Relationships between coastal tourism and ICM sustainability in the central Visayas region of the Philippines

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Abstract

As part of the Integrated Coastal Management Sustainability Research Project (ICMSRP), this study investigated the relationship between tourism and the success and sustainability of processes initiated by one ICM project in particular, the Central Visayas Regional Project (CVRP). CVRP is widely regarded as the first major externally funded coastal management project to take on a community-based, yet integrated, approach to rural development and resource management in the Philippines. CVRP was implemented by the World Bank from 1984–1992 across 16 coastal municipalities. Such a large and geographically widespread integrated coastal management project is bound to have site specific variances due to the presence or absence of certain community characteristics as well as differences between project personnel. It is these local variations that can have differential impacts on the sustainability of integrated coastal management planning and implementation. This paper focuses on the impacts of local variation in one community level variable (intensity of tourism). By looking for variation in impacts within one project (CVRP) across 23 sites, we are controlling the differences of overall project design while examining the impacts of differences in local context.

Data analysis revealed that the presence of coastal tourism had a positive relationship with the compliance and access indicator, but a negative relationship with both the quality of life

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indicator and activities sustained indicator, warranting a more thorough investigation of the costs and benefits associated with coastal tourism activities.

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1. Coastal resource management and CVRP

Coastal resource management (CRM) has had a long and involved history in the Philippines. This is warranted considering the Philippines’ status as an ecological ‘hotspot’ [1], its contribution to the world fisheries market, and its increasing popularity as a tourist destination, coupled with the ever-pressing threats of over-exploitation, coastal development, and population growth. Between 1984–1994, the Philippines had the largest number of recognized community-based CRM experiences in the world as well as the largest emergence of non-governmental organizations dedicated to the task of managing coastal resources [2]. The Philippines has also been the recipient of major foreign aid assistance for CRM from conservation NGOs and international donor institutions around the world. In fact, it has been estimated that approximately US$25 million dollars are spent annually to support integrated coastal management (ICM) in the Philippines [3,4]. This increasing interest is also reflected by the large amount of published literature on ICM in the last decade [3,5,6].

The Central Visayas Regional Project was one of the earliest and largest, community-based ICM projects in the Philippines. CVRP (Loan 2360-PH, US$25.6 million1) is widely regarded as the first major externally funded coastal management project to take on a community-based, yet integrated, approach to rural development and resource management in the Philippines [7,8]. Activities were launched in 1984 and concluded in 1992 after two, 1-year extensions [9]. Its three main components were upland agriculture, social forestry and near shore fisheries management. The evaluation for this study concentrates specifically on the near shore fisheries component of CVRP (CVRP-NSF). CVRP-NSF was implemented in four provinces across the Central Visayas Region with an allocation of approximately US$3.5 million dollars, out of the US$22.7 million dollars total CVRP budget. In total, it involved 182 villages (barangays) within 16 coastal municipalities [7].

The nearshore fisheries component of CVRP was divided into three major and two minor interventions. Major interventions included mangrove reforestation and management, coral reef management and marine sanctuary development, and artificial reef (AR) establishment. Minor interventions included small-scale interventions such as salt-water pond construction for shrimp farming, and outfall control to minimize the discharge of sewage into the marine environment.

1Originally this loan was approved in FY83 at US$25.6 million, but a total of US$2.9 million was canceled, making the total loaned US$22.7 million.

2There are some inconsistencies within and between various reports with respect to total number of municipalities involved, amount (e.g., number, area covered, etc.) of interventions accomplished, etc.
mariculture and installation of fish aggregating devices [7,10,11]. Each of the major interventions was planned with fair resource allocation and community management in mind. Specific objectives were to [7,10]:

1. establish and allocate user’s rights to an extensive system of ARs in waters adjacent to the four upland sites in the region,
2. establish effective coral reef management on all coral reefs at the four project sites and establish municipal marine sanctuaries covering 15–20% of the reef area,
3. replant mangroves in all suitable sites, manage existing mangrove timberlands by small holders and allocate user’s rights to these areas in the four sites,
4. strengthen participating regional line agencies, specifically the Department of Agriculture (which split into the Bureau of Fisheries and Aquatic Resources in 1987) and the Department of Environment and Natural Resources,
5. undertake special studies to support near shore habitat management goals,
6. undertake general surveys to provide a technical basis for project replication in other parts of the region and elsewhere.

