

# People and Reefs in the Pacific – People and Livelihoods<sup>1</sup>

Hugh Govan<sup>2</sup>, December 2007

## **Pacific Islands at Risk**

The future of Pacific Island peoples is inextricably linked to their coastal ecosystems. Unsurprisingly and with the exception of inland populations in Papua New Guinea, fish provides and is expected to provide the major source of protein for a rapidly growing population for at least the next 20 years<sup>3</sup>.

The role played by Pacific Island reef ecosystems extends far beyond that of sustenance or income generation and includes such vital functions as protection from extreme natural phenomena and providing a central element of Island society and culture - the very identity of Pacific Islanders<sup>4</sup>.

The increasing pressure on these life supporting ecosystems has been cause for concern for decades now and the region has seen numerous efforts to sustain or improve people's livelihoods on the one hand and support the conservation of coral reef systems on the other. After the many millions of dollars spent on these initiatives - what prospects are there for Island Peoples?

## **What has been done?**

Projects such as aquaculture, tourism, handicrafts and offshore fishing, trying to diversify livelihoods in order to reduce the extractive pressure on coastal resources, have not achieved even a fraction of their intended impact. Worryingly, it appears that these projects may even distract both donors and communities from addressing more effective forms of resource management<sup>5</sup>.

Several decades of conservation funding seem to have generally under-performed also with the output of paper vastly outweighing tangible impacts. This is apparent in the numerous "paper" protected areas, the development of unenforceable policy and legislation and the accumulation of largely misguided or irrelevant research studies<sup>6</sup>.

The particular characteristics of the region account for some of the challenges faced by conservation and livelihood projects as evidenced above; isolation, distance from markets or even government institutions, restricted human capacity, natural hazards, and civil unrest have all played their parts. But an important and recurring theme is that many interventions are not grounded in local reality nor do they respond to the priorities of local people.

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<sup>3</sup> See for instance Bell, J. 2007, Commission of the European Communities, 2000 and UNDP 2002.

<sup>4</sup> Whittingham et al 2003, Johannes 1981, Hviding 1996

<sup>5</sup> Gillett et al. 2007, World Bank. 2000.

<sup>6</sup> Cf. Baines et al 2002, 2006, Fox et al 2007, Foale 2001, Tortell 2007

### **Integrated resource management as the basis for sustainable livelihoods?**

The realization that local aspirations, livelihoods, conservation and inshore fisheries management should be integrated has seen an increasing emphasis on collaborative and participatory approaches worldwide<sup>7</sup>. In many respects the Pacific has taken the lead with hundreds of communities in Fiji, Vanuatu, Solomon Islands, Samoa, Papua New Guinea, Tuvalu and Micronesia now proactively managing their coastal resources. Approaches range from the customary or traditional to complex multi-stakeholder co-management<sup>8</sup>.

These approaches are known by as many names as there are sponsors; LMMA, VBRMA, CBRM, CBFM, VFMP<sup>9</sup> to name a few. A comprehensive review and analysis of progress made is overdue but there is now sufficient evidence to discern a path towards sustainable livelihoods and reef conservation. The following livelihood benefits seem reasonably achievable and have been documented:

- Biodiversity conservation: localized recovery or protection of vulnerable species such as large food fish or marine turtles<sup>10</sup>
- Improved fishery landings: experiences from within the region and nearby Philippines show that, depending on species, catches may be sustained or increased<sup>11</sup>.
- Governance: communities may improve decision-making processes, link to other organizations and institutions, influence policy development, reduce internal conflicts and of course, central to resource management, improve compliance and enforcement<sup>12</sup>.
- Community organization: simple resource planning and facilitation processes are being used to support community endeavors in other fields<sup>13</sup>. Community institutions used for management may be used for other purposes or be adapted to handle other types of projects<sup>14</sup>.
- Resilience and adaptation: supporting local stewardship and promoting understanding of people's potential impact on resources provides a basis for response to new threats in the context of adaptive management and helps provide local security<sup>15</sup>.
- Health: improving or securing the supply of marine protein has a direct impact on community wellbeing aside from the potential to use the same planning process for other community priorities including health<sup>16</sup>.
- Integrated resource management: addressing a wide range of issues such as watersheds, waste management, community events and so on<sup>17</sup>.
- Cultural survival: the considered use of traditional management measures and knowledge may slow the loss of valuable aspects of culture and improve management success<sup>18</sup>.

