

BATANGAS BAY AND BATAAN CASE STUDY

“Partnerships in Environmental Management for the
East Asian Seas” (PEMSEA)

Knowledge Management Perspective

Batangas Bay & Bataan - Case Study

Introduction

Batangas Bay and Bataan are respectively demonstration and parallel sites in the Philippines for the PEMSEA ICM programme. Batangas Bay has a much longer heritage as it was involved as a demonstration site in Phase 1 of the programme between 1994 and 1998 in conjunction with Xiamen in the PR China. The role of a demonstration site in this programme is to act as a role model for ICM in a country and, consequently, it receives the necessary training, financial and technical support. In contrast, a parallel site is self-funding and funds its own training and technical support through PEMSEA.

This case study shall explore the forms of learning, lessons learnt and knowledge sharing practices at these two sites, the current results and achievements or lack thereof, and the possible reasons for these outcomes. As a caveat, the reader needs to be aware that knowledge management practices were not an explicit part of PEMSEA's original TOR and, hence, any observations or assessments need to be taken in this context.

Organisational Learning

In Phase 1, the dominant form of learning for Batangas Bay was understanding and implementing the six phase ICM development cycle. One of the key lessons learnt at this time was the importance of local government commitment and political support. The Project Management Office (PMO) was established in 1994 and was absorbed into the PG-ENRO established by the Provincial Government in 1995 as part of the ICM institutional arrangement. The PG-ENRO was responsible for the operational management activities. In 1996, the Batangas Bay Environmental Protection Council (BEPC) was established by Provincial Ordinance to act as the Project Co-ordinating Committee (PCC). The Batangas Coastal Resources Management Foundation (BCRMF) was established in 1991 and is composed of 23 private member organisations. This body is represented on the BEPC to allow greater involvement between the private sector and local government on environmental concerns. The dominant learning outputs in Phase 1 were the publication of the Strategic Environmental Management Plan (SEMP), the Coastal Environmental Profile for Batangas Bay and the integrated waste management action plan.

In Phase 2, Batangas Bay and Bataan started to develop organisational routines to embed the generic ICM development cycle in their day to day activities. This was a form of single-loop learning where predictable behaviours and patterns were perpetuated. Using hindsight from Phase 1, Bataan was able to engage in much greater stakeholder consultation than Batangas Bay for its coastal zoning scheme.

The political opportunity for Bataan came in 1999 when Marilou Erni (Executive Director of Petron Foundation, Inc) contacted PEMSEA about Petron's desire to engage in corporate responsibility activities linked with coastal management in the spirit of BCRMF. As is common to many local sites, a coastal cleanup campaign was organised in September 1999 to mobilise the community using the slogan 'Kontra Kalat sa Dagat' meaning 'Movement against Sea Littering'. One continuing challenge is how to sustain stakeholder interest after a campaign. Political support for ICM was soon forthcoming from the Bataan Governor Leonardo Roman who saw coastal management as his lasting legacy. There were numerous coastal environment problems that needed addressing such as habitat destruction of mangrove areas, oil spills from shipping and 'red tide' phenomena caused by domestic sewage and agricultural run off along the coastline. The level of political will allowed the formation of a PMO office named 'Bigay Galing sa Kalikasan ng Bataan' or BIGKIS-Bataan in February 2000 to implement ICM practices. A local name was used meaning 'united or bundled' to make the project more appealing and secure popular support.

However, there are risks to the sustainability of BIGKIS-Bataan as it is still considered as a 'special project' rather than being institutionalised in local government policy. Governor Leonardo Roman's final term of office comes to an end in 2004 and there is a likelihood of succeeding governors shelving the legacies of their predecessors. The loss of political commitment would pose a serious threat to the parallel site. However, there appears to be considerable commitment from the Bataan Coastal Care Foundation composed of 16 private sector organisations locally who contribute financial resources to the BIGKIS-Bataan in equal measure to the local government. They are also represented on the local PCC and monitor the performance of the PMO.

