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Aishath Niyaz & Donovan Storey

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Professional practice

Environmental management in the absence of participation: a case study of the Maldives

Aishath Niyaz and Donovan Storey

This paper explores environmental assessment and management practices in the Maldives with a focus on the role of the public in environmental decision-making. As one of the world's most vulnerable states, the Maldives is undergoing rapid political, economic and environmental transformation. Yet environmental impact assessments (EIAs), and environmental policy in general, take place within a framework of limited democratic representation and participation. Thus environmental assessment is reinforcing unsustainable practices through curbing debate and information on the sources and consequences of environmental threats. While historic democratic elections in 2008 opened the door for political and social change, tensions remain between state desire for rapid economic growth, and environmental vulnerability and democracy.

Keywords: participatory planning, environmental impact assessment, sustainability, Republic of the Maldives

UMAN BEINGS HAVE THE ABILITY to negatively exploit natural systems which sustain them. In some cases this damage results from the 'unintended consequences' of development activities for improving levels of material comfort (Lohani et al, 1997), but in recent decades the ability to measure, interpret and forecast the environmental impacts of economic development have become more sophisticated. In this environmental impact assessments (EIAs) play a fundamental role. Yet, while EIA processes have become an accepted part of environmental assessment, they have proven less robust as instruments of participatory planning (Doelle and Sinclair, 2006: 186–187; Gilpin, 1995; Lohani et al, 1997). Capacity (including human and financial resources), expertise, cultural norms and

Donovan Storey (contact author) is at the School of Geography, Planning & Environmental Management, The University of Queensland, St Lucia, Brisbane 4072, Australia; Email: d.storey@uq.edu.au. Aishath Niyaz is at H.Niyasa, Bodufungandu Magu, Malé, Maldives.

inadequate planning systems have all been cited as factors shaping, and at times impeding, the effective adoption and implementation of participation in environmental assessment and decision-making processes (George, 2000: 52; Wood, 2003).

To date though there has been limited case study attention paid to the 'gatekeepers' of participation in developing countries and the implications for public involvement in the decision-making process (Bisset, 2000: 157–159). This article focuses on this aspect, in exploring the tensions between environmental assessment practices and the demand for (economic) development in the Republic of the Maldives. In particular, we focus on the important role of EIA consultants as advocates (or otherwise) of participation in the assessment process. EIA consultants are an important nexus between communities, government and developers in the Maldives. In the almost complete absence of social impact assessment (SIA) and strategic environmental assessment (SEA), participation in the EIA process often represents the only opportunity for contesting centralized decisionmaking over island and regional development.

Public participation in environmental impact assessment

In the classic EIA model the public plays a vital role in nearly all stages in the process, making participation a crucial component of any legitimate EIA. For the purposes of this paper, the term public participation is defined as a process or a set of processes by which all affected and interested persons or communities are involved in the decision-making process of any proposed development activity (Harding, 1998; UNESCAP, 2003). Public participation has become an increasingly essential component of natural resource management and environmental decisionmaking (Lawrence and Deagen, 2001; Lazarow, 2002) and plays a dual role: to bridge the gap between government and its citizens by the redistribution of powers in decision-making processes (McLaverty, 2002), and to enable different viewpoints to be taken into account in the decisionmaking process where people are empowered and have a sense of ownership on the decisions made (Bisset, 2000: 149–150; Lazarow, 2002). Nevertheless, as both research and practice have demonstrated, stakeholders exercise power unevenly in the decision-making process and participation may range from tokenism through to shared ownership and partnership (Botes and van Rensburg, 2000; Dana, 2001; Harding, 1998; Richardson, 2005).

Typically a variety of techniques are used in public participation in environmental assessments, including community meetings, individual interviews, focus group meetings, workshops, informational brochures, surveys and advisory committees (Petts and Leach, 2000). Experience has shown that a mixture of techniques is important as rarely does one single tool capture public and individual viewpoints, interests and needs (Arnstein, 1969; Francis, 2002: 403-405; Lawrence and Deagen, 2001; Petts and Leach, 2000). Indeed, the assessment process can play a vital role in the building of environmental democracy and justice towards substantive citizenship and inclusive decision-making; outcomes which reflect both the principles of the Rio Declaration (1992) and also the Aarhus Convention on Access to Information, Public Participation in Decision-making and Access to Justice in Environmental Matters (1998) (Hartley and Wood, 2005; UNECE, 2008).

