

PUBLIC-PRIVATE SECTOR ENGAGEMENT FOR MARINE CONSERVATION

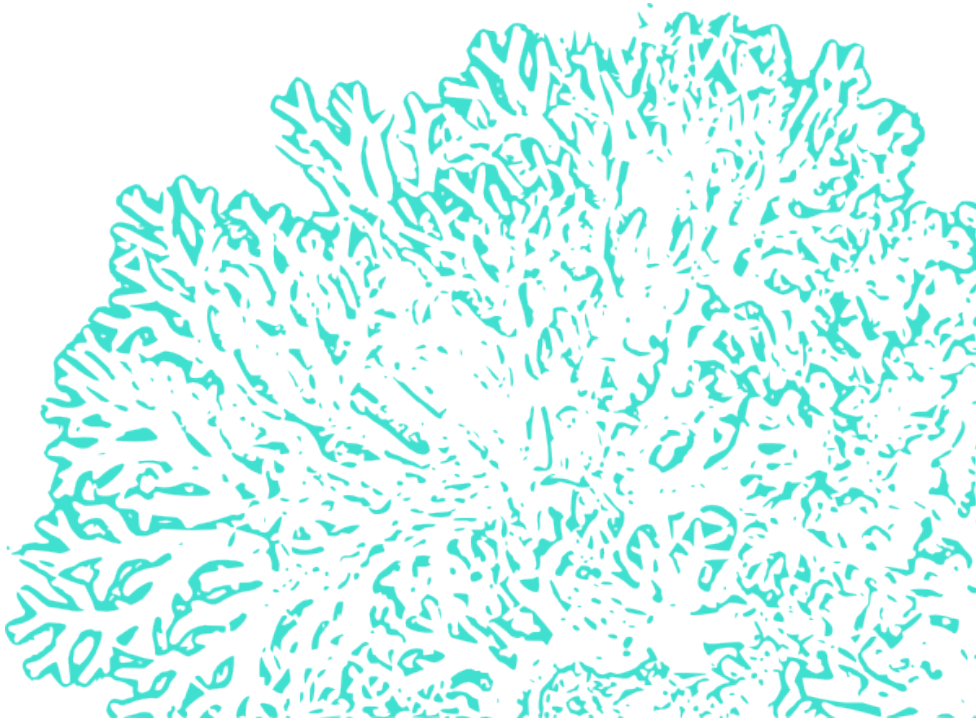
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*Lessons from Australia's Great Barrier Reef: Transferring Practices for Private Sector  
Engagement in Large Scale Marine Management to the Coral Triangle*

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## **EXECUTIVE SUMMARY**

### **Purpose & Overview of Research**

The purpose of this research is to inform government and non-profit actors in South East Asia's Coral Triangle region of potential partnership models that involve both the private and public sectors in stewarding threatened marine and coral ecosystems in the Coral Triangle. The ultimate purpose for researching multi-sector partnerships is to better understand how to engage the commercial fishing, tourism, and shipping industries in large-scale marine management in resource-rich and ecologically important marine areas.

This research investigates multi-sector stewardship and marine management practices of Australia's Great Barrier Reef, the largest managed coral reef stretch on the planet, as a case study for identifying the primary elements of success of public-private sector collaborations between marine management agencies and the fishing, tourism and ports industries in Queensland, Australia. It draws upon significant analysis of scholarly research on the Great Barrier Reef, existing management plans, as well as interviews with stakeholders in both managing agencies of the GBR Marine Park and heads of industry bodies.

GBR multi-sector stewardship practices are evaluated for their transferability to the Coral Triangle, and categorized into their capacity to be implemented in the Coral Triangle in the short, medium, and long-term. Recommendations for how to move the region toward an effective multi-sector marine stewardship model are provided for a target audience of CT government resource managers and involved environmental non-profit organizations.