Clearly, a strong emphasis was placed on community organizing. Community organizing is a process of community group formation, leadership development and education that is used throughout the Philippines to engage communities in social change processes. Generally, CVRP was designed so that site staff would live in the communities where they could develop credibility and be responsive to community needs, insuring the potential for beneficiary participation throughout implementation [12]. Trainings were conducted to help the participating families to organize themselves into fishermen’s associations and federations, many of which still exist today.

As such, CVRP offers many useful lessons for ICM planners and practitioners. The trick is in extracting the sustainability lessons learned from such a large and comprehensive project 10 years after the projects conclusion. While unique in its baseline-independent approach and quantitative design, this evaluation follows several other evaluations of CVRP. They include two internal post-project evaluations conducted by the World Bank Operations Evaluation Department. One is a Project Completion Report written by the World Bank in October 1993 [10] and the other is a Performance Audit Report written in June 1997 [9]. Several external assessments of CVRP have also been conducted. These include a desk study by Pomeroy and Carlos in 1994 (published in 1997) [2], a biological assessment by Nida Calumpong and Silliman University Marine Laboratory in 1996 [13], and another quantitative evaluation by Pomeroy et al., in 1997 [14]. All reports seem to agree that lessons learned have been difficult to extract quantitatively due to a lack of baseline data [2,15]. Despite many initial site surveys, the information collected during CVRP was not systematically stored due to frequent project staff turnover and poor record keeping. Consequently, this research study was designed to identify any remaining lessons from this ground-breaking
project that could still be generated using a large-scale, baseline-independent survey method.

CVRP I was the first foreign-funded project to support the Government of the Philippines regionalization program. According to World Bank reports, CVRP helped the Philippines Government to set up the institutional framework upon which the 1991 Local Government Code and 1998 National Fisheries Code were founded [10]. It also helped initiate the community-level organizing and training that is still very much present in the Philippines today. And, because of its recognized successes at both reducing degradation of natural resources and raising the incomes of project beneficiaries, CVRP was continued from 1998–2003 in the form of a modified CVRP II.³ CVRP II was modeled after CVRP I, with the exception that it channeled funds (both loans and grants) directly to Local Government Units (LGUs) through a Municipal Development Fund rather than a line agency. Also, LGUs were required to contribute equity to the project in order to create a greater sense of project ownership, and long-term sustainability [15,16]. For all these reasons, CVRP proved to be well-suited for a post-project evaluation of sustainable ICM processes.

2. Coastal tourism

Although coastal tourism development did not form part of CVRP’s activities, the relationship between tourism and ICM sustainability is important to consider when planning as well as evaluating ICM activities in tourist hotspots like the Philippines. Tourism is currently among the world’s largest industries and fastest growing economic sectors. It is estimated to have generated 3.5 trillion dollars and almost 200 million jobs globally in 1999 [17,18]. The coastal tourism industry in natural areas in the tropics is growing even more rapidly than the industry as a whole [19,20]. In the year 2000, there were approximately 697 million international tourist arrivals worldwide, according to the World Tourism Organization [21]. Tourism activities are responsible for employing three percent of the global workforce and eight percent if indirect/informal jobs are considered [18,22]. As such, coastal tourism is traditionally considered to benefit developing economies and especially local communities through local revenue stimulation. It is considered an opportunity to promote economic development with minimal negative impact if it is developed responsibly [19]. However, other recent literature questions the use of tourism as an alternate economic strategy for reducing more destructive impacts of consumptive activities such as fishing, logging, or farming [23,24]. Since the preponderance of findings suggests that tourism should have a positive effect on local communities, our working hypothesis is that tourism will have a positive impact on sustainability of CVRP’s outcomes.

