Communication Between Marine Science and Policy in the Eastern Caribbean

LYN-MARIE DEANE* and PATRICK McCONNEY

*CERMES, University of the West Indies, Cave Hill Campus, St. James, Barbados. *lyn-marie.deane@cavehill.uwi.edu.*

ABSTRACT

Marine science seldom "speaks for itself". Marine science, relevant to solving real problems, is still being done without any effort to inform and influence marine policy. This situation applies more to fisheries than MPAs, which often incorporate advocacy, but both are deficient. We suffer the consequences of marine policies that do not utilise research results. Research should mobilise knowledge (scientific, local, traditional) and stimulate learning to enhance future policy-making. Policies that encourage overfishing or poorly designed and operated MPAs, despite available scientific information, are witness to this deficiency. Why do these dysfunctions persist? There is insufficient attention, on both sides, to improving the communication between science and policy. Communication entails understanding people, pathways and products in the context of its purpose or main message. Marine scientists and managers require professional assistance in this area. The Centre for Resource Management and Environmental Studies (CERMES) is seeking to investigate and address these issues and means for improving communication through its Local Area Management Project (LAMP). LAMP, in the context of governance institutions for locally managed marine areas, sought to determine communication products and pathways for influencing policy makers and other key change agents; to use policy groups in Dominica and Grenada for learning best practices and information sharing; and to develop communication strategies for marine resource governance. Lessons learned from these study sites about communication between marine science and policy are likely to be applicable to an array of marine resource governance institutions and arrangements in the Wider Caribbean.

KEY WORDS: Communication, governance, local area management, policy, science, eastern Caribbean

Comunicación entre la Ciencia de Marina y la Política en el Caribe del Este

PALABRAS CLAVE: Comunicación, polïtica, ciencia de marina, Caribe del Este

Communication entre les Sciences Marines et la Politique dans les Caraïbe Orientales

MOTS CLÉS: Communication, politizue, sciences de marines, Caraïbes Orientales

INTRODUCTION

People involved in commercial marketing, social marketing and communication more generally are often amazed that natural science research, even more than social science research, ever makes its way into policy. In the corridors of conferences they have been heard to voice skepticism that information often packaged much more for the scientific sender than any receiver will successfully reach a target audience at the policy level. Fisheries and marine sciences are by necessity interdisciplinary at the science-policy interface, and that is an advantage, but still there is typically too little attention to properly communicating research results so that they have impacts upon policy. This deficiency requires urgent attention. Now, more than ever before, policy makers and their advisers need to be able to quickly and effectively absorb and respond to scientific findings ranging from the uncertainties of climate change to the certainties of overfishing and habitat degradation.

The Centre for Resource Management and Environmental Studies (CERMES) at the University of the West Indies, through its Local Area Management Project (LAMP) attempted from November 2009 to September 2010 to investigate and address means for improving communication among and from governance institutions for locally managed marine areas in Dominica and Grenada. This project was linked to moving the region towards achieving long-term marine protected area (MPA) management goals and protecting biodiversity contained within context of sustainable livelihoods. The LAMP study sites were the Soufriere Scott's Head Marine Reserve (SSMR) and the neighboring communities of Soufriere, Scott's Head and Pointe Michel in Roseau, Dominica. The LAMP sites in Grenada were the recently launched Sandy Island Oyster Bed Marine Protected Area (SIOBMPA) and Molinere/Beausejour Marine Protected Area (MBMPA) plus the soon to be launched Woburn/ Clarkes Court Bay Marine Protected Area (WCCBMPA) and communities surrounding these three MPAs. For the project's duration field research, workshops and communication took place in the two study sites using participatory approaches. The lessons learned from this study apply to communication in a wide array of marine resource governance institutions and arrangements in the wider Caribbean (Deane 2010). Here we provide a brief overview of the work that was presented as a conference poster.

METHODS

The communication aspect of LAMP was implemented mainly between June and August 2010. It focused primarily on achieving the following objectives:

i) Determining the communication products and pathways for influencing policy makers and other key change agents on effective regional fisheries and managed marine area governance

ii) Establishing policy focus groups in Dominica and Grenada to support peer learning, best practices information sharing and how to replicate/expand these practices

iii) Developing communications strategies for marine resource governance and improvements covering a range of users/decision makers from practitioner to policy level.

A number of studies have confirmed that a top-down management approach to development is less effective than a participatory one (e.g. Bagadion and Korten 1985). Development communication supports shifting towards a more participatory approach as this often results in the reduction of political risks, the improvement of project design and performance, increased transparency of activities, and the enhancement of people's voices and participation (Mefalopulos 2008).