### **The Coral Triangle: Marine Ecosystems in Decline**

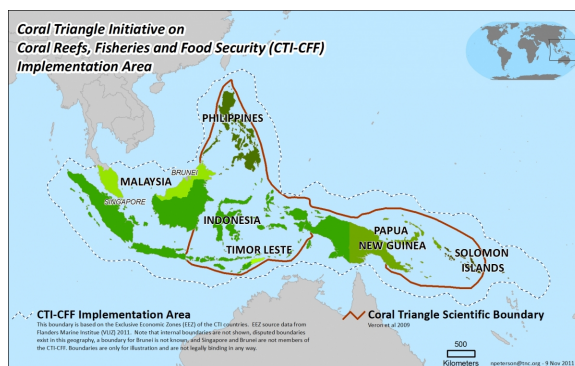
The Coral Triangle (CT), a loosely defined geographical area comprising the countries of Indonesia, Malaysia, the Philippines, Papua New Guinea (PNG), the Solomon Islands, East Timor, and Fiji ('The Coral Triangle Overview | The Nature Conservancy', n.d.) comprises less than two percent of the Earth's oceans, but contains more than 75% of the global coral species (CTI-CFF, 2015). In addition to this ecological biodiversity, the coastal ecosystems of the Coral Triangle provide economic, social and cultural benefits

for the region’s 395 million people, and in particular, for direct food security and livelihoods for 130 million of its inhabitants (Cos, Fatan, & White, 2014).

However, the coral reefs of region are some of the most at risk on the planet, with human activity threatening 85% of Coral Triangle reefs (‘Problems in the Coral Triangle | WWF’, n.d.). Coral reefs are living structures that support fish and other marine life, protect coastlines, and are the building blocks for complex marine ecosystems. While rising ocean temperatures, ocean acidification and other impacts of climate change are considered the largest threat to the health of coral reefs, industry activity also has significant direct impacts on ecosystem health within the region, including destructive fishing methods (Burke, 2012), and large scale coastal tourism (Asian Development Bank, 2014), port development/dredging, and agricultural run-off from pesticides and fertilizers (Fidelman et al, 2011).

The economies and food security of these countries depend on healthy, productive ocean environments that can meet the subsistence and economic needs of growing populations. Therefore, ecosystem degradation has the potential to compromise the livelihoods and food security for millions of inhabitants of this region.

## The Coral Triangle Initiative and the Seascape Model for Marine Management



In order to respond to these pressing threats, the political leaders of the Coral Triangle together established the Coral Triangle Initiative for Coral Reefs, Fisheries and Food Security (CTI-CFF) in 2009 (Veron et al, 2010). Led by Indonesian President, the CTI-CFF is a

Figure 1: CTI-CFF Implementation Area

multilateral partnership between the six countries of Malaysia, Indonesia, the Philippines, Papua New Guinea, the Solomon Islands and East Timor to “work together to sustain extraordinary marine and coastal resources by addressing crucial issues such as food security, climate change and marine biodiversity” (‘About CTI-CFF | CTI-CFF’, n.d.).

The CTI-CFF has committed to strengthening the management of the Seascape model as one of its five primary strategies for accomplishing its multiple objectives of conservation and economic development.

Each Seascape is a defined marine geography, organized to permit human activity while simultaneously protecting marine resources. Seascapes apply multi-level governance structures and ecosystem-based holistic management tools to coordinate public and private sector activity in marine environments in order to sustainably manage economic development, promote ocean-based food security, and protect marine ecologies (Atkinson et al, 2011). There are currently eight Seascapes in the world, including several in South East Asia and South America.

Involving private sector actors from the primary industries of the Coral Triangle (fisheries, marine-based tourism, and ports/shipping) in the sustainable management of Seascapes can help to ensure the long-term preservation of these crucial marine ecosystems. Therefore, in the face of the destructive impact of human activity on coral reefs, Seascapes are a significant opportunity to bring private sector participants into marine management decisions, to generate industry activity that takes account of conservation targets. By identifying successful public-private partnerships for marine stewardship, and understanding their effectiveness and potential transferability, this research can provide critical information for protecting threatened marine ecosystems.

