throughout the process of plan making however, recent changes in the structure of the local council and lack of transparency and communication has affected the level of trust between the council and the community.

Half of the interviewees from both the internal and external experts saw mutual respect as an important aspect of the NCAP collaborative process. They suggested that hearing each other and creating the environment to give everyone a voice is improving the relationships and makes the process productive and cohesive. In the NCAP case, half of both internal and external experts have mentioned or confirmed stakeholder confidence as significant in the collaboration process. One of the internal experts mentioned that the new biosphere management should try to bring confidence back as it might have been lost to a degree while another believed that they had a process full of confidence. Yet one of the external experts had a completely different view that there might be lack of public confidence in general about climate change that could affect commitment to and engagement with the process.

Achieving sustainable development for the region is mentioned as a common goal for the Noosa residents (NBL 2012a) and to bring the community and the businesses together (NBL 2010). Exactly half of the interviewees saw collective goals as an effective factor in collaboration success. The interviewees identified the impacts of such a factor in the process as well as the future of the region and the presence of the collective goal was evident in the NCAP case.

The NCAP itself mentions that good relationships and productive partnerships between stakeholders 'came through strongly as a key requisite in this galvanising process' (NBL 2012a, P5). Majority of the interviewees agreed that it is an important factor. All of the internal experts interviewed found this factor critical, stated how it is embedded into the collaboration process and how it affects the end results. One of them believed that the council does not want to break the relationship it has with its broad community. One of the external experts mentioned the importance of strong relationship for empowering the community.

The community driven plan of NCAP claims that it had a good leadership to guide the actions of many toward effective adaptation (NBL 2012a, P5). Majority of the interviewees from both the external and internal experts have agreed to it. One internal expert suggested that we lack leadership from state to (inter)national levels but we have got people exercising the issue at a local level. One internal expert was talking about an essential leadership by the authority and the need for additional engagement. Yet another external expert doubted if there is any leadership anywhere. There were a variety of reflections on effective leadership along the rest of the stakeholder related factors and they were all emphasising the importance of these factor as well as the presence of them in the NCAP process.

Resource Factors

The collaboration literature emphases the importance of resource related factors for success. Majority of the interviewees have mentioned the importance of sharing resources and responsibilities however, the bigger support comes from the external experts while one of the internal experts mentioned that local council had allocated sufficient resources and community had the opportunity to exercise joint management and sharing responsibilities of the resources and it was stated that Noosa community did not miss the opportunity to experience joint management and sharing responsibilities.

The main intention behind the NCAP is learning from the past mistakes and facilitating an adaptive management process requiring continual improvement and updating local knowledge (NBL 2012a, p.11). All internal experts and half of the external experts mentioned this factor. An external expert raised the importance of avoiding maladaptation by building adaptive capacity into the plan while an internal expert believed that learning capacity is embedded into the concept of biosphere reserves.

One of the key steps in this constantly evolving process of the NCAP is to build capacity within the community to monitor, model and implement the plan in order to celebrate the successes (NBL 2012a, P11). This factor was the most mentioned among the resource factors (7 out of 8 interviewees). All

internal experts and all but one external experts mentioned it. Reflections from both expert groups validate the effectiveness of the plan making process on building knowledge and citizen's capacity in general as well as the NCAP process in particular.

NBL (2012a, p.23) claims that changes towards sustainability 'are supported through relevant, dynamic and credible information'. Majority of the interviewees, especially of the internal experts, saw this factor as vital to have in the process and their reflections ranged from the volume of information available to the process of sharing it.

Institutional Arrangement Factors

Literature suggests that institutional arrangement factors are essential to have a successful collaboration and one of the main objectives of the NCAP as a climate proofing process is to have an effective governance structure to guide the actions toward effective adaptation (NBL 2012a, p.11). Institutional arrangement factors have been mentioned by the majority of participants in both expert groups. The NCAP process has combined top-down and bottom-up approaches to ensure shared responsibility and effective climate governance (NBL 2012a, p.11). This factor was mentioned by half of the respondents in both groups but the results indicate different viewpoints. One of the internal experts claimed that they had such a combined approach in the actual NCAP process. While another internal expert was suggesting that efforts from the top were missing at the end of the process which has left the implementation of the plan uncertain. External experts commented more on the broader issue of Australian governance structure not aligning with combining bottom up and top down approaches.

The NCAP process allowed the education and empowerment of the community partnership programs (NBL 2012a, p.23) by offering different mechanisms in decision making process such as: encouraging them to participate in workshops, even offering incentives for workshop attendance and anonymous voting on issues during the workshops, focus on schools and youth training and broad distribution of existing information and kits available through State Emergency Services (NBL 2012a, p.7). Few interviewees reflected on power, especially among the internal experts. However, both external experts who commented on it suggested that there is not a fair distribution of power throughout the Australian governance structure and there is a need for change to share power.