The LAMP researched the history of the SSMR local area management authority (LAMA) in Dominica as an example of a participatory approach to the governance of marine resources (McConney et al. 2010a). The information and lessons learnt from this research were then applied to the MPAs in Grenada and ongoing attempts at MPA co-management (McConney et al. 2010b). Recommendations were made for the best way forward for the inactive SSMR LAMA and the Grenada initiatives.

In many cases, communication was closely associated with participation in events and activities. Considerable attention was paid to communication in LAMP workshops, meetings, interviews and on-site observations. This included communication to the public or particular stakeholders about the MPAs and communication among people, groups and organisations related to the LAMP activities. The data gathered were used both in this investigation into the communication of conservation messages and broader research into policy influence regionally as well as a concurrent study focused on governance. Efforts were directed towards developing a learning cycle (Figure 1) within the project, and to establish amongst participants an interest in learning and adaptive management.

The LAMP communication research methods were informed and guided by the participatory action research (PAR) methodology of the Marine Governance in the Eastern Caribbean (MarGov) project. A multi-faceted approach was taken towards stakeholder groups specifically identified by the LAMP in order to discover and address
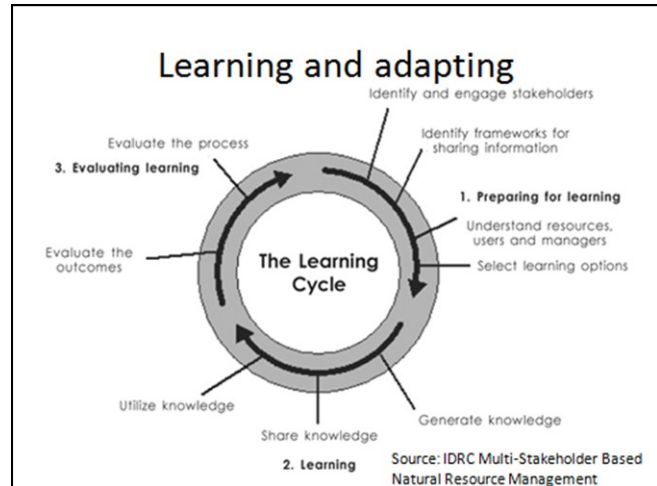

Figure 1. The importance of lessons learned

the individual needs of these groups. This was done through assembling a communication network which tapped into the existing networks of key entities and individuals to create multidirectional flows of information among the project team and all interested parties. This enabled the project to be more adaptive, while continuing to evolve to understand and address past, current and future communication needs and concerns (Figure 2).

As a result of the direct interface established between the project and its primary and secondary stakeholders, a communication strategy was produced which tailored to each stakeholder's individual needs.

RESULTS

Communication Strategies

The LAMP communication strategy (Table 1) consisted of a multidirectional yet simple approach aimed at involving targeted stakeholder groups to discover and address their individual needs while providing a high level plan of action to tackle how the project members communicated for the project's duration. It identified the objectives of the project communications, the various project stakeholders, the key messages which were disseminated to stakeholder groups and the most effective and efficient methods for information sharing with stakeholders. Several methods of information dissemination were used. These included but were not limited to personal paper and emails, slide and video presentations, face to face communication, reports, workshops, exchange visits, newspapers, training, artistic media and public education tools such as videos, public service announcements (PSAs) and displays. The communication strategy used can best be illustrated in the form of a table which lays out the various sets and sub-sets of the target audiences, the key messages relayed to these audiences, the desired action taken, and the pathways which were used for the dissemination of the key messages to the members of the target audiences.
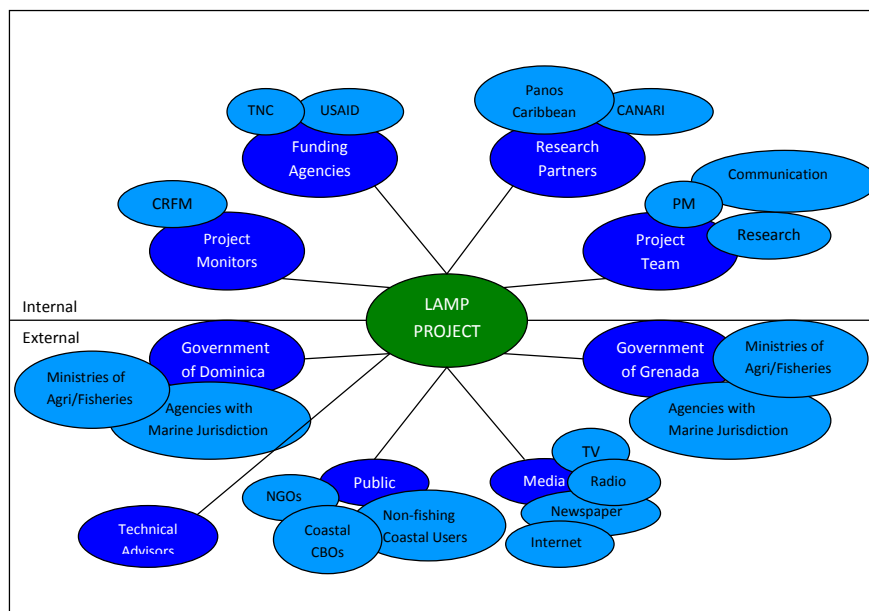
Figure 2. LAMP stakeholder map