### **Choosing The Great Barrier Reef as a Case Study**

The GBR has many similarities to Seascapes, making it applicable for study. It regulates multi-use activities by the public, private and non-profit sectors, and has a high level of industry activity in the relevant sectors of fishing, tourism and ports/shipping. The GBRMPA allows for sustained economic activity while also preserving threatened habitats and marine species, goals of the Seascape model. Its 35-year old history offers not only scholarship, but also provides a long history of testing, failing, succeeding, reiterating and evolving management approaches, and has demonstrated long-term positive conservation outcomes. Lastly, the GBR boasts an equally high level of biodiversity and abundance of marine life in comparison to the CT, and commercial activity on the Reef is equally important to the economic well-being of the region. These

similarities and qualities suggest that the Coral Triangle can benefit from an in-depth consideration of the successes of the GBR Marine Park.

Fourteen practices from the Great Barrier Reef were selected from across three industry sectors, and the goals, motivations, outcomes and characteristics of success were determined for each. These practices were the most frequently mentioned in GBR management reports and sustainability plans, and cover categories of stakeholder engagement, industry leadership, legislation, partnerships, regulatory body, monitoring, and cultivating local leadership.

However, when considering adopting practices across varying regions, it is critical to understand the context-specific structural elements that will influence their success. The GBR and Coral Triangle differ along significant dimensions, which affect the transferability of stewardship/partnership practices between regions.

<b>Dimension</b>	<b>The Coral Triangle</b>	<b>Great Barrier Reef</b>
<b>Geographical Scope</b>	Six Countries 5.7 million square kilometers	Single Country 344,000 square kilometers
<b>Governance Structures</b>	Governance structures are weak and nascent	Governance structures are robust and well-established
<b>Organized Regulatory Body with high level of Authority &amp; Enforcement Capacity</b>	Coral Triangle Initiative, multi-lateral agreement between six CT countries for food security, fisheries and coral reefs. Visioning and convening body, lacks regulatory authority, and enforcement capacity.	Great Barrier Reef Marine Park Authority, mandated by GBR Marine Park Act legislation. GBRMPA has operational authority to manage day-to-day functions of Marine Park, with capacity to enforce regulatory compliance
<b>Industry Representative Bodies</b>	Lack of strong industry peak bodies to represent industry interests and act as bridges for public-private collaborations	Organized and highly representative peak representative bodies participate/initiate management planning
<b>Jurisdictional Complexity</b>	Multi-jurisdictional, six countries	Dual-jurisdictions (AU Commonwealth & Queensland), single country
<b>Social Pressure for Stewardship</b>	Low level of social pressure on industry to practice marine stewardship	High level of social pressure on industry to practice marine stewardship
<b>Development Status of Region</b>	Developing countries with high needs for marine resources to support subsistence incomes and food security.	Developed country, low levels of poverty and subsistence needs.

<b>Environmental Legislation</b>	Formal but rudimentary environmental legislation, little political will or enforcement capacity	Robust environmental legislation at national and regional levels, with political will and governance capacity to enforce
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### Assessing GBR Practices for Transferability to the Coral Triangle

Based on the differences in the dimensions highlighted above, criteria were established to evaluate the transferability of GBR practices to the CT. Criteria are based on how these practices relate to the dimensions discussed above, and are used to evaluate which practices are applicable in the short, medium and long-term in the region.

<b>Criteria for Successful Application of Practice To the Coral Triangle</b>	Can Operate Independent of Role of Regulatory Authority Body	Requires Low Level of Social Pressure to Initiate
	Can Operate Independent of Association Leadership	Requires Low Level of Funding
	Requires Low Level of Jurisdictional Coordination	Can Operate Independent of Environmental Legislation
	Leverages Stakeholder Engagement	Requires Low Level of Enforcement Capacity
	Can be Implemented Independent of Political Pressure	Industry Perceives Benefits from Participating
	Leverages Peer Influence	Environmental Conditions Threaten Industry

Using the above criteria, practices were scored on a scale of 1-3. Practices with higher scores (2.5 to 3) have a greater ability to be implemented in the short term, as their requirements for implementation and success match the current structural capacity of the CT. Practices with medium (2.0-2.4) and lower scores (less than 2.0) demonstrate a need for varying degrees of governance, legislative, political or social development not currently supported in the CT region, but with the potential for development in the future.

