



Summary Country Market Transformation Plan

Prepared for:
Secretariat of the Pacific
Regional Environment Programme (SPREP)

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A Regional Assessment of Sustainable Tourism in the Pacific: A Road Map for Successful Market Transformation



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Overview

Objective: Conduct a regional assessment of Sustainable Tourism and ecotourism in the Pacific.

- Sponsored by the Secretariat for the Pacific Region Environment Programme (SPREP).
- Cameron-Cole visited 5 countries/territories: French Polynesia, New Caledonia, Palau, Tonga, and Vanuatu.
- We met with scores of government officials (e.g., tourism, environment) and individuals in NGOs, research facilities, private sector, and identified key challenges/pragmatic short-and long-term recommendations including Market Transformation Protocol Road Map to Sustainability.

Five Deliverables:

- Deliverable 1: Sector Profile of Sustainable Tourism in the Pacific.
- Deliverable 2: Analysis of the Current Pacific Marine Ecotourism Industry and Key Supply Side Constraints for the Pacific.
- Deliverable 3: Key Actions to Support Development of an Ecotourism Sector.
- Deliverable 4: Priority Recommendations for Promoting Sustainable Tourism.
- Deliverable 5: Country Market Transformation Plans.
 - Emphasises one element of Market Transformation Protocol.
 - Palau (Building and Equipment Standards).
 - Tonga (Access to Activities and Opportunities).
 - French Polynesia (Public Education and Involvement).
 - New Caledonia (Enforcement).
 - Vanuatu (Standards Development).
 - Provides a template for developing more comprehensive Sustainable Tourism Market Transformation Plans.



Deliverable 1: Sector Profile of Sustainable Tourism in the Pacific

- Forecast growth rate of Pacific Island tourism is 20% greater—5.2%/year vs. 4.4%/year—than other developing countries.
 - Micronesia dominated by air arrivals; Polynesia and Melanesia dominated by sea arrivals.
- Environmental impacts of this growth threaten to overwhelm fragile island ecosystems and social fabric.
 - Nearly half of Pacific Islands are ‘Extremely Vulnerable’ according to the Environmental Vulnerability Index; half are either ‘Highly Vulnerable’ or ‘Vulnerable’.
 - Social factors include:
 - Hopelessness in the face of climate change.
 - High unemployment.
 - Low prestige of tourism jobs; lure of seasonal labour overseas.
 - Sustainable Tourism will be key to the future.
- ‘Sustainable Tourism’ does not yet qualify as a ‘sector’.
 - No definition of ‘Sustainable Tourism’.
 - Cameron-Cole recommends defining Sustainable Tourism as improving standard tourism—by reducing environmental impacts and creating positive economic and social impacts—and developing an ecotourism niche.
 - No standards; no enforcement.
 - Australia ECO Certification Program standards should be used as the regional model.
 - Insufficient size of the market to date.
 - In the next 10 years, tourism is expected to be over 36% of Pacific Island GDP and over 40% of employment.

Recommendations

- SPTO should work with Pacific nations to develop a uniform visitor information sheet so that consistent information is collected from country to country.
- Tourism’s contribution to island economies needs to be better quantified (See Deliverable 4 recommendation regarding WTTC).
- The Market Transformation Protocol developed by Principal Investigator, Rob Watson, should be strategically applied across the region to transform the tourism sector toward sustainability.



Deliverable 2: Analysis of the Current Pacific Marine Ecotourism Industry and Key Supply Side Constraints for the Pacific

- Sustainable Tourism covers inclusive, context-sensitive processes that lead to reduced environmental impacts and positive economic and social impacts.

Recommendations

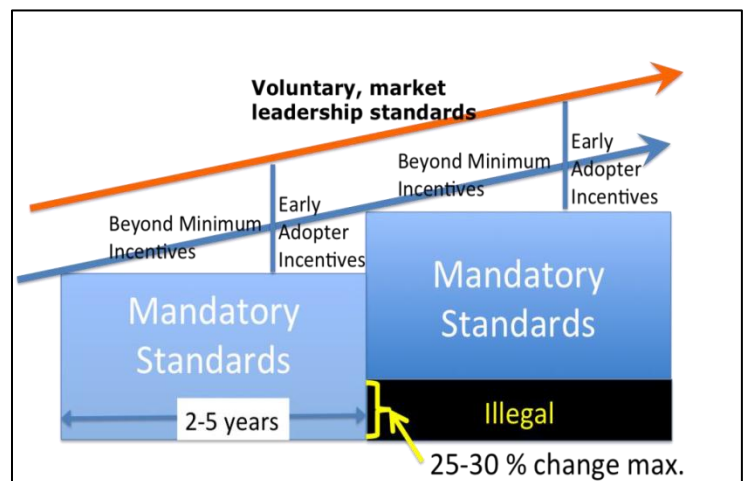
- Ecotourism and Sustainable Tourism in the Pacific should focus on quality over quantity.
- Tourism should be viewed in ‘crisis mode’: danger and opportunity.