The action aspect of the research involved influencing change agents throughout the project via a variety of communication initiatives. The LAMP communication strategy identified these key change agents. By working closely with a range of stakeholder groups and presenting local area management as an option for governance the project was able to expand the number and type of participatory institutional arrangements being considered for marine areas. Although the many non-governmental actors were important, in both cases the most influential change agents were the government authorities responsible for MPAs and the senior technical officers within them. In the eastern Caribbean it is these officers that influence policy and are most accessible to a wide variety of communication strategies.

Marine Resource Governance

The LAMP communications strategy tested several approaches to communication on marine resource governance that have application beyond the project. These range, for example, from public services announcements in Grenada to several different approaches to holding workshops and interviews. Face-to-face communication is still important to many stakeholder groups in the Caribbean despite this form of communication being one of the most costly "per unit" in that large audiences cannot be reached and expenses are often high. At the other end of the spectrum, electronic communication such as email and internet sites can reach wide audiences but are not used sufficiently to be effective for wide information exchange in most cases. Falling in the middle are the more common means of mass communication such as television, radio and newspapers. A media session and discussion held with

the media workers in Grenada proved very informative in guiding the project on what communication to research.

Specific recommendations arising from their advice and the project's communication research included the need to conduct additional general public education and more specialist technical training on the topic of local area management. This should utilize communication products such as non-technical reports and executive summaries, information packages which include video and slide presentations, as well as brief well-documented case studies. LAMP only skimmed the surface of an area of applied research and action that required much more attention as a viable alternative or supplement to conventional management of marine protected areas in the Caribbean.

Research Required

The LAMP communication research provided useful information for other CERMES projects throughout the Caribbean. This was an unprecedented opportunity to closely examine and study research-policy linkages within Dominica and Grenada. The impact of marine policy is, or should be, linked to research programmes aimed at mobilizing knowledge and stimulating learning to enhance future policy-making. Project communications have wide reaching implications for marine resource management and project management but require more dedicated attention from project managers.

Communication can be used to increase uptake of project outputs, increase buy in and influence policy. The communication research is required to investigate these links while improving the communication between research and policy through understanding the people, the