³This was the conclusion made following a World Bank—OED audit completed in June of 1997 (World Bank, Performance Audit Report, 1997).
3. Methods

3.1. Survey research methods and sample selection

Both quantitative and qualitative methods were used to collect data for this research project. Quantitative methods, including field surveys and research team evaluations, were used to collect comparable data across a large number of CVRP project sites. Structured, standardized questionnaires used both open and closed ended questions embracing five major subject areas including: bio-physical, institutional, economic, socio-cultural and legal dimensions. A specialized survey was created for each of the following three respondent categories: resource users (e.g., fishers), project participants (people involved in ICM project implementation), and village officials. Field surveys were administered verbally in the local language (either Tagalog or Visayan) by four Filipino research assistants. Each research assistant received the same formal interview training by the co-authors, which included 1-week of field testing on Siquijor Island. Consistent data quality control practices were employed at each site.

Qualitative methods included informal field interviews with local community members, as well as formal, semi-structured interviews with municipal and provincial officials (Mayors, Governors, Municipal Agricultural Officers, Bureau of Fisheries and Agriculture Resources staff, Department of Environment and Natural Resources staff). Interviews were also conducted with various key informants (NGO officers, ICM project staff and consultants involved in project implementation, and local scientists). A literature review included published articles on comparable ICM and CRM activities in tropical, developing countries as well as a review of World Bank CVRP project documents (technical reports, appraisals, and summary documents) [25].

Sample sites were selected from those CVRP sites participating in the Nearshore Fisheries Component and which had both upland and coastal activities. Sites were chosen to encompass a range of project activities that reflected both successes and failures. Other factors considered included geographic location and accessibility, the team’s pre-existing familiarity with sites, and willingness of the local government to participate in the research. Sites were geographically distributed across 4 major geographic locations (provinces) and within 13 different municipalities and across 23 local villages (known as barangays) reaching over 230 respondents. See Fig. 1 for locations of municipalities. Villages are located within the municipalities and are too close together to be identified on the map.

3.2. Sustainability indicators

At the village level, CVRP implemented a number of activities directed at improving community access to and management of resources, empowerment of communities through community organizing and improving the well-being of community members. Assessing the sustainability of all these outcomes will, of necessity, involve evaluating a relatively large number of indicators. Behavioral
science research, as it has evolved over the past century has clearly demonstrated that multi-item scales are the most reliable way to assess such complex variables [26]. Hence, our evaluation of the dependent variable, sustainability, will be based on analysis of numerous indicators of the multiple community-level objectives of CVRP described next. It is assumed that the analyses of the multiple indicators will result in scales representing components of project sustainability such as access, well-being (both community and resource), governance, and sustained activities.

The first set of indicators examined involve aspects of access to resources, equity with regard to access, and items indicative of community well-being. The list of items
can be found in Table 1. These items were also used as indicators in a more extensive study of 43 villages in the Philippines [27]. In each village, project participants were requested to evaluate on a scale of from 1 to 4 (1 = none, 2 = very little, 3 = some, 4 = a lot) project impacts in terms of each of the indicators listed in Table 1. Modal (the most frequently occurring) values for each of these evaluations were determined for each village. Modal values for the village are used since the village, not the individual is the sampling unit. While it is interesting to examine each of the indicators, one at a time, it is possible that there are relationships between the indicators that can be used to understand changes in more general factors in the project communities. As a means of discovering these more general factors, principal component analysis with varimax rotation was used to elucidate patterns of relationships between evaluations of the 12 indicators. The scree test was used to determine the number of components, resulting in 2 components, which account for a total of 69 percent of the variance in the data set. The results of this analysis are in Table 1. Most of the items loading highest on the first component are related to access and equity. On the second component most of items loading highest are related to quality of life.