Traditional Tourism Dangers	Sustainable Tourism Opportunities
Fragile ecosystems	Restricting access to vulnerable sites
Invasive species and storm damage	‘Voluntourism’
Food and resource scarcity	Energy/water efficiency and renewable energy; local, intensive microfarms
Cultural dilution	Domestic employment opportunities; create prestige around tourism sector; Sustainable Tourism app with language module
Weak laws and enforcement	Strategic market transformation; community-managed resource approach
Predatory foreign investment and business practises	National Travel Agency (NTA); Sustainable Tourism app
Inadequate resources	National ‘all access’ fees
Low quality infrastructure	Green building standards; hospitality training centres
Difficult access to activities	High-speed ferries; NTA; more evenly distributed sites and tourist infrastructure



Deliverable 3: Key Actions to Support Development of an Ecotourism Sector

- Adopt and implement a strategic market transformation approach.
 - Integrates mandatory regulatory measures with voluntary market measures, including both standards and incentives.
 - Provides for indicators to measure programme success.
- Case studies from around the region illustrate how key elements of the Market Transformation Protocol have been implemented.





Market Transformation Step	Purpose and Description
1. Strategic Plan	Outlines legislation, standards, demonstration projects and continuous improvement steps plus ways the six supporting elements can reinforce them.
2. Enabling Legislation	Ensures that responsible entities (both organisations and individuals) are empowered to set and fulfil standards and targets, as well as provide incentives.
3. Technical Demonstrations	Small-scale projects that demonstrate what is achievable as a mandatory minimum, as well as through best practise. Emphasis is on demonstrating technical feasibility and gathering performance information.
4. Mandatory and Voluntary Standards	Complementary mandatory minimum and voluntary best practise standards should be developed in an open and inclusive manner.
5. Pilot-Scale Implementation	Pilot-Scale Implementation emphasises administration and enforcement over technical achievement.
6. Full-Scale Implementation	Full-scale launch of a mandatory standard is much more difficult than opening a voluntary standard to the full market.
7. Continuous Improvement	Both the enabling legislation (or ordinance) and the standards should have provisions for regular, continuous improvement.

Supporting Elements	Purpose and Description
1. Indicators	Success needs to be defined before it can be measured. Then it needs to be measured so it can be managed.
2. Training Programmes	Trained and accredited professionals are needed to develop, implement and enforce standards as well as projects and programmes that emerge from the market transformation process.
3. Procurement	Private and public procurement policies send important market signals and reinforce the demand for market transformation toward sustainability.
4. Incentives	Early Adopter incentives promote adoption of mandatory standards, while Beyond Minimum incentives accelerate adoption of voluntary standards. Incentives can be both monetary and non-monetary.
5. Industry Development	Professional and trade associations are important players in developing, promoting and implementing market transformation.
6. Public Education	Public education and awareness building help grow markets and increase uptake of better practises.



Deliverable 4: Priority Recommendations for Promoting Sustainable Tourism

- SPREP should create model sustainable Strategic Market Transformation Plans (SMTPs) in conjunction with SPTO.
- SPREP should support the Pacific Island Legal Information Institute PacLII to create a searchable database of tourism-focused enabling legislation.
 - PacLII could help create a model Sustainable Tourism legislative package.
 - Embed scientifically-supported sociocentric elements of *tapu*, *bul*, *raui* and other cultural restrictions into governance and adjudication structure.
- SPREP, with SPTO, should develop a compendium of successful case studies across the field of Sustainable Tourism.
 - Priority should be given to successful MPA and PAN projects.
 - Demonstration projects should not be done for their own sake, but as a first step in a comprehensive and planned-out process.
- The first set of standards (either mandatory or voluntary) that are applied to any situation should focus on implementation and enforcement, rather than high levels of performance.
 - Australia's ECO Certification Program is the recommended sustainability certification for Accommodation and Activity Operators in the region.
 - Mandatory and voluntary standards should not change by more than 25%–30% in each iteration. Sometimes even less change is appropriate.
- Pilot-scale projects should penetrate at least 15% of the target market.
 - Implementing a partial pilot (e.g., 15% in each province) is better than full implementation in one region, even if it represents ~15% of the market.
 - Pilot-scale expansion should not be done with grant funding, but funds from transaction fees are okay; the pilot should mimic actual market conditions to the extent possible.
 - Pilots are the most influential stage for the implementation of the supporting elements of market transformation.
- Enforcement of the initial set of fully implemented standards is the most important time to establish a culture of compliance.
 - Penalties must be meaningful to deter violations of the standard.



