



Options for Sustainable Financing of Marine Protected Areas in the Solomon Islands



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Table of Acronyms

ACMP	Arnavon Community Marine Park
BBOP	Business and Biodiversity Offsets Programme
CI	Conservation International
CTF	Conservation Trust Fund
CSO	Civil Society Organization
FAN	Fondo Ambiental Nacional del Ecuador
FAO	Food and Agriculture Organization of the United Nations
FFA	Forum Fisheries Agency
GIZ	German Society for International Cooperation
IMO	International Maritime Organization
IUCN	International Union for the Conservation of Nature
KMMA	Kavachi Marine Management Area
LSMPA	Large Scale Marine Protected Area
MEDCM	Ministry of Environment, Climate Change, Disaster Management and Meteorology
MFMR	Ministry of Fisheries and Marine Resources
MMA	Marine Managed Area
MPA	Marine Protected Area
MSC	Marine Stewardship Council
MSP	Marine Spatial Planning
NBSAP	National Biodiversity Strategic Action Plan
NFD	National Fisheries Developments Ltd.
NGO	Non-Governmental Organization
NM	Nautical miles
ODA	Official Development Assistance
PA	Protected Area
POFP	Pacific Ocean Finance Program

PPP	Purchasing Power Parity
PSSA	Particularly Sensitive Sea Area
SI	Solomon Islands
SICCP	Solomon Islands Community Conservation Partnership
SIDS	Small Island Developing States
TDA	Tetepare Descendants' Association
TNC	The Nature Conservancy
UNEP-WCMC	United Nations Environment World Conservation Monitoring Centre
WCS	Wildlife Conservation Society
WDPA	World Database on Protected Areas
WWF	World Wildlife Fund




















Executive Summary





The proposed Kavachi Marine Management Area (KMMA) is a 5,000 km² Marine Managed Area (MMA) centered around the Kavachi submarine volcano. The Kavachi Seascape refers to the waters between Tetepare Island, the Kavachi submarine volcano, and Matakai Reef. The KMMA would join the Arnavon Community Marine Park (ACMP) as a nationally designated protected area under the Solomon Islands Protected Areas Act of 2010, and would help to fulfill Solomon Islands' commitments under the Convention on Biological Diversity (CBD) and its own National Biodiversity Strategic Action Plan (NBSAP).

Using two approaches – benchmarking to other MPAs in Solomon Islands, and using regression analysis – the estimated costs of managing the proposed KMMA are \$30,000 USD per year.

An analysis of potential funding mechanisms for both the KMMA specifically, and MPAs in Solomon Islands generally, considered 11 potential tools. Each was evaluated based on funding potential, ease of implementation, and whether the necessary conditions were present in Solomon Islands. The key conclusions are summarized in the table below.

SUITABILITY OF FINANCE MECHANISMS FOR SOLOMON ISLANDS MPA FINANCE

	 Highly Suitable	 Partially Suitable	 Not Suitable
Finance Mechanism	Kavachi	SI MPA Network	Practical considerations
Government Budget			
Philanthropy			Best when used to leverage other mechanisms
Tourism-Based Finance			High potential for financial and conservation benefit; investment needed
Marine Biodiversity Offsets			May be relevant for oil & gas exploration, seabed mining
Bonds			Would require a very specific cash-generating project
Enterprises and Incubators			Could be a long-term option but not worthwhile in the short term
Fines and Penalties			Careful design is critical
Endowments and Sinking Funds			Sinking funds could be used to build government capacity; endowments would need to achieve economies of scale

Conservation Trust Funds			Requires a feasibility study; would have to complement the PA Trust
Policy and Regulatory Review			Full review would be time consuming; opportunistic review could be beneficial

Based on the expected annual costs to manage the KMMA, and the finance tools that are most immediately relevant and accessible, the following mix of finance mechanisms is proposed:

PROPOSED MIX OF FINANCE MECHANISMS FOR KMMA

Mechanism	Yield	Notes
Government Budget	\$6000 USD	Assumes SI Government will provide 20%, as it does with ACMP; this may be channeled through the PA Trust
Philanthropy	\$4000 USD	Likely to be more in the initial years, declining over time.
Endowment	\$5000 USD	While it is not practical for Kavachi to have its own endowment, a nation-wide MPA endowment is a viable option and this assumes it would include Kavachi in its distributions
Sinking Fund	\$10,000 USD	An initial 10 year sinking fund of \$100,000 would provide approximately one-third of the annual budget and give time for other funding sources to mature
Fines and Penalties	\$5,000 USD	Further economic analysis is needed to get a robust estimate
Total	\$30,000 USD	

Immediate next steps include the full development of the KMMA Management Plan, to include the zoning and the monitoring and enforcement plan, so that management costs can be more accurately estimated, and the development of the proposed Protected Areas Trust Fund for Solomon Islands.

Introduction

The purpose of this study is to explore, analyze, evaluate, and recommend approaches to fund Marine Protected Areas (MPAs) in Solomon Islands generally, and the proposed Kavachi Marine Management Area (KMMA) specifically. Out of necessity, from the universe of conservation finance solutions for ocean protection, the author chose to focus on evaluating a subset of solutions and instruments that showed the most promise and relevance. It is therefore not presented as an exhaustive analysis of options, but rather a pragmatic one. Cases where further study would be valuable are noted.

At this time, the KMMA is still in the design phase – some key decisions are still in the future. As a result, this study relies on some assumptions and estimates, which are noted as such. Further refinement will be necessary, once the Management Plan has been drafted and the stakeholder consultations are conducted.

Background

This analysis of financing approaches for marine protected areas in Solomon Islands fits within the larger context of protected area management in Solomon Islands, and MPA finance around the world. A short context summary for each follows.

Protected Area Management in the Solomon Islands

The Convention on Biological Diversity, to which Solomon Islands is a signatory, specifies actions that will achieve, or at least significantly contribute to, the protection and sustainable use of biodiversity worldwide. Among them, Aichi Target 11 calls for countries to ensure, by 2020, that 17% of terrestrial and inland water, and 10% of coastal and marine areas, “are conserved through effectively and equitably managed, ecologically representative and well connected systems of protected areas and other effective area-based conservation measures, and integrated into the wider landscapes and seascapes.”¹ The Solomon Islands National Biodiversity Strategic Action Plan (NBSAP) for 2016-2020 outlines Strategic Goals and specific targets, including a commitment that by 2020, at least 10% of the terrestrial and inland water, and 15% of coastal and marine areas will be protected and managed effectively “enabling an ecological, representative and well-connected system of protected area[s]” (MECDM 2016-2020). According to the World Database on Protected Areas (WDPA), as of 2019, Solomon Islands’ terrestrial protected areas coverage was 1.76% and its marine protected areas coverage was 0.12% (UNEP-WCMC 2019); however, numerous initiatives are underway to increase protected areas in Solomon Islands, and the country is well into a Marine Spatial Planning process to allocate marine resources among stakeholders.