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<sup>7</sup> Govan, H. 1997, Whittingham et al. 2003.

<sup>8</sup> Johannes 2002, Govan et al. 2006. LMMA 2006. FSPI 2004-2006,.

<sup>9</sup> Locally Managed Marine Areas, Village Based Resource Management Areas, Community Based Resource Management, Community Based Fisheries Management, Village Fisheries Management Plans.

<sup>10</sup> Johannes and Hickey 2004, LMMA 2006, McClanahan et al 2006.

<sup>11</sup> Tawake et al. 2001, Russ et al 2004, Abesamis and Russ 2005 but see concerns e.g. Foale and Menele 2004, Hillborn et al. 2004.

<sup>12</sup> Pomeroy et al. 2007. Leisher et al. 2007. LMMA 2006. Tawake in Prep.

<sup>13</sup> Chambers 1992, Inglis et al. 1997

<sup>14</sup> FSPI 2006 (cf. Paonangisu, Vanuatu), Participatory marine resource planning exercises have been used subsequently by other projects e.g. Small Grants programmes in Solomon Islands

<sup>15</sup> Cinner et al 2006. Thaman et al 2005.

<sup>16</sup> Leisher et al 2007.

<sup>17</sup> FSPI 2006, Thaman et al 2005.

<sup>18</sup> FSPI 2006, LMMA 2006, e.g. the use of tabu areas, sasisen or other traditional closures.

Although by no means will all these benefits necessarily accrue in all cases the proliferation and endurance of a great many sites across the region with relatively little outside support strongly suggests that communities do feel that the approaches have an overall beneficial impact on their livelihoods – quantitative evidence of these wider benefits is becoming available<sup>19</sup>.

### **Characteristics of community based adaptive management initiatives**

The approach which can be broadly termed Community-Based Adaptive Management (CBAM) seems to hold much promise for reefs and livelihoods but it is worth outlining what seem to be some of the vital components of the successful and enduring initiatives:

**Community-based:** The management is carried out primarily by the community and the relevant user groups but also, involving appropriately the locally and nationally relevant institutional and private stakeholders. This makes optimum use of social capital such as existing (or assigned) resource rights, local governance, traditional and local information, self-interest and self-enforcement capacity.

**Adaptive Management:** The local community sets priorities and establishes objectives and proposed actions based on the available, and usually local, information, actions are implemented and results are checked periodically<sup>20</sup>. Plans represent a community agreement and are frequently simple one page documents. Results of checking / monitoring and any new information are used to review the plan and modify as appropriate. Management tools selected tend to be simple to implement or enforce such as area or seasonal closures, restrictions on specific fishing techniques, waste management and restoration activities. Experience suggests that some benefits should be tangible and prompt in order to fuel continued management but these need not be monetary.

It is clear that community based adaptive management is a simple and not even alien concept given its similarity to many traditional resource management approaches<sup>21</sup>. What is relatively new, or at least so far not widely accepted<sup>22</sup>, is the proposal that this approach should form the basis for securing the wellbeing of both reefs and communities of the Pacific Islands.

### **The way forward for People and Reefs in the Pacific**

Of course, a few hundred communities practicing adaptive management across the region are unlikely to make a wide impact on livelihoods or reefs. Furthermore, recent calls to promote Marine Protected Areas (MPAs), citing some of the above list of benefits in support, miss the point in confusing a specific management tool with wider sustainable management.

The potential of the Pacific Island experience is not so much to attain the Western Conservationists' dream of "representative networks of MPAs" but rather the much more widely called for systems of Integrated Coastal (or Island) Management (ICM) that address livelihoods, development, inshore fisheries and conservation as a whole<sup>23</sup>. The MPA enthusiasts should not fret though; these community based approaches usually generate the most enforceable examples of closed areas/MPAs in the region and often serve as stepping stones to larger systems of protected areas or conservation initiatives<sup>24</sup>.