- SPREP and SPTO should work with the World Travel and Tourism Council (WTTC) to develop a consistent set of regional economic indicators.
 - Other indicators for sustainability and ecosystem health should be developed by local experts in these areas in consultations with local communities and organisations.
- At least 3 to 4 regional training centres in hospitality should be developed.
 - Sponsorship of these centres should be a prerequisite for chains to develop properties anywhere in the region.
 - Possible sites include Palau, French Polynesia and Vanuatu.
- SPREP and SPTO should work with countries to develop model sustainable procurement guidelines for government agencies and Sustainable Tourism businesses.
- Modest sustainability transaction fees should be charged for tourism activities and utilities.
 - These fees can support incentives for implementing market transformation and sustainability projects, especially during the pilot phase.
 - Extensive marketing regarding the use of these funds should be employed to show their value.
 - Resulting incentives need to be carefully crafted to avoid over-paying.
- Countries should provide support for developing industry and professional associations.
 - Capacity building, governance and financial training and peer mentoring all are helpful.
 - These associations can be the primary vehicles for training and help support the development of standards and the implementation of technical and pilot-scale demonstrations.
- SPREP should support countries' development of Sustainable Tourism videos and apps.
 - The videos can play on planes or cruise ships prior to landing/docking.
 - Apps can connect with the National Travel Agency for bookings, discounts, etc. It can also include language and local customs advice.



Deliverable 5: Country Market Transformation Plans — Summary

- Cameron-Cole developed a Country Market Transformation Plan for each of 5 countries visited—French Polynesia, New Caledonia, Palau, Tonga and Vanuatu.
- Each plan includes a recommended national group to undertake development of the Strategic Sustainable Tourism Market Transformation Plan.

Recommendations for All Countries

- Modify or develop specific pieces of Enabling Legislation.
- Develop a National Travel Agency.
- Adapt and adopt Australia ECO Certification Program accreditation for Accommodations and Activities and promote ‘Voluntourism’.
- Adopt energy standards for buildings, equipment and vehicles.
- Develop Complete Streets demonstrations in capital cities.
- Design demonstration projects, addressing a specific element of market transformation:
 - Palau (Building and Equipment Standards).
 - Tonga (Access to Activities and Opportunities).
 - French Polynesia (Public Education and Involvement).
 - New Caledonia (Enforcement).
 - Vanuatu (Standards Development).
- Create specific mandatory and voluntary standards to support the market transformation focus chosen.
- The Country Market Transformation Plans all emphasise the significantly greater challenge launching Mandatory Standards at full scale, compared with Voluntary standards.
- For six of the seven principal market transformation steps—except for the development of the Strategic Plan—Cameron-Cole describes how the six supporting elements (Indicators, Training Programmes, Procurement, Incentives, Industry Development and Public Education) should be specifically applied.



Deliverable 5: Country Market Transformation Plans — Palau

- Palau's tourism growth from 2011 to 2015 was twice the regional average: 10.2% per year vs. 5.2%. The overwhelming majority of arrivals are by air.
- Energy-Saving and Green Building Codes and Standards is the element of market transformation focused on in the country plan for Palau.
 - The six supporting elements will play crucial roles in the fulfilment of this focus area.
- Palau is to be commended for its leadership in the Palau Legacy Project and its adoption of the Palau Responsible Tourism Policy Framework (PRTPF) that emphasises quality over quantity.
- The National Tourism Coordination Board (NTCB) that was recommended in the PRTPF could be put in charge of developing the Strategic Market Transformation Plan.