Nevertheless, in a number of developing countries in particular, meaningful and effective public involvement is still more promise than reality (e.g. Martin, 2007, on India; Zubair, 2001, on Sri Lanka; Ramjeawon and Beedassy, 2004, on Mauritius; Wang *et al*, 2003, on China). What perhaps unites such diverse settings is the pressure for 'development' (i.e. commercial activity) and the relatively 'soft' environmental controls vis-à-vis 'hard' rewards (i.e. profits, especially to elites) (Storey and Murray, 2001). Studies reveal this is often due to public participation being understood by governments, the private sector and planners alike as costly,

time consuming, difficult to manage and an impediment to economic development (Irvin and Stansbury, 2004; Richardson et al, 1998). Even when participation does occur it can be easily undermined by the pressure for investment (from private developers) and 'development' (from potential beneficiaries); thus reinforcing the weakness and indeed 'tyranny' of participation when it is used to reinforce inequalities through policy 'choice' (Cooke and Kothari, 2001; Hartley and Wood, 2005; Martin, 2007; Richardson et al, 1998). This paper further explores these debates, by examining the important role of EIA consultants in the Maldives, as both mediators of participation and intermediaries between statebusiness development interests and communities. To date there has been limited attention given to the role of such individuals despite their significance in EIA processes. This is particularly the case where human resources and expertise are limited, as is the case in small island states such as the Maldives.

The Maldives: geography, land use and development

The Republic of Maldives is an archipelago consisting of approximately 1,192 low-lying coral islands located in the Indian Ocean. The islands exist as a chain of various size, though average land area is approximately only 1 km² and few islands reach a height of greater than one metre above sea level. Islands range from sand cays with no vegetation to densely vegetated islands consisting mostly of coconut palms. The impacts of development and population growth have become more pronounced in recent decades, as has inequality (MPND, 1998, 2005; MHAHE, 2001). The total population of the country in 2006 was 298,968, which is unevenly distributed among roughly 200 inhabited islands. In particular, population concentration in Malé (the capital city/island with over one-third of national population) and in regional capital islands is pronounced (MDNP, 2009).

Over the past two decades, many aspects of human development have advanced in the Maldives. This includes increased life expectancy and a 30% reduction in overall poverty levels (UNDP, 2007: 2). Today, tourism is the driving force of the Maldivian economy and is also the biggest foreign currency earner and the single largest contributor to GDP (MTCA, 2008). Typically each resort occupies a separate island and is totally self-contained under the unique 'one-island one-resort' policy, though this policy has recently been altered to allow for broader resort and island development on inhabited islands (MPND, 2008; MTCA, 2008). While the unique and isolated nature of the archipelago (Figure 1) has helped develop the tourism industry, it has hampered development activities among dispersed communities beyond fishing and small-scale agriculture (Davis, 1986; Hunter, 1996; UNDP, 2007).