In 2010, the Solomon Islands Parliament passed the Protected Areas Act, which established the laws for the creation and management of Protected Areas, and provides for the creation of the Protected Areas Trust Fund, a government fund to be used for the establishment, management and other matters related to protected areas. In 2012, the Solomon Islands

¹ Nagoya Protocol, Aichi Targets, 2010, Convention on Biological Diversity.

Parliament passed the Protected Areas Regulations, which clarify the specific requirements and processes for PAs, including classifications of PA designations, the rules for management plans and PA management, special requirements for MPAs, and the allowable sources and uses of funds for PA management funds.

In the intervening years, one protected area has been established under the Act, the Arnavon Community Marine Park (ACMP), comprising 40,000 acres of land and sea in the Manning Strait. Originally established as a community-managed marine conservation area, it was declared a protected area in 2017. The Park is home to a significant rookery of critically endangered hawksbill turtles. Management costs of the Park are approximately 250,000 SBD per year, or roughly 30,000 USD, mostly consisting of fuel costs for patrolling and other transportation needs. Currently the Solomon Islands government covers only 20% of the MPA management costs, or approximately 50,000 SBD per year, with the rest provided by donors. A small endowment of 700-800K USD, invested through The Nature Conservancy (TNC), provides some limited revenue, but not enough to fully cover the management costs. The Management Committee also encourages environmentally friendly tourism both to generate revenue for local communities, and to promote individual donations to ACMP.

While ACMP remains the only official protected area, there are community managed areas that provide ecosystem protection. Tetepare Island is the largest uninhabited island in the Southern Hemisphere and encompasses significant marine and terrestrial biodiversity. By a collective decision of the Tetepare traditional landowners, the Tetepare Descendants' Association (TDA) was created to manage Tetepare as a conservation area. This decision protects it from logging or other major development, and includes a 13 acre no-take zone. Its area is approximately 129 square kilometers – 118 km² of island plus 11 km² of the MPA². It functions as a marine protected area, albeit one that is not yet established under Solomon Islands law and is therefore subject to the continued commitment of the Tetepare traditional landowners. The TDA is pursuing registration under the Protected Areas Act. The TDA operates a research station, employs rangers, and owns an ecolodge. The current management budget is 500,000 SBD per year (roughly 60,000 USD). Of this, two-thirds comes from donors and one-third comes from tourism revenue. Primary costs are ranger salaries, monitoring, and maintenance. TDA are in the process of developing additional tourism infrastructure to generate revenue to cover some of the costs of managing the conservation programs, and has received grants for this purpose. They also benefit from a small endowment established by Conservation International (CI) to cover the costs of the TDA's annual general meeting, two board meetings per year, and provide 60-80 scholarships for descendants' school fees. A second fund set up in Australia also provides scholarships. This structure is based on the recognition that the revenue that the descendants decided to forego by rejecting logging would likely have gone to school fees, and therefore the scholarships play a compensatory role.

² MPA area provided by <https://www.protectedplanet.net/tetepare-marine-protected-area>. Note that the combined estimate slightly overestimates the total area as the MPA does include some land.

The Protected Areas Trust Fund that was mandated in the Protected Areas Act of 2010 has not yet been operationalized. The hope was that it would be funded under GEF-5, but this did not materialize. There is some optimism that GEF-6 will provide funding. The Food and Agriculture Organization of the United Nations (FAO) is, at the time of this writing, undertaking a project to operationalize the Protected Areas Trust Fund; they are expected to release a tender for consulting services to analyze the best approach to moving forward in 2019. The Protected Areas Act identifies moneys appropriated by Parliament, other contributions not from public funds, and accrued interest, as the three sources of funding for the Trust Fund.

MPA Finance

Worldwide, there are numerous initiatives underway to study, design, innovate and implement strategies and instruments for paying for the cost of MPA management. The public benefits of marine conservation are well-established. In 2009, IUCN demonstrated through a series of case studies the economic and financial benefit realized by communities from marine conservation through the increase in fisheries health and tourism revenue [IUCN, 2009]. A 2015 quantitative analysis by WWF valued the ocean's activities and assets at 24.2 trillion USD, although it is worth noting that because ecosystem services were not included, the number is probably much higher. The author estimated the annual goods and services derived from ocean activities at \$2.3 trillion USD, a number that would make the ocean, if it were a country, the 7th largest economy in the world [Hoegh-Guldberg, 2015]. Degradation of marine and coastal habitats creates economic impact, usually negative in the long run and often in the short run as well. The WWF study further found that two-thirds of the ocean's economic value comes from assets that depend on a healthy ocean. In a partner study, WWF found that the predicted economic rate of return for expanding networks of MPAs is as high as 24%, and that the benefits of expanding MPA networks outweigh the costs at a ratio of 20 to 1 [Reuchlin-Hugenholtz & McKenzie, 2015]. It is worth noting, however, that the WWF study focused on predicted *economic* return, which does not necessarily include financial or monetary streams that can be used to pay for conservation.

In the Pacific region, the Pacific Ocean Finance Project (POFP) has, at the time of this writing, five studies underway to develop concrete funding tools for MPA finance. The results of these studies will be valuable for Pacific countries as well as marine conservationists around the world. While at 5000 km², the proposed KMMA is well below the threshold to be considered a Large Scale Marine Protected Area (LSMPA), it does share some characteristics with typical LSMPAs, being well away from land and home to pelagic fisheries. The findings of the POFP's current study on LSMPA finance will therefore be of interest, and may inform future analysis of funding options for Kavachi.

Kavachi Seascape

Design and Current Project Status

Since 2017, with funding from Oceans 5, the Wildlife Conservation Society (WCS) has been working within Solomon Islands to build support and consensus on the creation of an MPA in the Kavachi Seascape. WCS has conducted briefings with key Ministries, conducted one-

on-one briefings and consultations to build support among key stakeholders and identify issues, and collated data to support the Marine Spatial Planning process.