The organisational learning at these two sites has been more institutionally or management focused rather than technically focused on ecological problems and the likely impacts of interventions on coastal systems. There has been some articulation of coastal dynamics in SEMP but this understanding is not commonly shared among PMO staff. This narrow focus can inhibit the further development of shared understanding of coastal problems among stakeholders and reduce any aspirations towards 'integration' in coastal management. For instance, neither PMO teams made explicit their understanding of coastal dynamics in their locality, and the fisherfolk at the mangrove seedling nursery project were unsure of the benefits of the project. This suggests the need for developing a common ontology and deeper understanding of coastal systems dynamics through stakeholder discussions and consultations. This would allow shared understandings to be embedded within PMO staff and the local communities. An example of the coastal systems dynamics at the alternative livelihood project in Bataan is shown in Figure 1. Another example of problem identification and consequences at the Bataan mangrove nursery is shown in Figure 2. Such shared mental models would represent a form of double-loop learning as assumptions concerning coastal dynamics could be questioned more easily and new insights developed. These maps are dynamic and represent a starting point for further exploration.

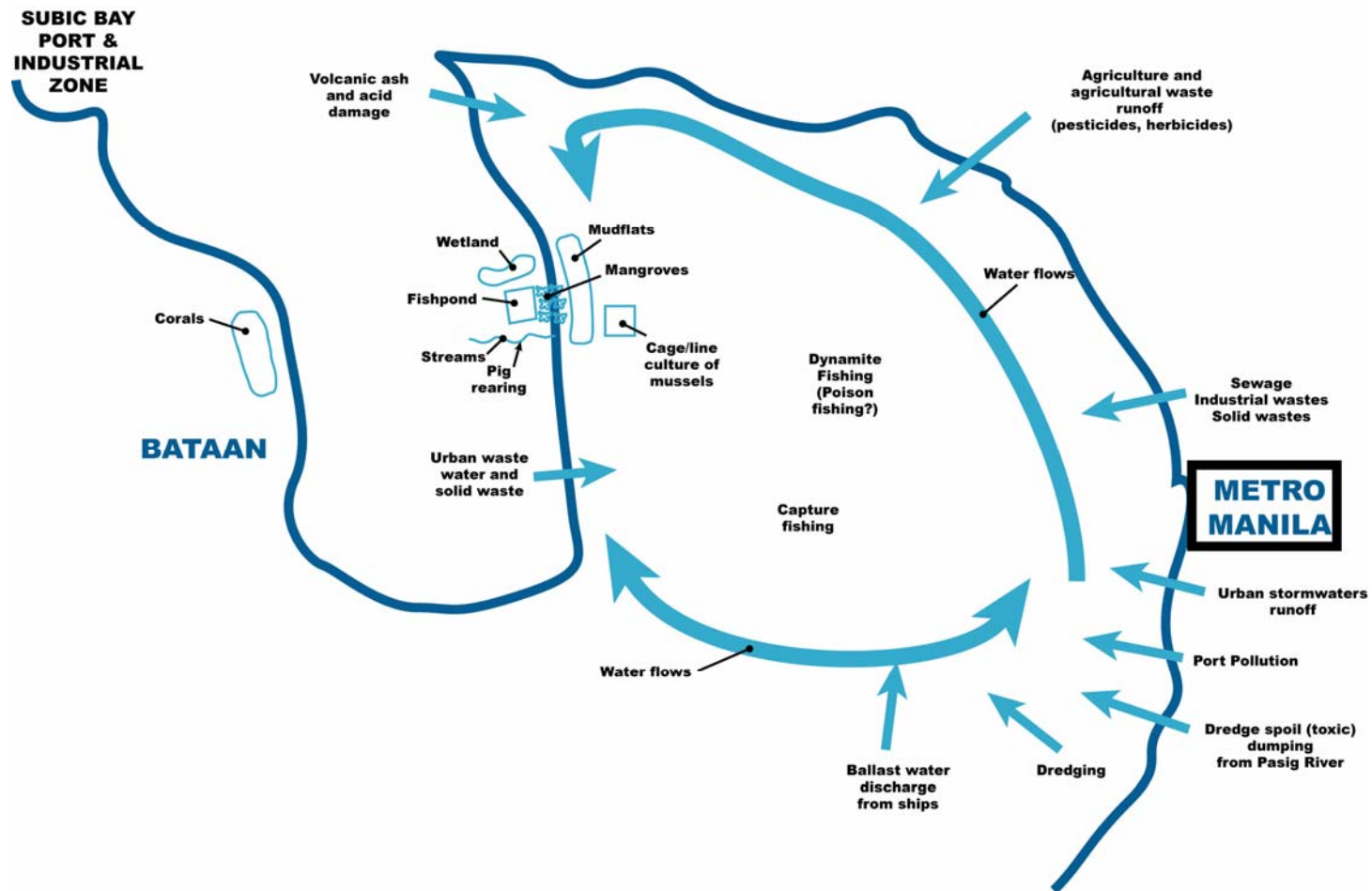


Figure 1 Coastal systems dynamics at fisherfolk livelihood project in Bataan

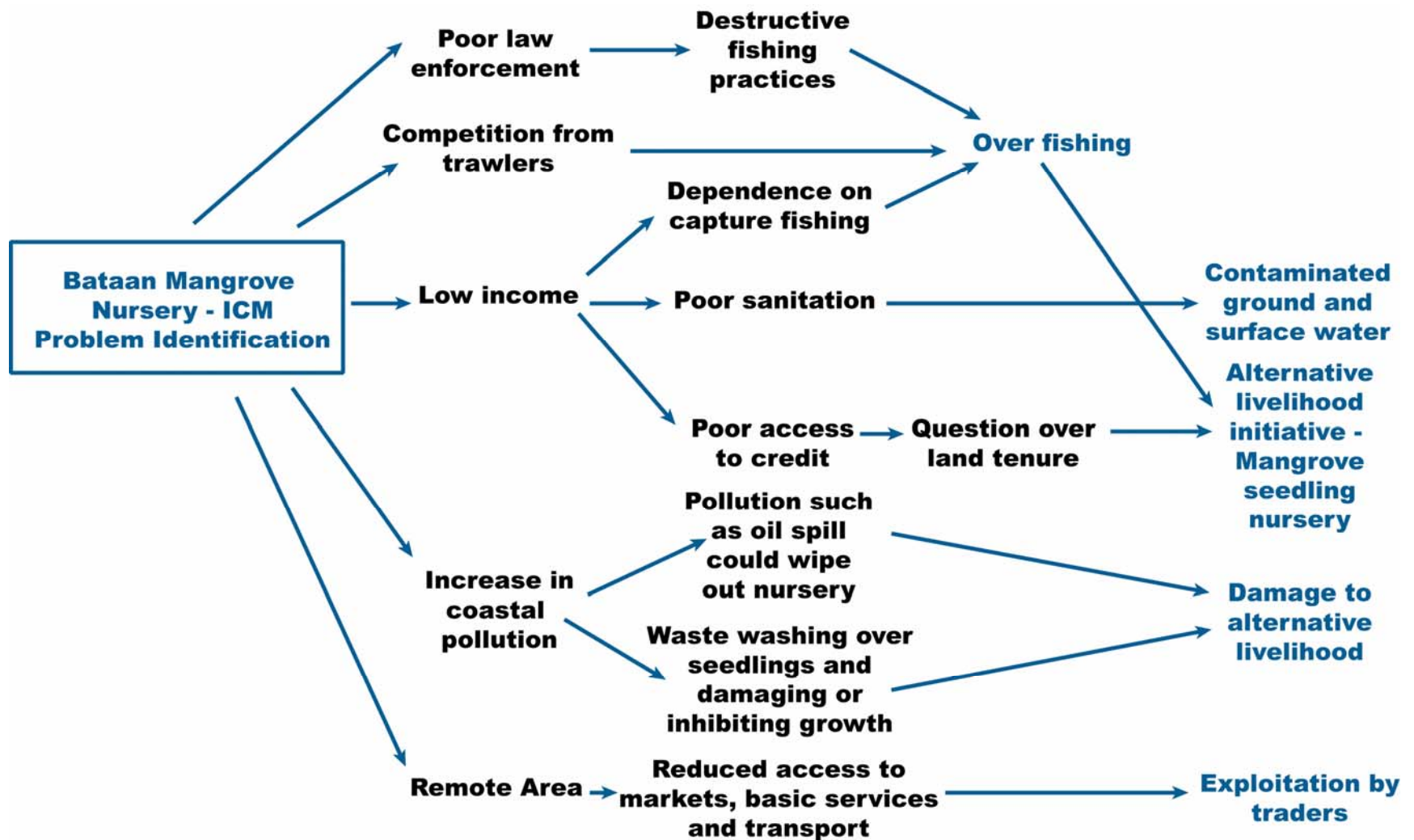


Figure 2 Problem Identification at the Bataan Mangrove

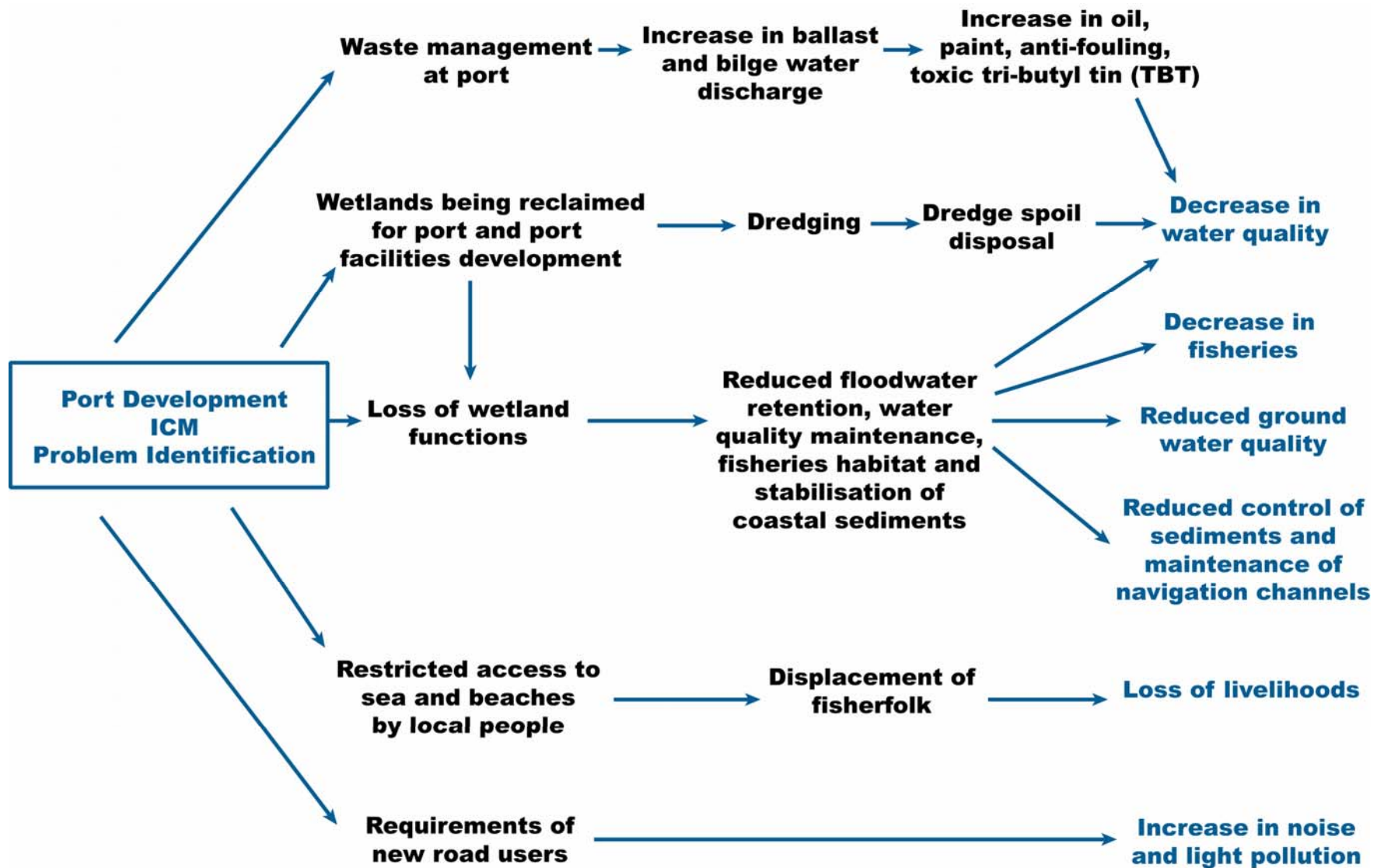


Figure 3 Problem Identification at Batangas Bay Port Authority Development

The current expansion of Batangas Bay Port Authority poses a number of serious challenges to PG-ENRO. There are many problems and potential conflicts that arise from this situation. For example, the plan to increase dredging and reclamation of wetlands will lead to a loss of wetland functions resulting in reduced water quality, fish stocks, control of sediments and maintenance of navigation channels. The complexity of the current problem is illustrated in Figure 3. The PCC as a policy forum has thus far prevented the ocean dumping of dredged materials. It is certain that without a mechanism such as the PCC, occurrence of adverse impacts would be more likely. Significant lessons will arise from examining how PG-ENRO resolves the potential conflict of interest between a large stakeholder in the region and a member of their PCC.