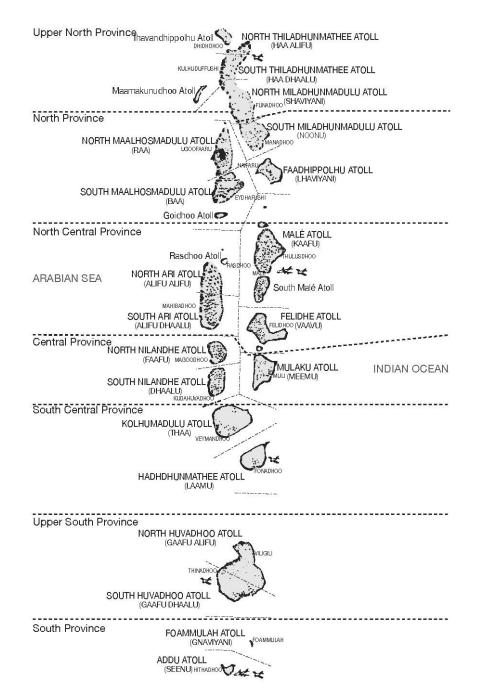


Figure 1. Republic of the Maldives

Despite tensions in tourism development and accusations of corruption regarding the choice of resort islands, the Government of the Maldives remains determined to expand tourist resort development to all regions of the archipelago. In 2008 an estimated 44 uninhabited islands were under transformation for new tourist resorts, while more islands have been opened up for bidding (MTCA, 2008). Moreover, a number of inhabited islands have been allocated for tourist hotel development, with ten new regional airports proposed to complement resort development (AFP, 2008).

Although the tourism industry either directly or indirectly affects the livelihood of almost every Maldivian, the development and direction of the tourism industry has been characterized by state and elite-directed decisions with limited public debate and input (Domroes, 1985, 2001; Saeed and Annandale, 1999). Indeed, local community input has been conspicuously absent in selecting locations for tourist resort development. This is evident in the Maldives Tourism Act (Law No. 2/99) itself, where clause 4 states that 'zones for the development of tourism in the Maldives, islands for development as tourist resorts and places for development as marinas shall be determined by the President'. In the three Tourism Master Plans that have been developed, including the most recent, the *Maldives Third Tourism Master Plan 2007–2011* (MTCA, 2007), the role given to public participation is relatively minor.

Though the country's first multi-party democratic elections for three decades heralded leadership change in 2008, as well as a number of significant reforms, the traditional model of state-directed development remains relatively intact.

Development of environmental regulation

In the Maldives the development of a bureaucratic system specifically aimed at environmental protection dates to the mid-1980s, and among other things recommended the initiation of an Environmental Commission to advise the Government on environmental issues and resulted in the establishment of a National Council for Environmental Protection and an Environmental Division within the Ministry of Home Affairs. In 1990, with assistance from the UN Environment Programme (UNEP), the first National Environmental Action Plan (NEAP I) was published, which further recommended a number of policy responses, including the need for an EIA system (Annandale, 2001). In 1993, almost a year after the Rio Declaration, the Environmental Protection and Preservation Act of Maldives (Law No. 4/93) was enacted and under this law, EIA became mandatory for all developments that had potential negative impacts on the environment. This law only formulated a broad framework stating that the Environmental Division had the power to set regulations, policies and other administrative settings related to EIAs.

In December 1994, with assistance from the Asian Development Bank (ADB), a set of administrative procedures for EIA was written and agreed by the Cabinet. However, these procedures were not used as a formal document due to the lack of enforcement and administrative weakness. Problems of capacity and enforcement have continued since. A decade after the initial administrative procedures for EIA were written, two key documents, General EIA Guideline (Xia, 2004) and the Environmental Impact Assessment Regulations (MEEW, 2007a), were mandated to act as regulatory tools for the EIA process (Figure 2). One of the key attributes of both was the call for public concerns to be given more attention, greater identification of interested and affected stakeholders, the strengthening of methods to ascertain community views and the call for greater use of such data in final decisions (Xia, 2004). Yet, as Annandale (2001) has noted, environmental assessment faces significant problems in human resources, capacity, transparency, information sharing and monitoring.

The above problems reflect a highly reluctant shift towards participation in decision-making processes. Although legislation and administrative improvements have been enacted, these have developed very slowly and have only tentatively attempted to encourage and incorporate meaningful public participation. In the 'actually-practised' EIA process the public are only consulted once proposed projects

are planned, screened and the scope determined by the proponent and the government. Moreover, even though public comments are accepted in the review phase, there is little evidence that they are considered in the decision-making process (see also Okello *et al*, 2009). Indeed, there is no compulsion to disclose the nature and extent of public feedback on planned development projects. Final decisions on development remain simply a matter of ministerial approval.