## RECOMMENDATIONS

### **Short-Term Recommendations (next 5 years)**

*(Transferability Score of 2.5 - 3.0)*

<b>GBR Practice</b>	<b>Industry</b>	<b>Transferability Score</b>
Foresighting Method	Fishing	2.9
Reef Guardian Program	Fishing	2.6
Tourism Reef Committee	Tourism	2.5
MRAG Stakeholder Engagement & Blueprint	Fishing	2.5

## **Recommendation #1: Practice Stakeholder Engagement**

- ***Practices:***
  - ***Fisheries Independent Review- Stakeholder Analysis***
  - ***Foresighting Method for Visioning***

Stakeholder engagement is particularly critical in the CT, due to the high number of political agendas, jurisdictional complexities, and industry players with varying degrees of organization and economic power. Stakeholder engagement is a low cost intervention that offers many benefits, and becomes a critical tool for securing the buy-in and motivation for self-generated compliance in this region.

## **Recommendation #2: Build Local Stewardship Movements**

- ***Practice: Reef Guardian Program, Promoting Local Stewards***

Members of the commercial sectors can motivate one another in the direction of stewardship, particularly at the local level. Industry members are motivated to join stewardship initiatives when given examples of success by their peers. It is important that the CTI establish programs that highlight the conservation practices of local environmental stewards, and develop conservation interventions that are tested locally before being attempted at a national scale.

## **Recommendation # 3: Incorporate Industry Members on Committees**

- ***Practice: Tourism Reef Committee as a Vehicle for Collaboration***

Another effective approach to increasing private sectors involvement in the management planning process is for government to build them into committees as industry representatives, and to establish a stable structural procedures for their frequent, consistent consultation within the relevant government agency.

## **Medium-Term Recommendations (5 - 10 years)**

*(Transferability Scores of 2.0 – 2.4)*

<b>GBR Practice</b>	<b>Industry</b>	<b>Transferability Score</b>
QSIA-GBRPMA Partnership for Climate Change	Fishing	2.4
Eye on the Reef Program	Tourism	2.2
Association of Marine Tourism Operators	Tourism	2.2
Gladstone Healthy Harbor Partnership	Ports	2.2
Port Curtis Integrated Monitoring Partnership	Ports	2.1

### **Recommendation #1: Foster Industry Associations**

- ***Practice: The Association of Marine Tourism Operators (AMPTO)***

Representative industry associations are needed to pull individual business actors together to deal with the government. Associations not only channel industry needs to the public sector, they also spearhead larger-scale industry stewardship practices, organize members for conservation efforts, and educate industry members on the imperative of stewardship and the need to act on environmental concerns raised by the government or conservation groups. In the CT, industry is not currently well-organized, and it lacks market mechanisms that reward stewardship methods.

### **Recommendation #2: Cultivate Industry Champions**

- ***Practice: QSIA & GBRMPA Partnership for Climate Change***

In the GBR, a large fishing association has partnered with the government management agency to spread the message of the importance of adopting climate change adaptation practices across the fishing sector. Careful nurturing of these relationships into industry champions is required. Nevertheless, this type of practice requires a level of organizational unity at the commercial level, as well as governance strength within the public sector, both of which are currently weak in the CT region.