Half of the participants, including mostly internal experts, reflected on equity. One of the external experts agreed with the importance of attaining equity and how it can be undermined by politics. These reflections indicate different levels of significance given to equity in general however; it seems that it has been considered in the NCAP process by reflecting on sustainable management of biosphere resources as well as sustainable development of the whole region as one of the main objectives of the NCAP process.

NCAP (NBL 2012a, p.51) also includes transparency in development decisions as an action to be addressed. Community driven NCAP states that it is underpinned by top-down and bottom up approaches to ensure good governance (NBL 2012a, p.11). All interviewees have reflected on effective governance as one of the most important factors to make collaborative processes more successful. The NCAP states that incorporating the relationships between people and communities, their knowledge, experiences, visions and values in decision-making is essential in facing current and future challenges (NBL 2012a, p. 7). Interviewees' comments supports the significance of mutual and consensus-orientated decision-making as well as presence of such agreement in the NCAP process.

The NCAP (NBL 2012a, p.11) reports that a series of events have been held to build awareness in the community and many of the actions in the plan are already under way to promote their existence and their role in an integrated climate adaptation approach. Activeness in program delivery has been mentioned by half of the internal experts but only quarter of the external experts with a total three out of eight interviewees commenting on it. The reflections indicated the presence of such an important factor in the NCAP process. NCAP is the result of nearly over 18 months of joint involvement of local community groups, residents, visitors, business leaders and government representatives (NBL 2012a, p.5). Joint involvement in a structured engagement was mentioned by half of the interviewees with equal number of respondents from each expert group. Internal experts mentioned the importance of this factor and noted equal opportunity given to everyone to collaborate. These reflections made before the issue was raised with the interviewees emphasise the importance and presence of the factor in the process. Only three participants reflected on identifying clear roles, two from the internal experts and one from the external experts. External experts were more focused on the bigger picture and the roles and responsibilities outside the planning process. One of them mentioned the pivotal role the local councils play in implementing the specific actions of the plan. One of the internal experts

explained how the process helped people overcome confusion. These reflections show the significance and the presence of institutional arrangement factors in the NCAP process.

Discussion

The results from face to face interviews are summarised into three primary categories of high (75% or above), average (50%-74% and low (25%-49%) levels of agreement. There was no factor that has not been mentioned by any of the interviewees so there is no level of agreement lower than 25%; in other words at least one out of four interviewees form each expert group reflected on each factor.

Essentially, the results indicate that there are high levels of agreement from the internal experts who supported the importance of the majority of the stakeholder and resource related factors for successful collaboration process as well as high levels of agreement on the presence of these factors in the NCAP process. An average level of agreement is received from the external experts to all these factors for successful collaborative climate governance, however, higher levels of agreement were observed by the external experts on two factors of 'maximising stakeholder's incentives' and 'sharing resource and responsibilities jointly' which is an indication of the importance of these factors in successful collaborative climate governance. The most important finding of this research is that the majority of both expert groups agreed with the importance of all these indicators by mentioning them before the issue was even raised with them or the question was directly asked. This result supports the hypothesized factors of successful collaborative governance mentioned in Table 1.

These results suggest a high level of trust and confidence among the planning team of NCAP to facilitate all the stakeholders with a successful process of collaborative plan making as all the factors are confirmed to be present in the NCAP process. Objectives like building citizen's capacity, making technical information available for every participant and facilitating adaptive and learning capacities for the community have been targeted through science based workshops and fully funded projects, programs and innovative research.

Perspectives expressed by the external experts suggest that the main shortcomings affecting such a process appear to be the institutional arrangements and decision making structure. They had doubts whether such a platform existed in Australian governance structure and suggested that the whole institutional fabric of Australia needs to change to participatory democracy to be able to facilitate such a successful process. The level of agreement from the external experts was relatively constant at 50% and 75% for majority of the factors, except for a few factors like having collective goals, attaining equity in decision making, transparency and clear consistent ground rules and process, activeness in program delivery and identifying clear roles with agreement levels as low as 25%. Internal experts had 50% higher agreement levels for factors like having collective goals and attaining equity in decision making and 25% higher for transparency and clear consistent ground rules and process, and activeness in program delivery compared to external experts. The lower agreement level from the external experts can be due to one of two reasons: not being directly involved in the process they may not be equally familiar with it or they may be more idealistic and have higher expectations.