Recommendations

- Building demonstration projects featuring mandatory basic life and safety measures and upgraded equipment should be undertaken.
 - Energy efficiency initially can be handled through equipment standards.
- High-end resorts being recruited under the auspices of the PRTPF should be required to achieve green building certification.
 - Ngarmadu Bay should be considered for a multi-state cooperative Sustainable Tourism demonstration project.
 - The destination host state develops the marine and/or land-based site and adjacent states develop the supporting infrastructure (hotels, tours, crafts, shopping, land-based activities, etc.).
- The NTCB should work with Palau's dive industry to demonstrate different approaches to restricting access to overutilised dive sites.
 - Alternative sites should be developed in other locations. Revenues can be pooled between sites that are rotated due to fragile environments.
 - The best and most sensitive sites would be reserved for guides who have achieved the highest green accreditation.
- Palau should support its MPA policies by outlawing the 'cooler trade' under Title 27-Fishing and other relevant laws.



Deliverable 5: Country Market Transformation Plans — Tonga

- Tonga's tourism growth 2011-2015 was significantly below the regional average: -3.1% per year vs. 5.2%.
 - Air visitation grew 4% during this period, while cruise visitation dropped by more than 14%.
- Access to Activities and Opportunities is the element of market transformation focused on in the country plan for Tonga.
 - The inability to access tourism destinations and services in Tonga is one of the greatest barriers to Sustainable Tourism and ecotourism.
 - The recommended National Travel Agency will help address many elements of access to Tonga's tourism resources.

Recommendations

- The Tourism Market Transformation Working Group that develops the Market Transformation Strategic Plan should be led by the Ministry of Tourism, the Tonga Tourism Authority and the Tonga Visitors Bureau with working group members from the Chamber of Commerce, respected tourism industry leaders from each of the Island Groups, and other key national organisations.
- Tonga should designate an *'Eua Island Whale Sanctuary and Reserve* as a Zoned Multi-Use MPA extending 10 km around the island.
 - Access would be granted preferentially to 'Eua trained and accredited ecotourist businesses and ECO-advanced ecotourism certified tour operators. Traditional fishing would be allowed in designated areas.
 - Ecotourism training and support should be provided to 'Eua ecotourist businesses.
 - Lessons learned from 'Eua can be then applied to Ha'apai and Vava'u.
- High-speed catamaran ferries should be piloted to access 'Eua Island's ecotourism activities.
 - This would expand visitor options for cruise passengers.
 - Interisland ferry access also would be significantly enhanced by these boats.
 - Impacts on whales would need to be closely monitored.
- Greater logging buffer areas are needed around parks and Terrestrial protected areas.



Deliverable 5: Country Market Transformation Plans — French Polynesia

- French Polynesia's tourism growth between 2011 and 2015 was slightly below the regional average: 5% per year vs. 5.2%.
 - Currently, air arrivals dominate, but sea visitation is growing rapidly.
- Public Education and Involvement is the element of Market Transformation focused on in the country plan for French Polynesia.
 - French Polynesia has region-leading education activities through Te Mana o Te Moana, as well as the extensive model consultation process around the Austral Islands Marine Protected Area (MPA).
 - Te Mana o Te Moana's training and education programme should be supported for regional expansion.

Recommendations

- PROGEM, Te Mana o Te Moana, CRILOBE, as well as industry leaders should participate in a 'Tourism Market Transformation Working Group' led by the Ministry of Tourism, International Air Transport, Modernisation of the Administration and the Public Service.
 - This effort would complement and supplement the work done on the 2015–2020 Tourism Development Strategy.
- French Polynesia should significantly expand its IUCN-recognised protected area network to achieve Target 11 of the Convention on Biological Diversity's Aichi Biodiversity Targets: 17% of Terrestrial area and 10% of Marine area in the EEZ.
- Following the extensive consultation already conducted, the proposed Austral Islands MPA should be demonstrated as a Category I IUCN Protected Area.
 - Additional MPAs should be established as well as Terrestrial protected areas based on Ridge to Reef principles.
- The Lycée Hôtelier in Faa'a should be supported as a regional hospitality training centre.



Deliverable 5: Country Market Transformation Plans — New Caledonia

- New Caledonia's tourism growth between 2011 and 2015 was significantly above the regional average: 12.9% per year vs. 5.2%.
 - Overall, New Caledonia receives 3 times as many cruise visitors as air arrivals. Cruise visitation is expected to double over the next few years.
- Enforcement is the element of market transformation focused on in the country plan for New Caledonia.
 - The Ambassadeurs du Lagon programme is a regional model for deputising private sector members of the tourism industry to support official enforcement agents for MPAs.
- New Caledonia is to be commended for its regional leadership in internationally-recognised Terrestrial and MPAs.