In May, 2019, building on the one-on-one consultations during the prior two years and a multi-sector stakeholder workshop in August 2018, WCS convened a workshop of key stakeholders to discuss the creation of the KMMA³. Delegates came from government, industry, civil society organizations (CSOs), and community organizations to explore the benefits and identify concerns. Representatives from the Solomon Islands Marine Spatial Planning process were present. (A full list of participants is included as Annex B.)

The current proposal for the KMMA is a 5,000 km² Marine Managed Area (MMA) centered around the Kavachi submarine volcano. The Kavachi Seascape refers to the waters between Tetepare Island, the Kavachi submarine volcano, and Matakai Reef. This area possesses unique biological and geological features, includes globally significant biodiversity, and is directly adjacent to a linked network of existing community-managed conservation areas within and around Tetepare, Vangunu and Gatokae islands, and within Marovo Lagoon. In a 2018 study, the Kavachi Seascape was identified as one of 12 offshore Special Unique Marine Areas (SUMA) in Solomon Islands, and had the second-highest rating [Ceccarelli et al, 2018]. As assessed from AquaMaps predicted species distributions, the Kavachi Seascape contains 94% of the Solomon Islands' marine species (WCS, unpublished data), as well as unique fisheries. A 2015 National Geographic expedition captured footage of hammerheads and silky sharks living inside the volcano [Phillips et al 2016]. The Kavachi Seascape is under threat from increasing human pressure, including the potential for mining or oil exploration and the presence of international shipping traffic. While the domestic commercial fishing fleet holds itself to Marine Stewardship Council (MSC) certified standards, there is the potential for illegal incursions from foreign fleets, or for the emergence of a non-MSC domestic fleet to compete with existing fleets in these waters.

Several possible draft boundary options for the Kavachi Seascape MPA have been discussed with Government, all of which are between 3 and 30 nautical miles (nm) from land. Ensuring the MPA is outside 3 nm from land is a deliberate strategy to minimize ownership and compensation claims. Because foreign fishing fleets are prohibited within 30 nm from land, keeping the boundaries within 30 nm of land limits potential fishing to the domestic fleet and aligns the southern boundary of the MPA with the existing 30 nm contour that is already being monitored. Several zoning possibilities were explored in the workshop, including a mix of no-take, sustainable use, and limited use zones. The participants also discussed other requirements, such as limiting commercial fishing to MSC certified fishing companies, prohibiting international shipping traffic⁴ or at least specifically prohibiting

³ Under Solomon Islands regulations, a Marine Protected Area is typically a no-take zone, whereas a Marine Managed Area provides for a mix of zoning. In some cases throughout this study, "MPA" and "MMA" may be used interchangeably in cases where the distinction is not relevant.

⁴ In order to exclude international shipping traffic, the KMMA would likely need to be recognized as a Particularly Sensitive Sea Area (PSSA) by the International Maritime Organization (IMO). These designations are relatively rare; the IMO currently recognizes 17 PSSAs.

dumping, and prohibiting seabed exploration. Requirements for research access were also considered.

As an outcome of the workshop, the participants committed to pursuing the creation of the MPA, under the Protected Area Act of 2010, and identified that the Management Committee will likely be formed from a subset of the workshop participants, with more stakeholders added as appropriate to ensure adequate representation. The group's draft vision for the KMMA is "Productive, thriving Kavachi Marine Management Area sustainably managed to maintain healthy people, culture, ecosystems and industry now and into the future."

The next steps will be to formally initiate the process with the Government, constitute the Management Committee, refine the boundaries and proposed zoning, draft the Management Plan and begin stakeholder consultations. It is anticipated that the full process culminating in the official gazetting of the MPA will be 2-3 years.

Beneficiaries and Stakeholders

In order to develop a finance solution, it is necessary to identify who benefits from that ecosystem's health.

The Public. Most importantly, the ocean is a public good and the people of Solomon Islands benefit from a healthy ocean, specifically insofar as the ocean provides or influences livelihoods, human health, and cultural heritage. The proposed MPA is significantly offshore – most community fishers will not travel that far and so it has limited benefit as a community fishery. The Kavachi volcano is a unique geological feature and one that has cultural significance; that being said, it is probably not a benefit that Solomon Islanders would be likely to pay for as individuals. Rather, they are more likely to expect the Government, constituted to act on behalf of the people of Solomon Islands, to provide public funding for this public asset.

Domestic tuna fishing fleet. National Fisheries Developments, Ltd (NFD) is currently fishing in the Kavachi Seascape using four pole and line and five purse seiners. NFD uses an all-Solomon Islands crew; its sister company, Soltuna, processes NFD's catch in Solomon Islands. Together, the two companies employ 2800 people and contribute significantly to the Solomon Islands economy. NFD is MSC-certified. Industry has argued that establishing an entire MPA as a no-take zone would be to the benefit of the international fleets and the detriment of the domestic fleets, as it would reduce the domestic fleets' available fishing grounds. However, the specific design of an MMA, reflecting NFD's input, has the potential to benefit the domestic tuna fishing fleet greatly – if the MMA includes sustainable use zoning that is limited to MSC-certified companies, it helps to shore up the competitive advantage of companies already operating as MSC-certified, and serves as a barrier-to-entry for new fleets. Further analysis is needed to fully quantify this benefit.

Researchers. The science community values the ability to learn from the seascape, as there is much to learn about species behavior and the ecosystem around the volcano in particular. The National Geographic expedition from 2015 identified numerous unique biological and geological features in and around the volcano. Of particular note, the

researchers noted the presence of multiple species of fish and zooplankton inside the volcano's crater, which may give insight into the "physiological and behavioral resiliency of marine animals to increased temperature, acidity, and turbidity," of particular value with respect to climate change [Phillips et al 2016].

Of note. The undersea volcano is not currently emergent, which is to say, it is fully submerged and rarely visible above the water surface. Should the volcano emerge, it will generate some difficult questions about jurisdictional control between the national government and the government of Western Province, and changes the makeup of the beneficiaries. Specifically, the volcano may be seen to benefit a subset of the public, i.e. residents of Western Province. If the volcano was highly visible, it would have a more specific economic value as it would be attractive to tourists, researchers, and film crews. While the MPA is farther than most tourists would have an interest in traveling at present, a highly visible volcano would be a more compelling attraction. Both tourists and film crews can provide revenue through permits or entry fees; the costs of patrol would increase as well. However, as it is impossible to predict the volcano's future behavior, these options are identified for future exploration should that be warranted, but do not constitute a focus of this study.