The study

Understanding the dynamics of participation in the EIA process was at the core of empirical research conducted in the Maldives in 2008 and through follow-up research in 2009/10. The primary method was targeted interviews with key EIA consultants. These consultants are an important conduit between communities, developers and government. At the time of the research, only 14 consultants were registered, out of which eight consultants participated through in-depth interviews. Though small in number, respondents provided a representative sample of EIA consultants in the Maldives. Those interviewed were typically the most experienced and active in the Maldives, with an average of 7+ years in their positions. The number of assessments across those interviewed totalled 82. The chief aim of the interviews was to better understand the reasons for limited participatory planning in environmental assessments in the Maldives, as well as how participation may be enhanced.

Background of EIA consultants

Table 1 provides an overview of the EIA consultants who participated in the research.

The majority of the consultants were young, between 30 and 40 years of age. Only one consultant was female, reflecting a broader absence of women in senior decision-making positions in the Maldives (Dayal, 2001). All consultants were qualified with at least a bachelor's degree and with a minimum of three years of work experience in the field. All participants had completed their higher studies overseas, in the UK, Australia, New Zealand, Fiji or Thailand. These qualifications were all environmentally related, ranging from aquatic science and marine biology, to environmental science, environmental engineering and environmental management.

Only three of the consultants had professional membership and only one was a member of the International Association for Impact Assessment (IAIA). With only one exception, *all* held concurrent positions in the government or private sector. The majority of those who held positions in the government sector were in senior positions at the Environment Ministry. This was quite expected as only a handful of Maldivians have tertiary qualifications in

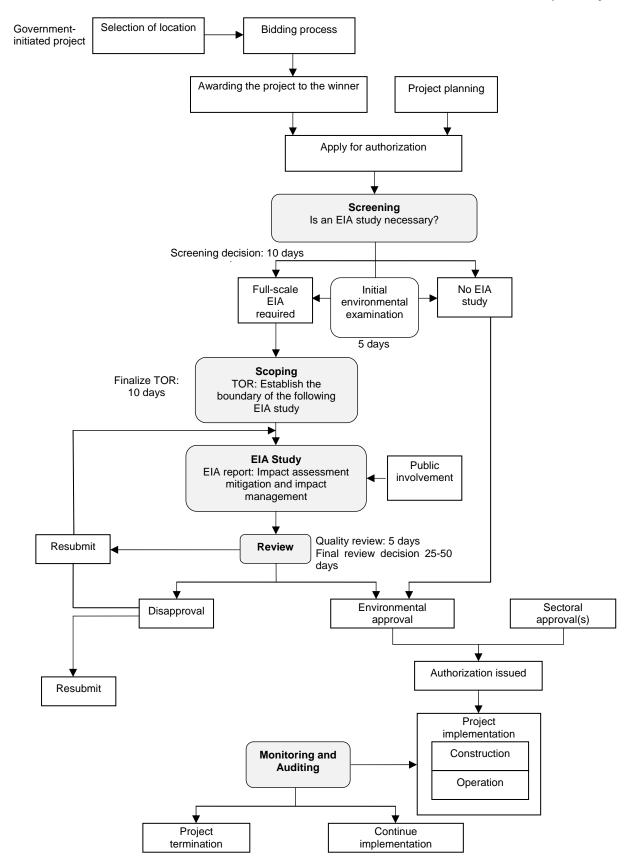


Figure 2. Typical EIA process in the Maldives (adapted from Xia, 2004)

environmental sciences. Still, concurrent roles are a real concern for independent decision-making, as well as providing a challenge for researchers seeking 'independent' views of respondents who wear multiple 'hats' in their working lives.

The practice of public participation

In the face-to-face interviews consultants were asked to reflect on the level of participation in EIAs and, importantly, the reasons for their role in facilitating