A form of double-loop learning that has questioned basic assumptions and moved the two sites outside the confines of the ICM development cycle has been their explorations around public private partnerships (PPP). As local governments do not have the financial means or technical capabilities to address the growing concerns over solid waste generation in their region, the Batangas Environmental Services, Inc. (BESI), a public corporation of 11 municipalities and 2 cities, was registered in May 2001. There was an ongoing dialogue with a consortium of New Zealand private companies identified after the pre-feasibility studies but the Governor withdrew his support for PPP for unstated political reasons. Such ventures that break new ground can suffer from loss of political will arising from 'NIMTO' (not in my term of office) and 'NIMBY' (not in my back yard) syndromes.

Batangas Bay has had a major achievement in the development of a junk shop operator co-operative for recycling waste. The co-operative is called 'BBREC' locally meaning 'drinking wine'. The key lesson learnt was continuous engagement with junk shop operators to develop trust even though many early meetings were very poorly attended. Junk shop operators tend to be sole and low volume operators resulting in fierce competition among them and fluctuating sales prices due to the strong buying power of intermediaries based in Metro Manila. As a consequence of training and seminars, 17 junk shop operators agreed to form a cooperative with a Board of Directors and contributions towards membership fees and monthly subscriptions. The co-operative collects paper, soft drink bottles and tin cans from households, schools, a variety of offices, dump sites and a Memorandum of Agreement was endorsed by the municipal government to allow them to collect waste in their region. The co-operative is thriving resulting in higher income and employment and a reduction in the volume of waste in the region.

This level of success has been absent in the alternative livelihood project linked with a mangrove nursery and mussel culture project in Bataan. The same level of engagement hasn't occurred leaving ordinary fisherfolk unsure of the true project benefits. This is most likely due to the fact that the junk operator co-operative has been functioning for 4-5 years and supported by a project officer funded by a Dutch NGO. In contrast, the alternative livelihood project in Bataan was only initiated a few months back. Soft loans were provided for the project but these are not being invested back into the project. Closer working with these communities and training could help increase awareness of ICM issues and provide the much needed financial advice to help poverty alleviation.

An important aspect of organisational learning is the notion of organisational or institutional memory. At both Bataan and Batangas Bay, the institutional memory is predominantly held within the heads of individuals. High turnover of staff at local sites and PEMSEA has led to a

loss of learning and institutional memory. New staff need to be trained, undergo a steep learning curve and much depends on their starting competencies in this area. The only ways to mitigate against this loss is to develop employee-friendly human resource practices to retain staff, promote communities of practice or codify key elements of knowledge in some form of knowledge repository for easy search and retrieval. The challenge is how to externalise this valuable tacit knowledge on a regular basis and share it effectively between site members and externally between sites.

Knowledge Sharing Practices

At site level, knowledge sharing occurs naturally through continual dialogue between a small project team. A site manager from the Regional Programme Office (RPO) is assigned to provide technical assistance and co-ordination between Bataan and Batangas Bay. Practical knowledge is shared regularly through email, phone and site visits. The site visits from the RPO are written up formally as 'mission reports' but they have limited effectiveness as staff are often overstretched and suffer from information fatigue. A document management system would help search and retrieve the necessary knowledge when required.

Study tours have played an important role in knowledge sharing particularly in mobilising political commitment from local leaders such as Governor Leonardo Roman. Staff at Batangas Bay and Bataan have published articles on lessons learnt in 'Tropical Coasts' (a bi-annual magazine), e-updates (monthly bulletins published on the PEMSEA website) and the regional RNLG forum. PEMSEA training has allowed local staff to develop their capacities in various aspects of ICM and develop informal networks with participants from other regional sites. The training tends to develop competencies in the ICM framework rather than technical competencies in coastal eco-systems. There is vertical integration between the RPO and local sites but very little horizontal integration so that relevant lessons learnt at other regional sites could be applied effectively to Bataan and Batangas Bay. These issues could be addressed more fully in the future.

Knowledge management systems

The main KM systems used at Bataan and Batangas Bay are the internet and the Integrated Information Management System (IIMS). The internet allows knowledge sharing more widely through the use of e-updates and contributions of news stories and items to the Media Resource Centre. The PEMSEA internet site has not been designed to enable greater knowledge sharing between local sites through a regional extranet. Such an extranet could provide a knowledge repository of practitioner knowledge useful at local level as well as facilitating online ICM communities of practice in the region.