Estimated Management Costs

There are several challenges to estimating the management costs for the MPA. First, the boundaries are still being confirmed and the zoning is being decided; the outcomes can influence the costs. Second, there is limited basis for benchmarking – ACMP has been an MPA for less than two years, so the Government has limited data; Tetepare is not formally a protected area yet, and is significantly more terrestrial than marine. And both of these protected areas are close to land and communities, which increases the immediacy of threats and the necessity of frequent patrolling.

Ideally, the budget estimate would be built from the ground up, with relevant parties estimating the annual cost based on the management plan. A sample structure for such a budget is included as Annex C. However, given the uncertainty of several variables, benchmarking to other MPAs is the most effective way to estimate management costs at this time. As more information becomes available, the budget estimates can be refined.

Two approaches will be used for estimation. The first is to rely solely on existing Solomon Islands data to estimate the cost of managing the KMMA. The second is to use a regression analysis based on data from 83 MPAs around the world. Neither is a perfect solution, but combined they provide a reasonable estimate of annual PA management costs.

The table below provides the relevant variables for ACMP and Tetepare.

TABLE 1: CURRENT MANAGEMENT COSTS OF SOLOMON ISLANDS MPAS

Protected Area	Current Annual management budget (USD) from stakeholder interviews	Area (km ²)	Estimated Cost per km ² (Budget Divided by Area)
ACMP	30,000	162	\$185
Tetepare	60,000	129	\$465

Using these estimated costs per square kilometer, as derived from the current management costs of ACMP and Tetepare, applying them to the proposed KMMA, the annual cost to manage the KMMA's 5,000 square kilometers would be between \$925K and \$2.33M, neither of which is a believable number. We can attempt to apply some discount factors to account for Kavachi's lack of land and the distance from shore, but without specific data these discount factors would be pure conjecture. Therefore, while the budgets of these two PAs are informative, the benchmarking calculation does not produce a useful estimate.

The second approach is to apply regression analysis. A 2004 study by Balmford et al. (2004) analyzed data from 83 MPAs from around the world using multiple variables. They concluded that three variables could predict nearly all the variation in MPA management costs: size of the MPA, distance from inhabited land, and Purchasing Power Parity (PPP), a measure of economic variability and differences in standards of living between any two countries, and in this specific case, representing the purchasing power of one US dollar.

The Balmford et al. (2004) study provides a regression equation that can be used to predict the annual costs of managing an MPA:

$$\log_{10}(\text{cost per unit area, dollar km}^{-2} \text{ y}^{-1}) = 5.62 - 0.72 * \log_{10}(\text{area}) - 0.002 * (\text{distance to inhabited land}) - 0.30 * (\text{PPP index})$$

For Kavachi, the proposed area of the MMA is 5000 km², the distance to inhabited land is 3 nm or 5.56 km, and the PPP is 7.14⁵. The formula yields management costs of 6.36 USD per square kilometer, or \$31,812.05 for Kavachi's 5000 km². This would give Kavachi an annual management budget comparable to that of ACMP.

The Balmford approach does not include the start-up costs of the MPA, nor does it include the costs of building capacity and political support. It also does not account for the costs of watershed management that may contribute to improving the health of the MPA; this is of minimal relevance to Kavachi, given its distance from shore, but worth considering when applying the model to MPAs closer to shore.

⁵ For 2018, from the World Bank <https://data.worldbank.org/indicator/PA.NUS.PPP>

Overall, with these caveats, the Balmford approach does produce a believable estimate. Until more specific budget data are available, it is reasonable to use the \$30,000 annual management cost estimate from the Balmford approach for planning purposes.

Evaluation of Potential Financial Solutions

Evaluative Methodology

This study explores eleven types of financial solutions as potential funding options for the KMMMA specifically, and MPAs in Solomon Islands more generally. The following criteria were considered in evaluating the applicability of a funding solution:

- *Funding potential* – within the context of the Kavachi Seascape and Solomon Islands, does the financial solution or instrument have the potential to generate sufficient revenue or cost reduction, over a sustained period of time, to contribute to an overall sustainable finance plan?
- *Ease of implementation* – how complicated is the financial solution to put in place, considering cost, complexity, and available capacity?
- *Necessary conditions* – what does the financial solution require to be successful, and are these conditions present in the Kavachi Seascape, and in Solomon Islands more generally, or could they be present with reasonable investment?

This is a qualitative, rather than quantitative, assessment, informed by knowledge of finance mechanisms and their applicability and use in a variety of contexts. However, the evaluation of applicability to Solomon Islands does rely on professional judgment calls by the author, and an effort has been made to identify any judgment calls that were particularly close.

Financial Solution Options

Each of the following 11 finance solutions or mechanisms was included based on its likelihood of being applicable either to Kavachi, to MPA finance in Solomon Islands more broadly, or to both. Some finance solutions – such as insurance schemes and debt conversions – were briefly considered for inclusion and rejected as unlikely to be applicable to either. While they are evaluated separately for ease of organization, it is important to note that many of the solutions can, and should, be used in combination to achieve a diversified funding strategy.

Government Budget

Government spending and philanthropy are by far the two largest sources of funding for protected areas. Globally, governments finance 75% of biodiversity conservation actions through budgets, grants, and subsidies [Parker *et al*, 2012]. Notably, though, most of this finance (78%) is generated in developed economies, and expended both in their own countries and as Official Development assistance (ODA); developing nations frequently have fewer available funds to allocate to PA management and biodiversity conservation.

The Solomon Islands Government recognizes the ocean as a public good, of which the people of the Solomon Islands are beneficiaries, and therefore spends some public funds on

its protection, through a variety of conservation actions and partial funding of the country's one PA. The Government currently contributes 20% of the costs of managing the ACMP. Further, it has committed to contribute to the Protected Area Fund, once established. However, as the number of PAs in the Solomon Islands grow, it may be a challenge for the Government budget to keep pace with increasing management costs, if it is, ideally, to maintain this 20% contribution rate across all protected areas. As the plans for the Protected Areas Trust become more developed, the Government's likely contribution will come into better focus. For current estimating purposes, it is reasonable to use 20% as a predictor of the Government's contribution to Kavachi, through a combination of direct contribution, in-kind contribution (e.g. technology-based monitoring), and payments through the Protected Areas Trust. More broadly, it is hoped that the Government will at least maintain this level of contribution to all PAs within the Solomon Islands.