Table 1. Contextual data of EIA consultants interviewed

ID	Age group	Gender	Years working as EIA consultant (EIAs undertaken)	Background/ qualifications				Professional organization membership	Concurrent positions held
				В	M	PhD	Other		
E1	35–40	М	14 (20)	✓	✓	-	-	No	Yes (Government)
E2	35–40	М	7 (10)	\checkmark	✓	-	-	Yes	Yes (Government)
E3	30–35	М	3 (6)	\checkmark	\checkmark	-	✓	Yes	Yes (Private)
E4	30–35	F	7 (5)	\checkmark	\checkmark	-	-	No	Yes (Government)
E5	40–45	М	4 (6)	\checkmark	✓	\checkmark	-	No	Yes (Government)
E6	35–40	М	6 (5)	\checkmark	\checkmark	\checkmark	-	Yes	Yes (Government)
E7	30–35	М	7 (15)	\checkmark	-	-	-	No	Yes (Government)
E8	35–40	М	10 (15)	✓	✓	-	-	No	No

(or not) community concerns in decision-making. While consultants stated that they asked for public advice on potentially adverse environmental impacts from proposed projects, they agreed that public input was not considered in any structured way. Nor did they (bar one) feel that there were adequate opportunities for participation. One respondent stated that public views about ways of minimizing adverse impacts on the environment were only incorporated 'where relevant'. Another respondent stated that EIAs tended to focus much more on the most important 'economic aspects' (often defined as likely financial benefits for developers and government) rather than environmental and social issues. In particular, local input was very low for tourist resort developments. Respondents overall suggested that 'consultations' were usually conducted for their own background information, given limited time available in the field, and could largely be considered as information-gathering activities.

Consultants felt that dissenting views on development projects would not be particularly welcomed by government or the private sector, so sought to minimize the reporting of these. As a primary method for involving the public, most conducted one-off public meetings, while half used one-on-one interviews (though these were defined as 'short informal chats', rather than interviews *per se*). Only two had experience of, and used, focus groups. Consultants typically employed one method, and rarely sought to combine qualitative and quantitative data. While consultants felt that they were free to choose their own approaches and levels of participation, most typically this involved consultations with local island chiefs or government officers.

'Successful' participation was regarded as individual and community willingness to share information for assessments. In general the public did not object to *any* proposed development. Residents and local leaders perceived tourist resorts in particular as a gateway for economic prosperity and improving

their livelihoods. Community leaders tended to take the view that any opposition to projects would result in the loss of livelihood opportunities (and especially employment for local youth). This was heightened as community leaders and island officials perceived that other atolls would almost invariably agree to development proposals. None of the consultants reported discussing potential negative social impacts of proposed projects with communities.

The reasons given for such a limited emphasis and role for participation vary, but include limited time and resources, and a lack of confidence to engage communities, But they also included political and commercial 'disincentives' for creating problems from decisions that are often already made. Given that new tourist resort developments were essentially political judgements (and often investments), anything 'complicating' such decisions was generally seen in a negative light with little professional reward. As one respondent stated:

the time-frame to do EIAs is too small therefore they are generally done in a rush. Furthermore, the evaluation under the new Regulation does not give a considerable weight on the public participation component. Therefore EIAs are done in a way that is favourable for the client. It is more often the case where the client does not find the need to consult or involve the public.

'Cultural factors' were also seen as hindering effective public participation. One respondent stated that 'locals do not feel comfortable to criticize the development direction of the country in public'. It was believed that women particularly remain silent in community meetings. On the whole, communities did not consider their voice to be equal that of government with regard to the environment and resources. Such 'cultural factors' are evidently associated with political dynamics. Though a successful democratic election took place in late 2008 there has

been over 30 years of intolerance to political criticism and a centralization of power away from traditional community leadership (see Hunter, 1996 for a discussion on this regarding agricultural development). As one consultant remarked:

People are only informed and not involved...Planning for developments should be a two-way process. Currently it is one-way where the government or developers tell the people of what is best for them and tell the community of how they should live.

The above judgement is supported, somewhat ironically, through the response of another EIA consultant who held a concurrent senior government position at the time:

the related problems or issues regarding EIAs are not because of no public participation...the current way of asking the locals for their knowledge about the wave systems, current directions or behaviour of beach dynamics is very useful when identifying areas best suitable to put jetties or build water bungalows. The local public are more than happy when they are informed about the development details.