The majority of the factors related to institutional arrangements have been mentioned much less frequently by the interviewees. Having fewer comments in this area suggests that collaborative climate governance is a very complex issue and there are a lot of disincentives for empowering people to make decisions particularly around climate change issues, especially with the current political climate and in the absence of effective partnership with champions and opinion leaders that could influence different sorts of communities to share resources and responsibilities jointly. However, factors like combining top-down and bottom-up approaches, attaining equity in decision making and joint involvement in structured engagement were mentioned by half of the both expert groups. Reflections on combining top-down and bottom-up approaches indicate that this was attempted in the NCAP process even though Australian governance structure makes it difficult to do so.

Still, a high level of agreement of 100% was seen in effective governance and mutual and consensus-orientated decision-making from institutional arrangement factors and these two factors were the only factors which all experts reflected on and internal experts confirmed the presence of both factors in the NCAP process. In fact effective governance structure and having mutual and consensus-orientated decision making are two factors that have been constantly repeated in relevant literature, which emphasises the importance of having these factors in place throughout the collaboration process to have a successful process and reliable outcome at the end.

A stakeholder related factor of having collective goals between the stakeholders, was mentioned by 75% of the internal experts but emphasised by only 25% of external experts. Yet there is plenty of

literature stressing this factor as an essential factor for successful collaboration in climate governance and agreement of 75% of the experts who have been involved in the creation of NCAP supports the importance of the factor.

On the other hand, the lowest level of reflection has been recorded for identifying clear roles among institutional arrangement factors. This factor has also been mentioned less frequently in literature compared to the other factors of successful collaborative climate governance. Identifying clear roles was mentioned twice by the interviewees and each group of experts had one reflection on that, however one internal expert mentioning this factor indicates that it is reasonable to aim for and even obtain as an outcome of successful collaborative climate governance.

Conclusion

Australian coastal system is increasingly experiencing adverse impacts of climate change and estimated economic damages to the SEQ region will double in the next 10 to 15 years in the result of extreme weather events and natural disasters. Collaborative climate governance is strongly suggested by the literature in developing and implementing effective local climate change adaptation plans. This research examines the NCAP as a unique community driven plan which combines top-down and bottom-up approaches in order to determine how successful it is as a collaborative planning process.

A case study research design involving archival research and in-depth semi-structured interviews is used for this research. Archival research provided the secondary data available, while in-depth interviews with well-informed participants were used to obtain qualitative data on the perception of participants and observers of the process. The results of this research suggest that the creators of the NCAP were knowledgeable and experienced in collaboration and they generated the opportunities to exercise a successful collaborative process in many aspects of collaborative climate governance. However, there were factors which were not addressed nor taken seriously by all the stakeholders especially from among institutional arrangement factors. While strong relationship was present between the stakeholders as an important element in the success of this process it deteriorated over time. However, both the community and the local council are expecting positive changes in near future to overcome this problem and achieve again one of the prerequisites for successful collaboration to aid them in addressing all the other related issues.

The results from the face-to-face semi-structured interviews gave clear perspectives from the two different angles of internal and external experts. Internal experts had firsthand information about the NCAP process as they have been involved in the creation of the plan. External experts had expertise in collaborative climate governance though research, field experience and extensive knowledge about SEQ climate change issues. Reflections from both groups have confirmed the importance of the criteria for successful collaborative governance synthesised from the relevant literature as well as giving a benchmark to evaluate the process of creating the NCAP.

Such integration of primary and secondary data has established links between the literature, research and authentic practice on collaborative climate governance. The results have given an indication on what is expected in successful collaborative climate governance and which hypothesized factors have been present or at least considered in the NCAP collaborative process by the people who were involved in the creation of the plan or have observed the process. The results suggest that lack of clear national policies has weakened the capacity of local governments in collaborative governance and climate change adaptation while too much emphasis on national leadership and centralised approaches may limit local creativity and result in ineffective teamwork. Therefore, collaborative governance can be more equipped with regional and local knowledge of climate change impacts (Meadowcroft 2009), and become more effective by combining bottom-up and top-down approaches (NBL 2012a). Viewpoints collected from external experts suggest that facilitating such an environment to have a successful collaborative process is essential but difficult to create or even aim for. There are a lot of disincentives for empowering people and their participation in decision-making, especially with the current political climate and in the absence of effective partnership with champions and opinion leaders in joint involvement to create more effective governance structure.

Findings of this research suggest that combining bottom-up and top-down approaches in the NCAP process was successful and it can be followed by other local governments around the world as a good model of collaborative climate governance. However, retaining all the factors listed in Table 1 in general and institutional arrangement factors in particular throughout the process is vital in this ongoing process to develop a more comprehensive climate action plan and continue through evaluation and monitoring stages. Regaining a strong relationship between all the stakeholders

especially with the local council is recommended to secure the implementation of the plan, allocation of sufficient resources, sharing responsibilities and activeness in program delivery to build up confidence, trust and mutual respect.

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