The IIMS has been unwieldy comprising 192 data entry forms and more data driven rather than user driven. Batangas Bay has made the most progress in data generation due to its modern marine monitoring laboratory. Apart from some applications in coastal zoning, it has been unclear how this volume of data (much of it uncollected) would help local sites and governments make more effective decisions and policies.

The current PEMSEA library with over 22,000 titles is not utilised by local staff at Bataan or Batangas Bay. The library contains a wealth of knowledge that could help local sites question their thinking and explore new and creative ways of addressing their problems. This could

provide a valuable source of external knowledge at site level that goes over and above the conventional training at PEMSEA. Some innovative ways of using KM systems at local sites include:

- Developing a Who's Who directory or expertise database on the internet to encourage greater knowledge sharing.
- Producing continuous development materials for updating staff skills through distance learning channels such as e-learning.
- Developing an exclusive regional extranet for knowledge sharing and promoting communities of practice.
- Exploring case based reasoning (CBR) systems for acquiring, storing and retrieving past problems, their solutions and reasoning for knowledge sharing across the region.

Communities of Practice

Communities of practice are in their infancy at local site level. There is scattered informal dialogue between local staff in Bataan and Batangas Bay and other regional sites. These predominantly arise from chance meetings at study tours, training or RNLG. The RNLG has provided a forum for local sites to share their knowledge formally each year. However, informal networks are not currently present or supported more explicitly. The same situation arises among site managers in the RPO where valuable tacit knowledge is more likely to be shared through chance encounters. There is an opportunity to explore the development of communities of practice as part of the regional capacity building exercises.

Intellectual Capital

Batangas Bay has been much slower than Xiamen to show external signs of ecological and socio-economic impacts. This is principally linked to Batangas Bay dealing with a more fragmented political system compared with the centralised system in Xiamen. Once political will is mobilised in a centralised system, action is always faster as decisions are made top-down through a committee structure. Nevertheless, in the absence of physical manifestations, the significant benefits of the Bataan and Batangas Bay sites have been their development of intangible assets such as human and stakeholder capital¹. It is not purely the explicit knowledge and actions that matter but the linkages between stakeholders, the strength of these relationships and the shared meanings and mental models between them. In the case of Bataan and Batangas Bay, such social capital has been more evident. Organisational capital could be strengthened in the future through the appropriate use of KM systems and help increase the level of organisational and institutional memory.

¹ Stakeholder capital is used rather the more common term 'customer capital' as it is more appropriate in this context.

Conclusions

The principal lesson learnt in Bataan and Batangas Bay has been the importance of political will for institutionalising and embedding ICM practices locally. The change in political leadership does provide considerable challenges for future progress in this area. Hence, the main source of intangible assets have been the strengthening and deepening of stakeholder relationships in their area. Progress has been characterised as 'two steps forward and one step back'² due to the changing nature of the political climate.

The ICM development cycle from Phase 1 has been perpetuated through routines as a form of single-loop learning. Technical learning on coastal systems and processes needs to be embedded more clearly at site level to ensure that integration moves beyond a theoretical concept. This would allow much greater shared understanding among stakeholders of coastal management issues and their inter-relationships. Some good examples of double-learning were present in the PPP developments where some underlying assumptions have been questioned. The success of the junk operator co-operative in Batangas Bay was more attributable to the engagement and perseverance of local staff which was less evident in the Bataan alternative livelihood project. This may be attributable to the longer time frame and greater resources found in Batangas Bay.

There is relatively low use of technology to enhance knowledge sharing at site level. This could be enhanced by better use of the internet and establishing a regional extranet. Implementation of any new KM systems at site level would require extra resources and thorough training of staff in their effective use. The IIMS is still very data driven and there is need to examine how it could be more user led to help decision and policy making at local level.

Communities of practice can help tap valuable tacit knowledge being developed at Bataan, Batangas Bay and other local sites in the region. However, such self sustaining informal networks are not currently evident. They could be developed through problem centred on-line discussion forums and reinforced through more formal networks such as the RNLG. This would allow much greater horizontal integration of learning between regional sites and create greater balance between knowledge flows from PEMSEA's RPO.

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² Please refer to Chua, Thia-Eng, S. Adrian Ross, Huming Yu, Gil Jacinto and Stella Regina Bernad, (1999), Sharing lessons and experiences in marine pollution management, Quezon City, Philippines: GEF/UNDP/IMO, pp. 12.