Component scores representing the relative position of each village on each component were created for each village. The component scores are the sum of the component coefficients times the sample standardized variables. These coefficients are proportional to the component loadings. Hence, items with high positive loadings contribute more strongly to a positive component score than those with low or negative loadings. Nevertheless, all items contribute (or subtract) from the score;

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4This analysis was conducted on the larger sample of 43 Philippine villages, which included the CVRP villages. The larger sample results in construction of scales with greater generalizability within the Philippines as well as greater reliability.
hence, items with moderately high loadings on more than one component (e.g., improved income in the analysis presented here) will contribute at a moderate level, although differently, to the component scores associated with the both components. This type of component score provides the best representation of the data. In this paper, for these data we will refer to these scores as Access/Equity and Quality of Life indicators. These two components are independent aspects of project sustainability. They will also form components of the overall sustainability indicators that are described next.

Another indicator of project sustainability is a summary measure constructed from a summary score of the research team’s evaluations. Following completion of data collection at each site, the team assembled (all were involved in the data collection process) and ranked each site in relation to the others on a scale of from one to five on topics considered as indicators of project sustainability. The topics ranked were compliance with MPA rules, compliance with mangrove conservation rules, beach cleanliness, and overall project impact. The ranking was based on research team observations, as well as comments made by resource users (e.g., fishers), project participants, officials (e.g., the head of the village, village secretary, etc.), and other community members concerning the topic. The topics were discussed until a consensus was reached. The summary measure of the team’s evaluation of project sustainability was constructed by calculating the mean value for all topics evaluated (e.g., if a MPA was not present, it could not be evaluated). This measure is referred to as Team Evaluation.

Participant perceptions of sustainability are another indicator. Since project participants have the greatest knowledge concerning project activities in the villages, they were requested to indicate all activities undertaken and then indicate whether or not the activity is still being carried out (sustained). The percent of Sustained Activities is used as another indicator of ICM sustainability. Local perceptions of change in resource abundance and quality also serve as indicators of sustainability. Resource users have the most consistent contact with the resource; hence, they are sometimes in a better position than the researchers to comment on resource quality and quantity. Resource users were requested to evaluate changes in fish abundance and changes in coral reef conditions since CVRP implementation and to rank changes on a scale from 1 to 5 (1 = gotten much worse, 2 = a little worse, 3 = not changed, 4 = improved a little, 5 = improved a lot). Median values for user respondents in a village are assigned as the value for the entire village and are identified as Resource Change and Coral Change, respectively.

Another indicator of sustainability is the continuity of groups or associations (e.g., fisher or farmer cooperatives, etc.) formed as a part of project activities. These groups are usually responsible for carrying out project activities after project inputs cease; hence, their importance in ICM sustainability. This dichotomous variable is referred to as Group Success.

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5 As is common with responses to this question, some respondents may associate abundance with catch. Since the fish are underwater and not easily observed (by net and line fishers), they usually equate relative abundance with catch.
In each village, a village official (head of village or his/her representative) was asked if the village benefited economically from any of the project activities. If the response was positive, the respondent was requested to name the activities. The total number of beneficial activities mentioned is used as an indicator of project sustainability and referred to as Beneficial Activities. The officials were also asked to identify the types of benefits received from the activity. If economic benefits are mentioned the response is coded as economic benefits.