Recommendations

- The membership of New Caledonia's 2025 Tourism Development Strategy, supplemented with additional private sector and civil society participants, should comprise the Tourism Market Transformation Working Group to develop the Strategic Market Transformation Plan.
 - This effort would complement and supplement the work done on the 2025 Tourism Development Strategy.
- Consistent with the recommendations of the Tourism Development Strategy, the North, South and Loyalty Island provinces should coordinate tourism development and marketing activities.
- *Îlot Canard* and *Îlot Maitre* are recommended as technical demonstration sites for restoration activity and enforcement of MPA activity standards.
 - These sites are heavily visited and degraded as a result. Industry professionals associated with these sites should be trained as *Ambassadeurs*. A landing dock should be built at *Îlot Canard*.
- New Caledonia should implement an expanded programme at *Île des Pins* for a pilot-scale demonstration of enforcement, sensitive area recovery and balanced distribution of visitors to alternative sites.
 - The performance of the Sustainability Master Plan for the 'Great South' should be evaluated as part of this project and the efforts at *Îlot Canard* and *Îlot Maitre* and modifications made as needed.
- High-speed catamaran boat access should be explored nationally for distributing cruise ship visitors in order to avoid overvisitation.



Deliverable 5: Country Market Transformation Plans — Vanuatu

- Vanuatu's tourism growth between 2011 and 2015 was slightly below the regional average: 4.9% per year vs. 5.3%.
 - The trend during this period was dramatically affected by Cyclone Pam and is not reflective of current conditions.
- Standards Development is the element of Market Transformation focused on in the country plan for Vanuatu.
 - The Vanuatu Tourism Permit and Accreditation Programme (VTPAP) is a regional example of mandatory and voluntary standards definition and development.
 - The deliberate and inclusive standards development process used by Vanuatu represents best practises in the field and will likely result in more successful implementation.

Recommendations

- The Project Steering Committee (PSC) from the Vanuatu Strategic Tourism Action Plan (VSTAP) should develop the Strategic Market Transformation Plan with the addition of Outer Island and community-managed tourism representatives.
- VSTAP recommendations on legislative modifications should be expanded to include supporting elements of Sustainable Tourism, such as efficient buildings and transportation.
 - The 2016 Right to Information Act should be extended to public input on Sustainable Tourism development.
- A demonstration of mandatory and voluntary tourism accommodation and activity standards, with associated enforcement provisions should be undertaken in conjunction with the Nguna-Pele Marine and Land Protected Area Network.
 - This would also be an excellent opportunity to demonstrate 'Voluntourism' and integrating a National Travel Agency with the island call centre network.
- In the aftermath of Cyclone Pam, Vanuatu should consider creating a 'Cyclone Recovery Fund' and a 'Disaster Recovery Sustainability Plan'.
 - This would allow for more rapid and sustainable recovery after the next natural disaster.



Author and Production Biographies — A Regional Assessment of Sustainable Tourism in the Pacific

Robert Watson, LEED® Fellow

Principal Investigator, Market Transformation Expert

Qualifications Include:

- Mr. Watson was the Principal Investigator and Principal Author of 'A Regional Assessment of Sustainable Tourism in the Pacific', prepared for SPREP. He has extensive policy review experience with the purpose of optimising energy and environmental benefits through the intersection of services and technologies across multiple sectors, including green development, energy, transportation, zero waste management.
- He is a global leader in the green building movement with over 20 years in the international environmental nonprofit sector, during which time he founded the LEED® green building system of the U.S. Green Building Council. Since 2007, he has been in a leadership role at four startups ranging from international and U.S.-based green building services and technology companies to zero-waste technology.
- He has spent 30 years conceiving and implementing market transformation policies in green buildings, solid waste and transportation that include extensive programme and project experience on four continents, combining regulatory push with market pull mechanisms to optimise environmental and economic outcomes.
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Qualifications Include:

- Ms. Neray has over 20 years of experience in data analysis and was the Senior Data Analyst for 'A Regional Assessment of Sustainable Tourism in the Pacific', prepared for SPREP. For 18 years, she managed several multi-year, multi-million dollar projects with large government organisations to success. Clients included the U.S. Department of Justice for which she analysed big data sets to build a decision-support tool and the U.S. Postal Service—a \$65 billion supply chain organisation – for which she helped to develop a sophisticated workforce optimisation scheduling algorithm that saves them tens of millions of dollars annually. She also managed the statistical design of several other public safety projects for Washington, D.C. and the City of New York. Ms. Neray is a bilingual French and English-speaking native of Canada.
- Bachelor of Science, Honours Mathematics, McGill University; M.S. in Operations Research, Massachusetts Institute of Technology (MIT)