Securing government funding requires diligent relationship building and navigating the political sphere, which takes time and resources. While this capacity exists in Solomon Islands, it will be important to clarify roles and responsibilities, to understand specifically who will cultivate these relationships on behalf of Kavachi, and for MPAs more broadly. Role clarification and strong governance structures are important. Obtaining government funding also relies on consistency in government policy and priorities – this is by no means assured when a new Government is elected. To that end, it is also important to cultivate relationships with leaders in the minority parties as well, to optimize the chances of continued funding in the event of a change in Government.

Bilateral and multilateral aid will be addressed under “Philanthropy.” Importantly, decisions about how bilateral and multilateral aid will be distributed are made or influenced by Government focal points, and therefore it is important for management committees, PA Managers, and Civil Society Organizations (CSOs) and Non-Governmental Organizations (NGOs) to maintain strong relationships with decision-makers and influencers in a wide range of Government ministries.

Overall, Government funding, while unlikely to be sufficient on its own, should play a role in funding both the Kavachi Seascape and MPAs more broadly.

Philanthropy

Along with government, philanthropy is one of the leading sources of funding for biodiversity conservation. Both ACMP and Tetepare rely heavily on external donor funding.

There are several challenges with donor funding, especially if it comprises a large portion of the funding mix. First, it is time consuming to secure, and requires resources and staff time to cultivate donors, write grants, and fulfill compliance and reporting requirements. As with government funding, it therefore requires role clarification to identify who is responsible for this function – the Management Committee, the PA Manager, Government officials, CSOs, or NGOs can all be involved in fundraising, and must work with a clear strategy and plan. Second, it is rarely sustainable – at most a project grant might cover five years of costs before it has to be replaced. Donors rarely repeat the same project grant, or

commit to funding general operations over a sustained period of time. And third, donor priorities can shift – securing funding depends on being able to identify a sufficient number of willing donors committed to funding specific species or critical ecosystems, marine protection, the Pacific, or Small Island Developing States (SIDS), among other potential differentiators.

Donor funding is the most valuable in biodiversity conservation when it can be used to leverage other funding sources or instruments. Endowments and sinking funds, addressed below, invest donor funding in the capital markets to generate revenue that pays for conservation. Some donor support, in the form of concessionary loans or loan guarantees, can make debt-based instruments such as bonds or revolving loan funds affordable.

Project Finance for Permanence is a technique that has been used in Bhutan, Brazil, and Costa Rica to leverage donor funds to build Government budget capacity over time. In simple terms, donors contribute a sinking fund that will be spent down over a 20-year period. At the start of the period, the sinking fund covers the bulk of a country's PA management costs, with the Government contributing a smaller share. As the term progresses, the sinking fund's share of total expenditure decreases and the Government's share increases, until the Government is paying all the costs by the end, and the sinking fund has been fully spent out. This approach relies on significant Government commitment – it is a tool that gives the Government time to build its ability to fund conservation but will only work if the Government takes that commitment seriously and adheres to the terms of the agreement. This model also requires significant up front fundraising and donor commitment. The Linden Trust for Conservation and WWF have been leaders in using this approach; however, neither has identified Solomon Islands as a priority area. And it requires robust modeling and cost estimates, done by technical experts with experience in this approach. As such, a Project Finance for Permanence scheme on the scale of Bhutan's, for example, may be too labor intensive for Solomon Islands at this time, although as the Government fleshes out plans for the Protected Areas Trust, this may be a model worth considering. Certainly, it would have to be done at the national scale, as it is too much work to justify using it for a single MPA.

Some form of philanthropy will be a necessary component of funding both the Kavachi Seascape and MPAs more broadly, especially in the early years. As with Government funding, role clarification and governance will be vital to clarify specifically who will be accountable for raising donor funds. The specific type of funding will vary, and will almost certainly include project funds. As discussed below, securing donor funds for endowments and sinking funds is also recommended.

The private sector can also be a source of philanthropy. Several businesses including Solomon Airlines have grant-making instruments, and foreign businesses operating in the Solomon Islands are also a potential source of contributed revenue. The domestic tuna fishing industry is identified as a beneficiary of the Kavachi Seascape, if zoning allows sustainable use limited to MSC-certified fleets, and certainly of healthy marine and coastal habitats throughout Solomon Islands. While it is unlikely that they will be willing to pay increased or special license fees to operate in the Kavachi Seascape, they may be willing to

make voluntary donations to a fund that pays for marine conservation through protected area management, either specifically for Kavachi or more broadly for MPAs throughout Solomon Islands.

Tourism-Based Finance

Tourism has significant potential to finance marine conservation. Tourists are direct beneficiaries of healthy oceans, which they value for recreational purposes including diving, snorkeling, fishing, and boating, among others. Broadly speaking, tourists can contribute revenue in three ways:

- Economic growth and diversification– local communities benefit from tourists spending money on accommodation, dining, tours and activities, consumer goods, and transportation. As income increases, communities also have less incentive to engage in environmentally destructive practices such as logging and unsustainable fishing; this reduces the costs of protected area management. And as formal economic activity grows, the tax base increases, resulting in higher tax generation for the Government budget. Notably, the informal economy (i.e. unreported income) benefits local communities, though not the Government's treasury.
- Entry fees, permits, concessions and licenses – the Government (or another body) can charge tourists directly for the use of protected areas through entry fees, permits and licenses, and can charge local businesses for the exclusive rights to operate within the Protected Area (concessions). It is important to set these instruments at the right price, to optimize both revenue and the number of tourists per year that the PA can reasonably handle. While revenue from a popular MPA can be used to support other MPAs within the overall system, it is important to set the revenue-sharing model at an equitable rate. Using revenue from ACMP to underwrite management costs for Kavachi, for example, is only reasonable if ACMP's costs have been fully covered. Of greatest importance is making sure revenue generated from PAs stays within the PA system and does not get subsumed into the national budget as a whole.
- Tourism taxes and levies – Many countries charge a tax or levy on a per person basis. These can be collected based on airplane seats, beds, cruise ship passengers, or as an entry or departure tax through immigration and customs. Given the cost to travel to Solomon Islands, and that the driver for most tourists is the beauty of pristine waters and a healthy ocean, most tourists will not be deterred by a modest tax which might amount to \$10 USD per person, especially if the purpose is well-articulated to them. As with entry fees, it is critical to ensure that a tax designed to support PA management is used solely for that purpose and does not become part of the general budget. The costs of collection is a challenge with these instruments – in most cases, the process relies on vendors to collect the tax and remit it to the Government (e.g. a bed tax is collected by the hotel; an airplane seat tax is collected by the airline). For small businesses – which most tourism operations in Solomon Islands are - the burden of collection and remittance may be prohibitive, and there may be significant leakage (i.e. the tax is not collected, or not remitted to Government). An entry or departure tax may be more efficient, as there are only two international airports (Honiara and Munda) and these are operated by the Government. However, these would only capture revenue from international

tourists and miss the significant tourist activity from expatriates living in Honiara, who comprise a large percentage of Solomon Islands tourists.