The interviews highlighted that environmental assessment and decision-making in the Maldives continues to suffer from highly constrained public participation due to lack of awareness, lack of providing sufficient information, lack of political will and lack of enforcement of participatory guidelines. The prevailing power of developers, especially in the tourism industry, also counteracts the desire to strengthen participatory planning. The current process also does little to build the knowledge capacity of communities on development and encourage affected communities to respond (Smith et al, 2006). The most likely affected stakeholders (e.g. fishing communities) are rarely identified for specific attention and civil society organizations working with such communities are also often excluded. The result, unsurprisingly, is low levels of participation, which is subsequently attributed to apathy, thus reinforcing a lack of commitment to greater consultation. As one consultant reported 'the main reason for ineffective public participation is their lack of knowledge of projects, especially ones which are not directly linked with their daily lives such as resort projects. Therefore, discussions would not yield good results'.

When asked whether participation should be encouraged almost all the respondents raised the necessity of first increasing awareness among the public about the importance of public input in EIAs and the fact they had a voice in the decision-making process. When asked 'how' though, responses focused on standard information dissemination channels (through media, websites etc.) and more

effectively explaining government policy ('environmental education' is a constant theme in government policy, see MEEW, 2007b, c). None cited opportunities to enhance alternative voices regarding decisions, though consultants agree on the need to strengthen environmental awareness programmes. Although participation was seen as 'virtuous', consultants felt that little was to be gained in pursuing any information which might be seen as impeding the will of more powerful actors.

Conclusions

The ad hoc and outwardly superficial nature of public participation in environmental assessment in the Maldives is clearly evident in a number of ways. Approved consultants have limited expertise in conducting participatory assessments. Limited weight is given to the extent or depth of public consultation. There is limited evidence of public input in potential impact identification, or when mitigation measures and project alternatives are determined. The EIA process gives overwhelming weight to economic benefits such as employment opportunities (even though many jobs go to migrant workers from South Asia), particularly for proposed infrastructure and tourist resort developments. Often socio-economic benefits are highlighted without any indication of the costs for local communities or the negative impacts to the public. Only occasionally do public concerns appear in reports. To a significant degree this reflects reluctance (and a lack of purpose) in identifying concerns where these will be unlikely to change decisions which have already been made, or to expose criticism of powerful government and private sector interests.

Enhanced participation in environmental management and policy could ultimately benefit from but also contribute to the broadening and deepening of political and policy reform as well as development models which can be sustained. These can be regarded as particularly important goals for such a vulnerable small island state as the Maldives (Ghina 2003; MEC, 2004). Yet, in practice, the environmental assessment process remains a one-way flow of information where consultants primarily provide information about proposed development. The extent of public participation in the EIA process of the Maldives suggests that it is done in a manner that reflects degrees of manipulation and tokenism. This is of great concern, as tourism continues to expand by exploiting uninhabited and inhabited islands with arguably short-term benefits but long-term impacts, including impacts on alternative economic development opportunities. This is likely to lead to significant tensions and environmental consequences which threaten the broader development gains made by the country over the past 25 years.

While awareness-raising was cited as a means to elicit greater participation, there remain limited rights to participate and to access information.

Although EIA processes can be an important strategic vehicle in strengthening both environmental governance and democracy (e.g. the principles of the Aarhus Declaration), at present top-down political structures remain an impediment to engagement and informed decision-making. Recent shifts by the new Maldivian government acknowledge that good governance, community consultation, equity, empowerment and mobilization of the economy are key factors for the conservation of the fragile island ecosystem and the sharing in prosperity, but much remains to be done to realize these goals in practice.