Author and Production Biographies — A Regional Assessment of Sustainable Tourism in the Pacific

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- As native French-speakers who are fluent in English, Dr. Schuster and Ms. Verbert provide over 30 years of experience in technical translation services between the French and the English languages in both written and oral formats in law, business, finance, patent, public health, development assistance, and medical device. In the legal arena this includes translating contracts, international agreements, academic journal articles, licensing agreements, litigation, summons, claims, court decisions, insurance law, agency law, bankruptcy law, securities laws, ethics and compliance policies. In the business field, they translate financial reports, financial statements, business plans, mutual funds prospectus, tax reporting documents, mergers & acquisitions, leasing, and buy-out offers. In technical documents, they have experience with medical and health care documents, patents, owner's manuals, MSDS forms, medical devices, and technical specifications.
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- Ms. Toncre has over 20 years of experience in writing, editing, and design for both technical and nontechnical publications. She is responsible for producing Cameron-Cole's marketing collateral using content from subject matter experts. She also coordinates Cameron-Cole materials with clients' marketing efforts as needed. Additionally, she provides editorial expertise to Cameron-Cole work products, which included the 2003, 2004, 2005, 2006, 2007, 2008, 2009, and 2010 edition of Toyota's *North America Corporate Environmental Report*, and *The IMF's Sustainability Report, 2012, 2013*. Ms. Toncre directly supports Cameron-Cole's Sustainable Structures initiative as a sustainable Landscape Specialist; and TMA bioremediation efforts and Property Condition Assessment reports as a team member.
- B.A. in Journalism, Louisiana State University



COUNTRY I — PALAU



Country I — Palau: Tourism Sector Analysis

Palau collects and analyses visitor data by purpose of visit (e.g., business).¹ Holiday visitors are known as tourists. Note that visitors to Palau arrive almost exclusively by air; there is no meaningful cruise visitation.

As recommended in Deliverable 4, ‘Priority Recommendations for Promoting Sustainable Tourism’, and consistent with Objective 1.3 of the Palau Responsible Tourism Policy Framework (PRTPF)², Palau’s newly convened National Tourism Coordination Board should work with SPTO and SPREP to develop consistent definitions for ‘visitors’ and their ‘activities’ that would be adopted regionally. A common visitor information form for the region, including common definitions for each type of visitation, would go a long way to ensuring proper data collection and will aid subsequent analysis in the future.

Moving the tourism sector to sustainability will be especially important for Palau, since visitation to the country has increased almost 50% between 2011 and 2015, as shown in Table 1. From a regional perspective, its visitor growth rate (10.2% —all of this from air travel—is more than twice that of other Pacific Island and Country Territories (PICTs) in our study (5.0%)³. See Deliverable 1 ‘Sector Profile of Sustainable Tourism in the Pacific’ for additional regional comparison details.

Air Visitors	2011	2012	2013	2014	2015	AARG ⁴	Total Visitors
Palau	118,055	124,286	111,145	146,867	167,481	10.2%	667,834

Table 1: Annual Visitors by Mode of Arrival.

Figure 1 and Table 2 show the trend in visitor arrival types from 2008–2015. Over the 8-year period, there were 922,867 visitors. The mean number of visitors per year was 115,358 and the median number of visitors per year was 114,600. At a whopping 92.1%, by far the greatest percent of visitors are tourists.

¹ The source of all data in the Tourism Sector Analysis section is <http://palaugov.pw/immigration-tourism-statistics>, Statistical Yearbooks. Numbers and percentages on top of stacked columns in Figures represent total numbers in that year and range of percentages in those years, respectively.

² http://palaugov.pw/wp-content/uploads/2017/04/Final_Palau-Responsible-Tourism-Framework1.pdf

³ The PICTs Cameron-Cole visited for this study are French Polynesia, New Caledonia, Palau, Tonga and Vanuatu. However, our regional tourism sector analysis also includes data from Fiji, Guam and Samoa, which we use as the basis for an overall regional comparison with Palau. Regional averages presented here exclude the subject country (Palau) from those figures to create a true comparison.

⁴ Average annual rate of growth.