Table 1. Communication strategy summarized			
Stakeholder	**Key Message**	**Desired Action**	**Communication Tools**
Policy Makers Government ministers Permanent Secretaries and CEOs of government agencies with marine jurisdiction Heads of major NGOs and regional organizations High level media executives	Results of ongoing research and lessons learned should be incorporated into and used to guide policy Ensure uptake and positive changes in marine resource governance Create an enabling environment that is supportive of adaptive learning and decision making Facilitate input of applied research into marine resource governance	Reinforce the commitment of participants though personal interaction Involve champions in Press conferences/ media briefings Associate policy champions with research outputs Encourage personal networking Involve all stakeholders in the discussion/fostering discussion about their role in marine resource governance Enhance or establish institutions and mechanisms for governance	Personal paper and emails Technical reports and executive summaries Non-technical reports Information kits including CD packages that include Power Point presentations with narration Website Video presentations Brief well-documented case studies Face to face verbal communication
Change Agents Fisheries managers Coastal managers Fishers organizations Coastal managers Fishers organizations Middle-level administrators NGO officers Researchers Technical advisors/trainers University students	Research results and lessons learnt should be included in the policy and management of coastal and marine resources Advise policy makers on the benefits of alternate measures to ensure uptake and positive changes in marine resource governance Contribute to a climate that is supportive of adaptive governance Promote the sharing of information to allow for thorough investigation of governance, building capacity to adapt, and the ability to self-organise	Identify individuals to become technical change agents Gain their commitment through personal interaction Become involved in participatory one- day workshops Exchange visits Engaging in dialogue	Conference papers and posters Technical reports Journal articles Workshop reports Newsletter, bulletins Website E-mail list-serves Workshop CDs and various presentations Written & video case studies Site, national and regional workshops Training Social networks Brief well documented case studies Face to face verbal communication Videos Slide and video presentations
Resource Users Fisherfolk Fisheries organizations Non-fishing coastal users including the private sector Coastal community groups General public Media representatives	Enable self-organisation Participate in marine resource governance Promote adaptive governance Appreciate the need for systems to adapt and be resilient	Focus groups LAMA and town hall meetings Popularisation of research in mass media Personal interaction Field visits Regional, national and site workshops and meetings The identification of leaders from within or outside of the community to champion the cause	Newsletters/bulletins Newspapers Radio notices and call-in programmes TV interviews and discussion programmes Use of the creative arts Website Posters Flyers T-shirts and other novelty items Participatory videos and testimonials Interactive presentations Artisitic media poetry, etc Public education tools: videos, PSAs, plays, drama, public displays
Project Partners	Share information and relevant research with project team Promote networks for information exchange	Participation in regional panel discussions Site and exchange visits Personal interaction Participatory monitory and evaluation results	Conference papers and posters Technical reports and policy briefs Newsletters and bulletins E-mail messages/list-serves Website Case studies – written, video Personal papers and emails Executive summaries Regional and national conferences and workshops

pathways and products within that shared context. Through the use of appropriate and measurable indicators, investigation must assess whether a communication strategy is responsive to the needs of the target audience and if it is taking the approach necessary to meet the project objectives outlined in its strategy and plan.

Through participatory monitoring and evaluation (PM&E) of the processes and products, the LAMP research reviewed successes and shortcomings, and, as a result, improved project communications for more successful outcomes. More cases of PM&E as standard components of projects would provide useful information.

An inventory of existing communication pathways was catalogued and a determination made of which methods were more effective and efficient for distributing information from the LAMP to target audiences. Through incorporating stakeholder involvement, the appropriate methods and channels through which target audiences can be engaged were determined. This ensured that the most suitable methods for each group were utilized, but more research of this type is required for other audiences.

Due to the limited exposure of target audiences to the concepts and terminology associated with the project, in addition to various cultural differences which exist within and between study sites, the communication material was specifically tailored to the various target audiences. Furthermore, all communication between the project team members and the target audiences demonstrated respect and the use of appropriate language carefully chosen for the audience for which it is intended.

The communication research was used to highlight the challenges that faced in communicating research for policy and how these challenges can best be overcome.

KEY LEARNING

The final element of the LAMP communication research comprised key learning generated through feedback from the various communication products, pathways and activities. The following lessons learned are summarized in no particular order:

i)   The importance of gatekeepers should not be underestimated, especially if rapid penetration into existing social or organizational networks is necessary, often for purely practical reasons.

ii) It is necessary for products of a scientific nature to be presented in a manner which is appealing to the general public in both content and delivery, and to reach specifically targeted audiences.

iii) The use of scientific or technical jargon should be avoided because it makes the information difficult to understand, digest and, in the case of the media, difficult to impart to others.

iv) Better communication links need to be established between media workers and scientists, particularly as it relates to high level media officials who determine what news items are broadcast or print worthy.

v)   Greater levels of participation and interest from stakeholders are obtained when they are fully incorporated into the communication process.

vi)   Communication products and the media tend to focus on adult audiences; however, adults tend to be set in their ways and resistant to change, therefore it may be best to also target younger persons who can still be educated and guided in the right direction.

vii) In an effort to communicate and educate younger audiences, teachers need to be targeted and trained through the use of workshops and symposiums so that they can in turn pass on the correct information to their students.

viii) The media has a key role in determining what issues are important; however the general audience also plays a critical role in determining which issues are important as well.

ix)   Innovative and creative communication products must be utilized to effectively and efficiently communicate with target audiences instead of relying only on traditional media products.

x)   The clergy, service clubs and diverse NGOs play an important role in the lives of many persons in the general public and can be used to inform, educate and sway public opinion.

xi)   The media see it as their responsibility to represent the interests of the general public and to educate and inform them of activities and developments which can or will affect them in any way or of events which are of particular interest, but media workers need assistance to do this.

xii) Both formal and informal communication must be improved to strengthen the linkages between policy-makers, researchers and the general public, and especially to promote marine science.

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