References

- AFP 2008. Maldives to Offer 11 New Islands for Resort Development. Available at: ">http://afp.google.com/article/ALeqM5jl1fleYkPxuQgBhnX_Aoym_XXzKA>, last accessed 30 October 2009.
- Annandale, D 2001. Developing-country EIA: developing and evaluating environmental impact assessment systems for small developing countries. *Impact Assessment and Project Appraisal*, 19(2), 187–193.
- Arnstein, S R 1969. A ladder of citizen participation. *Journal of the American Institute of Planners*, **35**(2), 216–224.
- Bisset, R 2000. Methods of consultation and public participation. In *Environmental Assessment in Developing and Transitional Countries*, ed. N Lee and C George, pp. 149–160. Chichester: John Wiley and Sons.
- Botes, L and D van Rensburg 2000. Community participation in development: nine plagues and twelve commandments. *Community Development Journal*, **35**(1), 41–58.
- Cooke, B and U Kothari 2001. Participation: The New Tyranny? London: Zed Press.
- Dana, K 2001. Community Participation in Rangeland Management: A Report for the Rural Industries Research and Development Corporation. Barton: RIRDC.
- Davis, B E 1986. Quality of life in Small Island Nations in the Indian Ocean. *Human Ecology*, **14**(4), 453–471.
- Dayal, R 2001. Women in the Republic of Maldives. Maldives: Asian Development Bank.
- Doelle, M and J Sinclair 2006. Time for a new approach to public participation in EA: promoting cooperation and consensus for sustainability. *Environmental Impact Assessment Review*, 26, 185–205.
- Domroes, M 1985. Tourism resources and their development in Maldive Islands. *Geographical Journal*, **10**(1), 119–126.
- Domroes, M 2001. Conceptualising state-controlled resort islands for an environment-friendly development tourism: the Maldivian experience. *Singapore Journal of Tropical Geography*, **22**(2), 122–137.
- Francis, P 2002. Community participation and decision making. In Handbook on Development Policy and Management, ed. C Kirkpatrick, R Clarke and C Polidano, pp. 400–407. Cheltenham: Edward Elgar.
- George, C 2000. Comparative review of environmental assessment procedures and practice. In *Environmental Assessment in Developing and Transitional Countries*, ed. N Lee and C George, pp. 35–70. Chichester: John Wiley and Sons.
- Ghina, F 2003. Sustainable development in Small Island developing states: the case study of Maldives. Environment, Development, Sustainability, 5, 139–165.
- Gilpin, A 1995. Environmental Impact Assessment: Cutting Edge for the Twenty-First Century. Cambridge: Cambridge University Press.
- Harding, R ed. 1998. Environmental Decision-Making: the Roles of Scientists, Engineers and the Public. Sydney: The Federation Press.
- Hartley, N and C Wood 2005. Public participation in environmental impact assessment implementing the Aarhus Convention. Environmental Impact Assessment Review, 25, 319–340.
- Hunter, D 1996. Natural resources and community participation in their management: an atoll perspective. *Rural Society*, 6(3), 19–27.