A major component of ICM sustainability involves knowledge of and compliance with the rules and regulations that form a part of coastal management. Several indicators are used to evaluate this aspect of sustainability. First, project participants were requested to evaluate on a scale of from 1 to 3 (1 = no awareness, 2 = some awareness, 3 = full awareness) the extent to which community members are aware of ICM rules. The modal value reported in each village is used as the indicator of Knowledge of ICM Rules. Resource users were asked which rules they know, and for each rule (ordinance) they were requested to evaluate compliance on a scale of from 1 to 4 (1 = no compliance, 2 = most violate, 3 = most comply, 4 = all comply). The median value for the first two rules mentioned is used as the indicator (Rule 1 Compliance and Rule 2 Compliance, respectively). All respondents (village official, participants, and resource users) were asked about the presence of blast (dynamite), cyanide, and other illegal fishing methods. If any respondent in each group gave a positive response to one of these categories of illegal fishing, it was coded as present at the village (a dichotomy, 1 = present, 0 = absent). These values were summed within each category resulting in a score for illegal fishing that ranges between 0 and 3 for each respondent category within each village. The scores for the respondent categories were then summed for each village resulting in a total score for illegal fishing that varies between 0 and 9. To facilitate analysis, the score was converted to a score for legal fishing by changing the sign of the value, resulting in a score varying between −9 and 0, with the lower value (−9) indicating the least amount of legal fishing. The resultant scale is an indicator of Legal Fishing by all participants.

An important point concerning illegal fishing is who is involved. It seems obvious that if the illegal fishing is conducted by project villagers, it reflects more negatively on the sustainability of the project than if it is conducted by fishers from another community. Hence, respondents were requested to indicate who (in terms of residence) is conducting the illegal fishing. If any respondent in each group indicated community member involvement in one of these categories of illegal fishing, it was coded as present at the village (a dichotomy, 1 = present, 0 = absent). These values were summed within each category resulting in a score for illegal fishing by community members with a range between 0 and 3 for each respondent category within each village. The scores for the respondent categories were then summed for each village resulting in a total score for illegal fishing by community members that varies between 0 and 9. To facilitate analysis, the score was converted to a score for legal fishing by community members by changing the sign of the value, resulting in a score varying between −9 and 0, with the lower value (−9) indicating the least amount of Legal Fishing by Villagers.
Thus far we have described a relatively large number of indicators of ICM project sustainability. In several cases the measures were summary measures composed of the responses to several questions. Nevertheless, this large number can result in an overwhelming number of statistics upon analysis; hence, we will use principal component analysis to see if interrelationships between the separate measures (including the Access and Equity and Quality of Life scales) justify reducing them to a smaller number of summary scales. The technique used is principal components as described above, and it resulted in the analysis presented in Table 2. Variable identifiers are those used in the description above.

The analysis resulted in three components accounting for a total of 57 percent of the variance in the data set. The items loading highest on component one are for the most part related to compliance, access and equity; on component two, quality of life, number of activities perceived as beneficial, percent of project activities maintained, and the team evaluation; finally, on the third component, governance (knowledge of rules and compliance with rules governing major categories of illegal fishing), resource abundance, and income. These composite variables are referred to as Compliance & Access, Sustained Activity, and Governance & Resource, respectively. As for the principal component analysis presented above, factor scores on each component were calculated for each village.

Table 2
Principa l component analysis of sustainability indicators

<table>
<thead>
<tr>
<th>Indicators</th>
<th>Compliance and access</th>
<th>Sustained activity</th>
<th>Resource &amp; governance</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rule 1 compliance</td>
<td>0.798</td>
<td>−0.066</td>
<td>0.142</td>
</tr>
<tr>
<td>Coral change</td>
<td>0.726</td>
<td>0.120</td>
<td>0.203</td>
</tr>
<tr>
<td>Rule 2 compliance</td>
<td>0.692</td>
<td>0.052</td>
<td>0.265</td>
</tr>
<tr>
<td>Access/equity score</td>
<td>0.619</td>
<td>0.103</td>
<td>−0.207</td>
</tr>
<tr>
<td>Legal fishing (all)</td>
<td>0.588</td>
<td>−0.122</td>
<td>0.592</td>
</tr>
<tr>
<td>Sustained activities(%)</td>
<td>−0.051</td>
<td>0.868</td>
<td>0.002</td>
</tr>
<tr>
<td>Quality of life score</td>
<td>−0.294</td>
<td>0.775</td>
<td>−0.203</td>
</tr>
<tr>
<td>Team evaluation</td>
<td>0.192</td>
<td>0.690</td>
<td>0.213</td>
</tr>
<tr>
<td>Beneficial activities</td>
<td>0.323</td>
<td>0.555</td>
<td>0.322</td>
</tr>
<tr>
<td>Group success</td>
<td>0.471</td>
<td>0.553</td>
<td>0.187</td>
</tr>
<tr>
<td>Legal fishing (villagers)</td>
<td>0.190</td>
<td>−0.091</td>
<td>0.745</td>
</tr>
<tr>
<td>Knowledge of ICM rules</td>
<td>−0.333</td>
<td>0.268</td>
<td>0.717</td>
</tr>
<tr>
<td>Economic benefits</td>
<td>0.106</td>
<td>0.037</td>
<td>0.522</td>
</tr>
<tr>
<td>Resource change</td>
<td>0.152</td>
<td>0.191</td>
<td>0.472</td>
</tr>
<tr>
<td>Percent total variance</td>
<td>21.466</td>
<td>18.632</td>
<td>16.525</td>
</tr>
</tbody>
</table>