### **Recommendation #3: Involve Industry in Monitoring Programs**

- ***Practices:***
  - ***Eye on the Reef Program - Multi-Sector Reef Monitoring***
  - ***The Gladstone Healthy Harbor Partnership (GHHP)***
  - ***Port Curtis Integrated Monitoring Program Partnership (PCIMP)***



For these practices to be applicable to the CT region, there is first the need to build a culture of monitoring, starting with highly localized, small areas, which could, over time, be bundled together. The value of monitoring is generated over time, as the benefits of monitoring are better understood by communities and industry. Currently, the implementation of these practices in the CT would also be challenged by the lack of an oversight authority body to compile, organize, and translate data into related management actions.

**Long-Term Recommendations (10 - 15 years)**

*(Transferability Scores of less than 2.0)*

The following practices could be considered for implementation in the Coral Triangle in the long term (the next ten to fifteen years):

<b>GBR Practice</b>	<b>Industry</b>	<b>Transferability Score</b>
Stewardship Action Plan for Coral Fishery	Fishing	1.9
High Standard Tourism Program: Eco-Tourism	Tourism	1.8
Sustainable Ports Development Act	Ports	1.3
Zoning	All	1.6
Regulatory Authority	All	1.4

**Recommendation #1: Encourage Industry Led Management Plans**

- ***Practice: Stewardship Action Plan for Coral Reef Fishery***

Industry led management plans have the benefit of generating high levels of buy-in and uniting industry members. However, they require a strong industry association leadership, as well as political/social pressure on fishers to develop stewardship practices. The CT region must first develop strong industry associations and greater capacity to enforce export standards and regulations before this strategy can be viable.

**Recommendation #2: Develop Market Mechanisms to Drive Stewardship**

- ***Practice: Stewardship Action Plan for Coral Reef Fishery***

Market mechanisms play a key role in encouraging private sector stewardship methods. Markets reward sustainably produced and traced fish products. The Australian government mandates industry to meet sustainability targets in order to maintain export eligibility. As a consequence, the industry gains access to specific high-niche markets,

which adds market value to its product.

### **Recommendation #3: Establish a Regulatory Authority & Zoning for each Seascape in the CT**

- ***Practice: Regulatory Body & Zoning***

The CT region would benefit from building capacity to establish regulatory authorities in each Seascape, charged with administering the coordination and day-to-day operations of multi-sector actors on the water, with the purpose of facilitating human activity while preserving affected ecosystems. This is the crowning jewel of marine management, which can guide the integrated execution of a variety of multi-sector stewardship practices. However, in order to be implemented, governance structures and environmental regulation must first be strengthened.

### **Recommendation #4: Enact Robust Environmental Legislation**

- ***Practice: Sustainable Ports Development Act***

The CT's marine conservation potential will also increase as the CTI-CFF pursues and advocates for more robust environmental legislation, which structures industry activity and sets benchmarks for sustainability in each sector. Robust legislation depends on strong governance structures, which are in turn dependent upon increased financial resources, both of which will increase in the long-term as CT countries continue to develop economically.

### **Recommendation # 5: Establish Transnational Eco-Tourism Standards**

- ***Practice: High Standards Eco-Tourism Program***

Eco-Tourism standards promote industry stewardship practices and provide market rewards to operators who demonstrate environmentally sustainable business practices. However ecotourism, as seen in the Great Barrier Reef, requires a centralized organization with uniform standards, criteria and the capacity to offer benefits to participants. Such an organization is currently missing in the CT region even at national levels, let alone to organize transnational standards across the region. Ecotourism relies on the long-term evolution of tourism preferences for sustainable tourist experiences, which are currently present only at a very small scale in the CT. The trends and

developments needed for a transnational program will take many years to develop.

### **Concluding Considerations**

Private sector engagement is crucial for the success of stewardship practices in marine managed areas such as Seascapes. This research highlights that the success of public-private partnerships is as dependent upon a strong public sector, with good governance mechanisms, established communication channels, and consistent political support, as it is on cultivating industry willingness and capacity to collaborate. The GBR provides both inspiration and guidance for the CTI-CFF and participating NGOs continue with determined efforts to conserve a region valuable both to its underwater inhabitants and to the people whose livelihoods depend on it.