- Irvin, R A and J Stansbury 2004. Citizen participation in decision making: is it worth the effort? *Public Administration Review*, **64**(1), 55–65.
- Lawrence, R L and D A Deagen 2001. Choosing public participation methods for natural resources: a context-specific guide. *Society and Natural Resources*, **14**, 857–872.
- Lazarow, N S 2002. Demystifying Public Participation: A Case for Developing Environmental Indicators for Public Participation. Brisbane: Griffith University.
- Lohani, B N, J W Evans, R R Everitt, H Ludwig, R A Carpenter and S L Tu 1997. *Environmental Impact Assessment for Developing Countries in Asia: Volume 1.* Metro Manila: Asian Development Bank.
- Martin, T 2007. Muting the voice of the local in the age of the global: how communication practices compromised public participation in India's Allain Dunhangan Environmental Impact Assessment. *Environmental Communication*, 1(2), 171–193.
- McLaverty, P 2002. Is public participation a good thing? In *Public Participation and Innovations in Community Governance*, ed. P McLaverty, pp. 185–197. Aldershot: Ashgate.
- MDNP, Maldives Department of National Planning 2009. *The* 2006 Census. Available at http://planning.gov.mv/en/content/view/44/5/, last accessed 20 December 2009.
- MEC, Ministry of Environment and Construction 2004. State of the Environment: Maldives 2004. Maldives: Ministry of Environment and Construction.
- MEEW, Ministry of Environment, Energy and Water 2007a. *Environmental Impact Assessment Regulations*. Maldives: Ministry of Environment, Energy and Water.
- MEEW, Ministry of Environment, Energy and Water 2007b. *Institutional Strengthening of the Environment Research Centre.*Capacity Development Strategy 2007 and Beyond. Maldives: Ministry of Environment, Energy and Water.
- MEEW, Ministry of Environment, Energy and Water 2007c. Public Perception on the Environment: A Maldivian Perspective. Maldives: Ministry of Environment, Energy and Water.
- MHAHE, Ministry of Home Affairs, Housing and Environment, Maldives 2001. First National Communication of the Republic of Maldives to the United Nations Framework Convention on Climate Change. Maldives: Ministry of Home Affairs, Housing and Environment.
- MPND, Ministry of Planning and National Development 1998. Vulnerability and Poverty Assessment. Malé: Maldives.
- MPND, Ministry of Planning and National Development 2005. *The Maldives: One Year After the Tsunami*. Ministry of Planning and National Development, Maldives.
- MPND, Ministry of Planning and National Development 2008. Maldives at a Glance: 2008. Available at http://www.planning.gov.mv, last accessed 3 August 2009.
- MTCA, Ministry of Tourism and Civil Aviation 2007. Maldives Third Tourism Master Plan 2007–2011. Maldives: Ministry of Tourism and Civil Aviation.
- MTCA, Ministry of Tourism and Civil Aviation 2008. *Maldives Tourism and Civil Aviation: Protection of environment; 2008.*Available at http://www.tourism.gov.mv, last accessed 28 October 2009.
- Okello, N, L Beevers, W Douven and J Leentvaar 2009. The doing and un-doing of public participation during environmental impact assessments in Kenya. *Impact Assessment and Project Appraisal*, 27(3), 217–226.
- Petts, J and B Leach 2000. Evaluating Methods for Public Participation: Literature Review. Bristol: Environment Agency Technical Report E135.
- Ramjeowon, T and R Beedassy 2004. Evaluation of the EIA system on the island of Mauritius and development of an environmental monitoring plan framework. *Environmental Impact Assessment Review*, 24, 537–549.
- Richardson, T 2005. Environmental assessment and planning theory: four short stories about power, multiple rationality, and ethics. Environmental Impact Assessment Review, 25, 341–365.
- Richardson, T, J Dusik and P Jindrova 1998. Parallel public participation: an answer to inertia in decision-making. *Environmental Impact Assessment Review*, **18**, 201–216.
- Saeed, S and D Annandale 1999. Tourism and the management of environmental impacts in the Republic of Maldives. *Policy Studies Journal*, 7, 81–88.
- Smith, J, C Nielsen, F Shafeega, A Ahmed and R Henderson 2006. A Rapid Assessment of Perceptions into Environmental Management in the Maldives. Volume 1: Environmental Education and Community Mobilisation. Maldives: Live and Learn Environmental Education.

- Storey, D and W Murray 2001. Dilemmas of development in Oceania: the political-economy of the Tongan agro-export sector. Geographical Journal, 167(4), 291-304.
- UNDP, United Nations Development Programme 2007. UNDP Country Programme Maldives (2008-2010). Available at http://www.mv.undp.org, last accessed 5 November 2009.
- UNECE, United Nations Economic Commission for Europe 2008. Aarhus Convention: Convention on Access to Information, Public Participation in Decision-making and Access to Justice in Environmental Matters. Available at http://unece.org/ env/pp>, last accessed 13 March 2009.
 UNESCAP 2003 Environmental Impact Assessment Principles
- and Process. Available at http://www.unescap.org/drpad/vc/

- orientation/M8_1.htm>, last accessed 30 September 2009.
- Wang, Y, R K Morgan and M Cashmore 2003. Environmental impact assessment of projects in the People's Republic of China: new law, old problems. Environmental Impact Assessment Review, 23, 543-579.
- Wood, C 2003. Environmental Impact Assessment in Developing Countries: An Overview. University of Manchester: EIA Centre, School of Planning and Landscape.
- Xia, X 2004. General EIA Guideline. Maldives: Ministry of Environment, Energy and Water.
- Zubair, L 2001. Challenges for environmental impact assessment in Sri Lanka. Environmental Impact Assessment Review, 21, 469-478.