For the most part we followed a common practice of naming factors based on the item that loads highest on the factor. An examination of the content of the preponderance of items loading highly on each component provides support for the naming. Some may prefer to simply think of each component as a weighted sum of the included items.
3.3. Tourism indicator

To evaluate tourism, the field research team used a comparative ranking scale where each sample site was given a score ranging from 0 to 5 based on level of tourism, relative to other sites visited. A zero score was given to sites with no tourism. The evaluation was based on observations made by the team and questions posed to community members and relevant stakeholders during the interview process. After data was collected at each site, the research team met and discussed their observations concerning the level of tourism until reaching consensus on a score between 0 and 5.

3.4. Final analysis and results

Correlations between the tourism measure and the sustainability indicators are in Table 3. Since we are hypothesizing a positive relationship between level of tourism and the sustainability measures, a one-tail test of statistical significance is used. From the table, we see that the level of tourism present in a community is significantly correlated with three out of the five summary sustainability indicators. Interestingly, the greater the level of tourism in a village, the lower the Quality of Life and Sustained Activity scores, but the higher the Compliance and Access score. Hence, while tourism appears to have a positive impact on Compliance and Access, it has a negative effect on Quality of Life and Sustained Activities, the latter two being opposite to our hypothesized relationships.

4. Discussion

4.1. Coastal tourism and ICM sustainability

Analysis of this research data reveals an interesting yet controversial relationship between the increasing presence of coastal tourism and ICM project sustainability. Increasingly, tourism is touted as the new silver bullet that can help improve income

<table>
<thead>
<tr>
<th>Sustainability indicators</th>
<th>Tourism</th>
<th>Probability (1 tail)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Access and equity score</td>
<td>0.280</td>
<td>0.116</td>
</tr>
<tr>
<td>Quality of life score</td>
<td>-0.484*</td>
<td>0.015</td>
</tr>
<tr>
<td>Compliance and access score</td>
<td>0.520*</td>
<td>0.009</td>
</tr>
<tr>
<td>Sustained activity score</td>
<td>-0.439*</td>
<td>0.026</td>
</tr>
<tr>
<td>Governance and resource score</td>
<td>0.205</td>
<td>0.193</td>
</tr>
</tbody>
</table>

*aSpearman’s Rho.
*Statistically significant ($p<0.05$).
Tourism benefits have been known to also include indirect, ecosystem benefits as a result of providing an alternative to other more destructive or consumptive resource uses [28]. This study however reveals mixed impacts from tourism for nearby communities. First, the level of tourism was discovered to have a positive impact on one of the sustainability indicators: the ICM rule compliance and the resource access score. This relationship between level of tourism and increased user compliance and access may result from increased rule enforcement strategies (e.g., no fishing in marine sanctuaries) by tourist resorts which result in stricter adherence to ICM rules, a finding in line with other studies within the ICMSRP [29,30]. Another finding that supports this suggestion is that the level of tourism is positively correlated with perceived levels of restrictiveness of ICM rules \((r = 0.53 \text{ and } 0.58 \text{ for the first two rules mentioned, } p < 0.01)\) [25].