Tourism development, especially in Western Province, is a Government priority. There has already been considerable investment in infrastructure to support tourism activity, and more is planned. Insofar as tourists are some of the prime beneficiaries of a healthy marine and coastal environment, capturing revenue from them for PA management can and should be a major source of funds for MPA finance within the Solomon Islands. Due to its remote location, the KMMA is not an immediate candidate for tourism-driven revenue, unless it benefits in the future from an allocation of pooled revenue raised by other MPAs in the system, once more MPAs are created. As an area that includes a SUMA, Kavachi does have the potential to contribute to Solomon Islands' tourism marketing strategy – positioning Solomon Islands as committed to MPAs, and specifically highlighting the unique nature of the underwater volcano, can help to build interest in Solomon Islands as a tourist destination. The Palau National Marine Sanctuary and the Aldabra Atoll in Seychelles are both examples of this – the existence of both MPAs contribute to their countries' reputations for marine conservation and pristine waters, while both are also so far offshore that few if any tourists actually visit them.

Marine Biodiversity Offsets

Offsets derive from regulatory frameworks that require developers to mitigate the impact of their projects on biodiversity and ecosystem services. The Mitigation Hierarchy, developed by the Business and Biodiversity Offsets Programme (BBOP), is a widely accepted process for achieving no net loss of biodiversity resulting from development, or ideally a net gain. The Mitigation Hierarchy as a process and framework is an important sustainable funding tool that ensures that the costs of biodiversity impact are borne by the companies that cause them, by building these expectations into the regulatory framework for development, and requiring these activities as a condition of licenses and permits for exploration and development. Offsets are activities that compensate for residual impact, after steps have been taken to avoid, minimize, and rehabilitate/restore any damage. While offsets can take the form of positive activities to create measurable conservation gains in another habitat or ecosystem than the one affected by the project, they can also take the form of compensatory payments that are used to fund other conservation work.

Offsets and the Mitigation Hierarchy have the potential to reduce impact and pressures on PAs, reduce costs, and generate funding. However, the process is complicated and requires significant Government commitment. Given the potential revenue from licenses for exploration and extraction, it is often hard for a Government to prioritize biodiversity conservation. It takes a great deal of effort to build support within Government to create and enforce the regulatory framework that achieves No Net Loss or ideally Net Gain of biodiversity from development. The process also requires significant scientific analysis to predict environmental impact, recommend actions within the Mitigation Hierarchy, and identify offsets that are equivalent to any residual impact in the project area. Furthermore, the Mitigation Hierarchy, if implemented well, should result in newly-created PAs and the funding to manage them, rather than the funding of existing PAs. There are scenarios in which compensatory payments under an offsets program can be used to support the

existing PA system, so while offsets are not an immediate source of funding for Kavachi, there is the potential for it to benefit from an offsets scheme in the future.

Bonds

Bonds are structured debt instruments through which an entity borrows funds at a specific cost (i.e. interest rate) with the requirement to pay back both the borrowed amount (principal) and the interest to the lender at a specified date in the future. Bonds can be issued by governments, corporations, or other entities. The cost to the borrower is a function of the risk of default, i.e. the likelihood that the lender will not be paid back in full. The higher the risk of default, the higher the interest rate. Importantly, bonds require an increase in cash flow – the proceeds must be used for a project that produces enough cash to pay back both the principal and the interest. For this reason, many conservation activities are not good candidates for bonds, because they do not generate cash. One of the most common uses of bonds in the conservation space is for investment in infrastructure that reduces environmental impact and therefore costs; the cost savings translate to cash that pays back the debt. The Seychelles gained a great deal of attention in the MPA finance community by issuing the first Blue Bond, a conservation bond focused on ocean health and the Blue Economy. The cost of borrowing was reduced through loan guarantees from the World Bank, making the debt affordable to the Seychelles, and the proceeds will be invested to improve fisheries health, thus increasing the Government's tax revenue and generating cash to pay back the bond. It is possible that a bond may be a viable conservation finance tool for Solomon Islands, either for fisheries health projects or expansion of ecotourism. However, rather than generating direct revenue for MPA management, it would more likely produce a secondary benefit for MPAs, through economic growth and diversification that reduces pressures on the MPAs and therefore lowers the costs of MPA management.

Enterprises and Incubators

Conservation enterprises are businesses, typically small to medium sized, that produce both a financial return and a conservation benefit. Examples include MSC certified fisheries, ecotourism ventures, sustainable agricultural products, low-carbon cookstoves, and waste management businesses. The conservation benefit can come from the specific product or service, as well as from the creation of alternative, less-destructive income-generating activities. Incubators or accelerators provide technical assistance and low-interest financing to conservation enterprises, often with the goal of building them to the point that they become investable projects for impact investors. Incubators can include a revolving loan fund, which greatly expands the impact as the same corpus can be lent and paid back multiple times – assuming a relatively low default rate – thus benefitting multiple enterprises over time. Incubators may also function as early-stage impact investors, generating both a financial return from debt or equity financing to the enterprises, and the concurrent conservation benefit. Incubators can be a powerful way to leverage donor funds, as they create a multiplier effect when the same funds are cycled through multiple beneficiaries. Concessionary financing or loan guarantees from development banks or

multilateral agencies can also expand an incubator's impact by reducing the incubator's lending risk.

While incubators are a compelling tool, especially for attracting private sector funding to conservation, they also require highly specialized technical expertise in business management, investing, entrepreneurship, and finance. Due to capacity constraints, an incubator is not a practical solution for funding MPAs in Solomon Islands at this time. However, Government tax subsidies for conservation enterprises may be a viable way to reduce MPA management costs by averting environmentally destructive practices and promoting environmentally beneficial ones. However, securing such subsidies would require a great deal of lobbying of Government officials, and because the conservation benefit of this approach will be difficult to demonstrate, this is not the most practical use of time and resources.