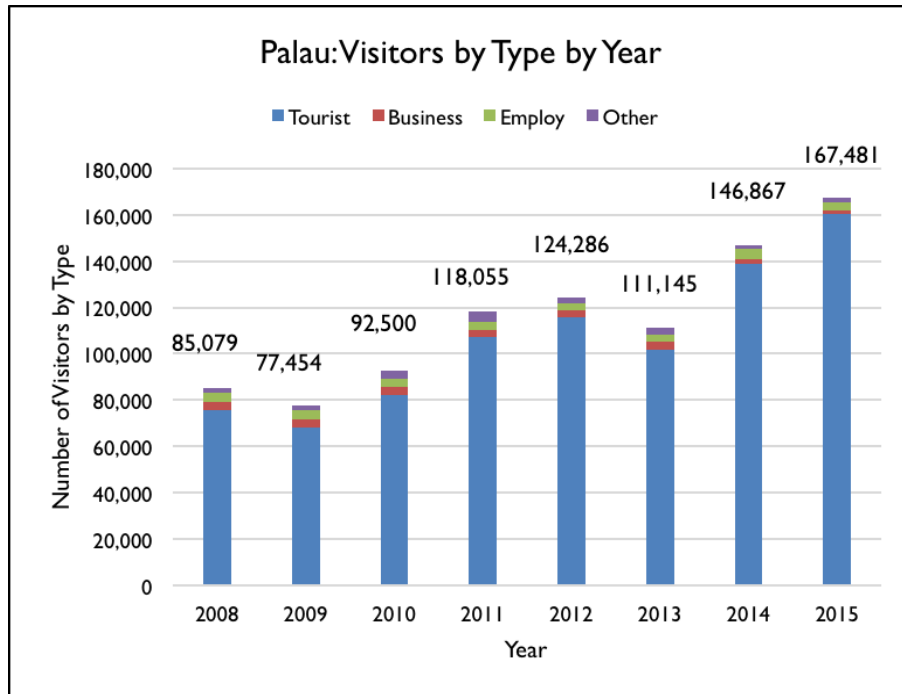


Figure 1: Visitors by Type by Year.

Visitor Type	2008	2009	2010	2011	2012	2013	2014	2015	TOTAL VISITORS
	Col %	Col %	Col %	Col %	Col %	Col %	Col %	Col %	Col %
	Row %	Row %	Row %	Row %	Row %	Row %	Row %	Row %	Row %
Tourist	75,843	68,329	82,202	107,205	115,629	101,546	139,029	160,370	850,153
	89%	88%	89%	91%	93%	91%	95%	96%	92.1%
	9%	8%	10%	13%	14%	12%	16%	19%	100%
Business	3,413	3,558	3,392	3,124	3,125	3,520	1,755	1,559	23,446
	4%	5%	4%	3%	3%	3%	1%	1%	2.5%
	15%	15%	14%	13%	13%	15%	7%	7%	100%
Employ	3,713	3,621	3,427	3,226	3,222	3,377	4,359	3,593	28,538
	4%	5%	4%	3%	3%	3%	3%	2%	3.1%
	13%	13%	12%	11%	11%	12%	15%	13%	100%
Other	2,110	1,946	3,479	4,500	2,310	2,702	1,724	1,959	20,730
	2%	3%	4%	4%	2%	2%	1%	1%	2.2%
	10%	9%	17%	22%	11%	13%	8%	9%	100%
TOTAL VISITORS	85,079	77,454	92,500	118,055	124,286	111,145	146,867	167,481	922,867
	100%	100%	100%	100%	100%	100%	100%	100%	100%
	9.2%	8.4%	10.0%	12.8%	13.5%	12.0%	15.9%	18.1%	100%

Table 2: Visitors by Type by Year.



Figure 2 shows Palau’s tourist visitors by country of residence from 2008–2015. Palau distinguishes the country of residence according to the type of visitor (e.g., tourist, business), which is helpful in shedding light on the distribution of visitors; for the purpose of this study, we focus on tourists only and include no other types of visitors (e.g., business) in Figure 2. Indeed, knowing from where different types of visitors originate, especially tourists, may inform potential, targeted Sustainable Tourism marketing efforts. The data shown begin in 2008 since pre-2008 country data were categorised differently and difficult to reconcile with post-2008 data. Also note that as of 2014, Palau uses ‘Country of Nationality’ instead of ‘Country of Residence’.