In contrast, however, a negative relationship was discovered between the presence of tourism and two of the sustainability indicators, the sustained activities factor score and the quality of life factor score. This finding is especially interesting because the relationship suggests that communities are less likely to sustain project activities in the presence of coastal tourism and that the greater the presence of tourism, the lower the perceived quality of life. These last two relationships contradict the general perception that the coastal tourism is largely a benefit to local, developing communities.

One explanation gleaned from field observations and literature is that this finding may relate to social stratification within communities where tourism exists [23,29]. Typically, the immediate area around the tourist resort is the most pristine and ‘well-to-do’ while areas just outside the tourist area are poverty stricken and receive few of the benefits of the tourist industry. In many cases, the tourist resort, usually with support from the municipal government, denies community access to its designated beachfront sanctuary areas—areas which may have previously been part of the local fishing grounds but are now considered prime swimming, snorkeling or diving areas. Not surprisingly, this situation can result in a disgruntled, unsatisfied surrounding community—one that is unlikely to be supportive of additional ICM related activities. As suggested by Oracion et al. [29], this sense of alienation on the part of the local fishermen can result in tension between fishers and the tourism industry, and potentially jeopardize the overall success of the sanctuary itself. This feeling is escalated when local enforcement measures selectively tolerate snorkeling or scuba diving in these sanctuaries—in some cases, activities that are prohibited by the marine sanctuary ordinance. As a result, the community may have little interest in assisting ICM activities which they perceive as providing little or no benefits to them, in addition to depriving them of their traditional fishing grounds [23,31].

Another analysis revealed that village meeting attendance is lower when tourist businesses are involved in managing or carrying out ICM activities \((r = -0.58, p < 0.01; [25])\). It is possible that the local resource users, or fishers, sense that their input matters less when tourist resorts (e.g., businesses with financial muscle) are also involved. Perhaps they think that the money making resort owners have more weight in these community meetings. This suggests a need for better participatory planning
processes that integrate both the local fishing community and the resort owners in joint ICM planning exercises, especially in areas where tourist resorts seem to play a leading role. In other words, ICM practitioners should seek more balanced and equitable co-management of resources [32,33]. The dynamics of this relationship are indeed worthy of further investigation.

5. Conclusion

Despite some of the criticisms about the success of CVRP, this paper shows once again that CVRP was indeed a pioneer in the development of ICM in the Philippines and has helped to provide numerous lessons that still influence coastal resource management in the Philippines today. Many of the formal marine resource management strategies that are employed by coastal practitioners today were first tested by CVRP and may have offered insights and lessons from which subsequent conservation management projects have benefited. Collecting information at the community level, across a large number of sites, from the very people who are most directly affected by ICM plans is a critical ingredient to learning about a projects’ successes or failures. These resource users, project participants, and government officials all hold considerable valuable information that is often ignored. In the end, they are the people who will have the greatest influence on the success and sustainability of ICM projects and should be considered in the start of ICM project design and planning processes.

The mix of positive and negative relationships we have seen between the level of coastal tourism and a variety of ICM sustainability indicators offer an important lesson. ICM projects located in areas with considerable coastal tourism may witness higher levels of compliance with regard to sanctuary rules, but as a result suffer from higher levels of community tension between fishers and proponents of marine sanctuaries and tourism (e.g., resorts). In sum, it would seem that projects employing tourism as an alternative to fishing activities should proceed cautiously to ensure that participatory planning processes equitably include local resource users as well as the tourism industry and that benefits are distributed evenly across the community. Furthermore, ICM activities, such as marine sanctuaries should hold all stakeholders accountable to the same standards and not allow certain unfair exclusions or benefits only to the tourism industry.

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