Fines and penalties

Once the boundaries, zones, and restrictions of the MPA are established by law, it will be important to establish fines and penalties for violating them. In so doing, it is necessary to set the penalties high enough to deter illegal activity, which is a function of the violator's benefit from the illegal activity and perceived probability of getting caught. If, for example, the fines are high but there is little patrolling or monitoring, or little prosecution, and therefore people don't perceive they will be caught and held accountable, the fine will not deter illegal activity. Increasing patrolling and monitoring, will increase the likelihood of catching violators, and committing to prosecute those who are caught will increase the likelihood of collecting fines, but both will also increase the costs of managing the PA. And, even if the fines are set appropriately, enforcement activities are sufficient and prosecution is pursued, it is also critical that any fines that are collected go directly to the MPA management costs and not to the central Government budget. Setting truly useful fines requires an economic analysis that is beyond the scope of this study. If the necessary preconditions can be met – setting of meaningful fines, adequate patrols, prosecutorial follow up, and assignment of fines to MPA management – fines and penalties can be a useful tool both to deter violation of the MPAs and to generate revenue, for Kavachi specifically and for the broader MPA system.

Endowments and Sinking Funds

An endowment is a sum of money that is intended to exist in perpetuity or preserve its capital over a long-term timeframe. An endowment's capital is invested with a long-term horizon and normally only the resulting investment income is spent, in order to finance particular grants and activities. Its purpose is to preserve intergenerational equity, that is to say, the needs of current beneficiaries and future beneficiaries are treated equally in decision-making. The capital cannot be spent down to benefit current recipients in a way that disadvantages future generations. In order to achieve this objective, the endowment funds must be well-invested and managed to generate a return that pays for current needs, and recapitalizes some returns (equal to the rate of inflation) to grow the capital base.

Endowments are valuable tools for achieving long-term funding streams. However, they can also be frustrating due to the opportunity cost of giving up some current spending in order to provide for future spending. The pool of potential endowment donors is limited; some donors, especially some governments, are legally constrained from funding endowments, and others are prioritizing current spending. Nonetheless, endowments continue to be a strong anchor to a diversified PA funding strategy. While it takes research and effort to find the right donors, the presence of a reliable, consistent and predictable source of annual revenue makes this effort worthwhile. Endowments benefit from scale – to some extent it takes the same amount of effort to manage a small endowment as a large one, and larger endowments pay lower investment fees and have access to better investment products than smaller ones. For these reason, several small endowments are less efficient than one large one. Setting up an endowment solely for the Kavachi Seascape would not make sense. To generate 30,000 USD per year, the capital base would need to be 750,000 USD, assuming a 4% annual spending rate. The transaction costs of managing an endowment this size would be high, unless the endowment could be nested within a larger institution and benefit from economies of scale. By contrast, a \$10M endowment could be expected to generate \$400,000 USD per year, providing a base of funding for an entire MPA system and achieving a worthwhile scale of operations.

A sinking fund is a pool of monies that will spend down its capital within a designated period of time (e.g. 10, 20, 30 years). The entire principal and investment income is disbursed over a fairly long period (more than five years and typically 10 to 20 years) until it is completely spent and thus sinks to zero. An advantage of sinking funds over endowments is that while it is still a long-term funding stream, it is possible to prioritize current needs over future needs where necessary. Many donors that will not fund endowments are willing to contribute to sinking funds. As noted above, sinking funds are useful for building capacity. In the example of Project Finance for Permanence, the sinking fund is used to build Government's capacity. Another technique is to pair a 5-8 year sinking fund with an endowment so that the sinking fund covers operating costs for the first few years, allowing the endowment's returns to be reinvested to build up the capital base. The drawback is that while sinking funds are a long-term vehicle, they are not perpetual, and the revenue stream will eventually have to be replaced with another sinking fund or other finance mechanism.

Sinking funds can be a useful tool both for Kavachi and for MPAs more broadly. The Protected Areas Trust, once established, is expected to be a source of revenue for Kavachi, along with any other PAs that have been created in the interim. However, if Kavachi is gazetted before the PA Trust is operational, a sinking fund could provide funding to cover the gap until the PA Trust produces a reliable revenue stream. This would effectively be a lite version of Project Finance for Permanence. It would, however, rely on a fairly accurate estimate of what the PA Trust could be expected to generate for Kavachi, and a high degree of confidence that the PA Trust will be operational in the estimated time frame.

Typically, donors want endowments and sinking funds to be held by organizations that are transparent, private, legally independent, and well-run. To provide confidence and reassurance to donors, an endowment or sinking fund for Kavachi or for a wider network

of MPAs would need to be housed within an existing NGO, CSO, or similar institution, or in a Conservation Trust Fund (see below).

Conservation Trust Funds

Conservation Trust Funds (CTFs) are private, legally independent institutions established to catalyze resources and provide stable, sustainable, long-term sources of funding for the protection and sustainable management of natural resources in areas of high biodiversity. CTFs typically encompass one or more endowments and/or sinking funds. Coupled with other financing mechanisms, CTFs use income from investments to provide a reliable source of support for management of protected areas, long-term investment in conservation programs and projects, and financing for indigenous communities. Many of the CTFs grow to become significant resource mobilization and grant-making institutions, effectively managing and disbursing funds from a variety of sources to support conservation and sustainable livelihood projects.
[Mathias and Victurine, 2017]

Conservation Trust Funds are not a single financial instrument but rather a broader finance solution that encompasses multiple instruments, and serves to catalyze funding as well as public support and engagement.

Historically, most CTFs were created with an endowment, a sinking fund, or both. Over time, the older CTFs have diversified, adding new financing mechanisms both to innovate, and to reduce the risk of over-relying on any one source of funding. Newer CTFs have started out with a diversified funding strategy.

CTFs meet donors' need for confidence that the funds will be used for the intended purpose – there is often a concern that Governments may re-direct conservation funds to other uses when faced with a budget crisis. Similarly, corporations making offset payments want similar reassurance that the payments will be used for their intended purpose, and CTFs can manage and allocate offset payments.