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<sup>19</sup> Leisher et al op. cit.

<sup>20</sup> In Fiji, many villages even define quantitative goals and then monitor them scientifically

<sup>21</sup> Hickey 2006, Cinner et al 2007.

<sup>22</sup> See for example Johannes 1998 and the case for data-less management

<sup>23</sup> Whittingham et al. 2003, Bell et al. 2006, World bank 2006.

<sup>24</sup> Tawake in Prep., Aswani and Hamilton 2004.

Achieving the potential of ICM based on CBAM will involve developing strategies that integrate hitherto separate conservation, fisheries and livelihoods sectors and address some relatively neglected but vital areas:

- **Strengthen and adapt national and sub-national policy and institutional frameworks** in support of ICM based on community driven adaptive management. This is vital to provide robustness to external drivers such as population increases, market pressure and terrestrial impacts. The strengthening of institutional capacity will require innovative approaches from NGOs and donors, imaginative and tailored institutional structures which may adapt or hybridize traditional or national institutions. Bridges between these and other stakeholders can be built using networks and umbrellas, examples of which are now established in the region<sup>25</sup>.
- **Strive for highly cost effective** and locally appropriate approaches – these should not require expensive technical inputs or analysis (e.g. natural or social sciences) at the outset. Local government, community or NGO staff can facilitate and initiate management at the earliest opportunity based on experiences elsewhere, rules of thumb and community knowledge, new information can later be incorporated into cycles of adaptive management. The costs in establishing and supporting communities must be in the order of hundreds of dollars per year for them to be sustained in the long run by government – emerging data suggests that this is achievable<sup>26</sup>.
- **Research needs to be more responsive to the needs of the managers** i.e. communities and their support agencies. At present research and capacity priorities are often derived from outside the region based on models of management that are not applicable. There now is considerable technical support capacity in the region but agencies face the challenge of discerning priorities on the ground. New approaches to improving communication between communities and their support agencies on the one hand and research institutions on the other are needed<sup>27</sup>.
- **Avoid raising unrealistic expectations.** Communities are getting involved because they want to manage their resources better for their own benefit. Unrealistically promoting the benefits of MPAs or providing “incentives” are common strategies despite the lack of demonstrable long term success. These are not only financially unsustainable in a national ICM framework but also erode the vital empowerment and ownership communities achieve when they observe the connection between their actions and accrued benefits.
- **Encourage interdisciplinary and cross-sectoral approaches.** A number of agencies have overlapping responsibilities (e.g. environment, fisheries and disaster preparedness/adaptation) which could interface with communities through a single community based adaptive management approach cutting costs and ensuring “holistic” and integrated approaches.

In conclusion, one of the untapped riches of the Pacific has begun to show its true potential; villages, communities, tribes, clans and districts are planning, implementing and enforcing management at the local level. The challenge for policy-makers, scientists, government and

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<sup>25</sup> Cinner et al. 2007. Cinner and Aswani 2007, Anderies et al 2004, Ostrom 1990, Berkes 2004, Tawake in Prep. Support networks or umbrellas have proven useful in the advancement of national community based management in Fiji and also Solomon Islands and Micronesia (FLMMA, SILMMA, PIMPAC).

<sup>26</sup> Data from FLMMA and SI FSP/SIDT sites suggest that currently village sites can be supported for around 2,000USD per year during their start up phase (maybe 3 years). The bulk of cash expenditure is in transport and salaries. There is every reason to suppose that this can be substantially reduced at economies of scale.

<sup>27</sup> Wilson 2007 warns that self interest frequently clouds the priority setting capacity of researchers.

non government institutions is to support and promote this de-centralized Island way as a vital foundation in a truly regional approach to Integrated Island Management that can address the pressing issues associated with sustaining the region's reefs and livelihoods<sup>28</sup>.

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