Creating a CTF means registering a new charitable organization. A well-designed CTF with broad stakeholder commitment, a strong governance structure, and highly qualified Trustees and management may take 2-3 years, and several hundred thousand dollars, to operationalize. Given the necessary time, effort and resources to establish a CTF, it should have a mission and purpose that is broader than a single MPA. Determining whether a national CTF for the Solomon Islands would require a feasibility study that is beyond the scope of this study. However, conceptually, there could be value in establishing a national CTF that serves as a partner to the Protected Areas Trust but operates in parallel. Although many specifics about the Protected Areas Trust are yet to be developed, it seems likely from the text of the Protected Areas Act that it will be a Government fund. As such, it may have trouble attracting funds from private donors and some public ones. Setting up a

legally independent CTF that works in parallel with the PA Trust and in alignment with Government strategy could be a solution to meet multiple needs.
























Several preconditions are necessary to create a CTF that is transparent and trustworthy in the eyes of potential donors. The Practice Standards for Conservation Trust Funds [Spergel and Mikitin] provide a set of voluntary standards and evidence-based norms for setting up and running a CTF. The Governance structure of the CTF is vital – the CTF must be legally independent of Government, and established under a law that fully protects the Trust’s assets for their intended purpose. Fondo Ambiental Nacional del Ecuador (FAN) – set up as a national CTF to provide funding for biodiversity conservation in Ecuador - provides a cautionary tale. Faced with a budget crisis, the government of Ecuador seized the trust fund’s assets, because the legal structure under which FAN was created did not adequately protect the assets. While not exhaustive, and not a replacement for legal advice, the Practice Standards provide guidance on the elements of a well-run CTF.

Policy and regulatory review

While the focus of securing sustainable funding for protected area management tends to be on revenue generation, there are other techniques that should not be overlooked. Frequently, a detailed analysis of existing Government policies and regulations shows that some laws and subsidies are increasing pressures on PAs, thereby driving up management costs. Often, these negative laws or subsidies are working in direct conflict with positive conservation actions being promoted by other laws or subsidies. A coal industry subsidy, for example, drives up the costs of climate change adaptation and mitigation. Identifying and eliminating these laws and subsidies can reduce costs, meaning less revenue will be needed. A thorough analysis of the Solomon Islands regulatory and tax code is beyond the scope of this study. However, it may be worthwhile to introduce the concept and potential benefits of such a study for future consideration. It may be possible to take on smaller reviews on an opportunistic basis.

A summary of each finance mechanism’s suitability for Kavachi and the MPA network is included in the table below.

TABLE 2: SUITABILITY OF FINANCE MECHANISMS FOR SOLOMON ISLANDS MPA FINANCE

	 Highly Suitable	 Partially Suitable	 Not Suitable
Finance Mechanism	Kavachi	SI MPA Network	Practical considerations
Government Budget			
Philanthropy			Best when used to leverage other mechanisms
Tourism-Based Finance			High potential for financial and conservation benefit; investment needed
Marine Biodiversity Offsets			May be relevant for oil & gas exploration, seabed mining
Bonds			Would require a very specific cash-generating project
Enterprises and Incubators			Could be a long-term option but not worthwhile in the short term
Fines and Penalties			Careful design is critical
Endowments and Sinking Funds			Sinking funds could be used to build government capacity; endowments would need to achieve economies of scale
Conservation Trust Funds			Requires a feasibility study; would have to complement the PA Trust
Policy and Regulatory Review			Full review would be time consuming; opportunistic review could be beneficial

Recommendations and Next Steps

Based on estimated management costs, the KMMA will likely require approximately \$30,000 per year. The best financing mechanisms to achieve this will be a mix of government funding, philanthropy, fines and penalties, and an endowment and/or sinking fund. A suggested mix of financing mechanisms and expected yield is as follows:

TABLE 3: PROPOSED MIX OF FINANCE MECHANISMS FOR KMMA

Mechanism	Yield	Notes
Government Budget	\$6000 USD	Assumes SI Government will provide 20%, as it does with ACMP; this may be channeled through the PA Trust
Philanthropy	\$4000 USD	Likely to be more in the initial years, declining over time.
Endowment	\$5000 USD	While it is not practical for Kavachi to have its own endowment, a nation-wide MPA endowment is a viable option and this assumes it would include Kavachi in its distributions
Sinking Fund	\$10,000 USD	An initial 10 year sinking fund of \$100,000 would provide approximately one-third of the annual budget and give time for other funding sources to mature
Fines and Penalties	\$5,000 USD	Further economic analysis is needed to get a robust estimate
Total	\$30,000 USD	

On the off-chance that there is a highly-motivated donor interested in putting about \$1M into a trust fund to benefit the KMMA, the drawbacks of managing a small endowment could and should be overcome. One option would be to identify an NGO willing to host and invest the funds and make distributions. Both The Nature Conservancy and WWF are very experienced in serving this function; WCS has also provided this function. The second option would be to place the endowment within a national CTF, should one be created.

For the broader network of MPAs in Solomon Islands, as more MPAs are added, government funding, philanthropy and fines and penalties will similarly be relevant. Tourism-based finance approaches have considerable potential as a source of funding for MPAs throughout the Solomon Islands, and warrant considerable exploration. Another viable option is the creation of a nation-wide MPA endowment, possibly housed within a national CTF that complements the PA Trust. As the network of PAs and specifically MPAs expands, it is critical to ensure a comprehensive and proactive sustainable finance plan is

in place. Doing so is rightly identified as a strategy in Solomon Island's NBSAP, and cannot be overlooked or shortchanged.

Two key developments are necessary before further investigation can happen. The first is for the management plan and zones and restrictions for the KMMA to be drafted. This will allow for fine-tuning of the expected costs, and a better estimate of potential revenue from fines and penalties. Second, plans for the Protected Areas Trust must be clarified, as this will significantly affect the amount of revenue the Kavachi Seascape might reasonably receive, and give a better perspective on what mix of financial mechanisms will make sense for nation-wide MPA finance.

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Annex A: List of Consulted Stakeholders

Allan Tippet Bero, Tetepare Descendents Association
Wilko Bosma and Stephen Suti Agalo, Natural Resources Development Foundation
Willy Atu, The Nature Conservancy
Alec Hughes, WCS Solomon Islands
Stacy Jupiter, WCS Melanesia
Andrew Nihoparo and Bunyan Sivor, Ministry of Culture and Tourism
Bjorn Svensson, International Finance Corporation, World Bank Group
Agnetha Vave-Karamui, MECDM ECD
Douglas Yee and Raushan Kumar, Food and Agriculture Organization of the United Nations

Annex B: Kavachi Seascape Workshop Participants

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Tema Wickham, WCS
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Annex C: Sample budget framework for MPA management costs

[illegible]