Two countries — Japan and Taiwan— accounted for over half (i.e., 54%) of all tourists; Korean tourists accounted for between 10% to 20% of all tourists. Specifically, from 2008 to 2013, Japanese and Taiwanese tourists represented between 60% to 70% of all tourists to Palau. However, there has been a surge in tourists from China. Chinese tourists increased 16-fold between 2012 and 2015, by doubling or even tripling their numbers in consecutive years (i.e., 2012–2013, 4% to 9%; 2013–2014, 9% to 28%; 2014–2015, 28% to 54%). The PRTPF lays out a clear strategy to gain control of tourism visitation to the country and to harness it and manage it for the benefit of all Palauans.⁵

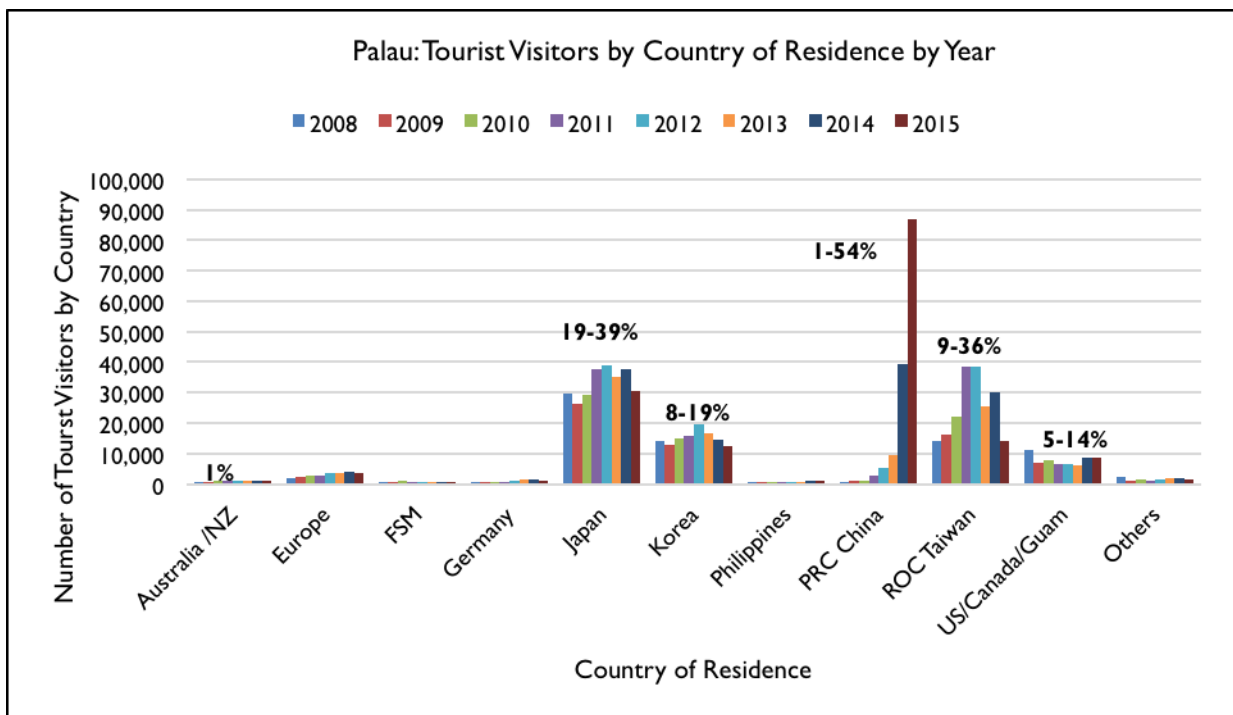


Figure 2: Tourist Visitors by Country of Residence.

⁵ PRTPF, Footnote 2 above, at p. 8.



Palau: Strategic Market Transformation Protocol

Cameron-Cole is basing its recommendations to achieve Sustainable Tourism on the Sustainable Tourism Market Transformation Protocol⁶ (Figure 3) developed by Principal Investigator Rob Watson, which has been demonstrated to be effective in transforming various sectors from utilities and energy conservation to green buildings. The Market Transformation Protocol (MTP) was introduced in Deliverable 1 and referenced extensively in Deliverables 3 and 4. It is composed of seven fundamental elements in red and blue (e.g., Strategic Market Transformation Plan, Enabling Legislation)—five of which are either Regulatory or Market Driven—and six supporting elements (e.g., Indicators, Training Programmes). Together, they form the necessary framework and process to fulfil the key elements to build a viable and thriving Sustainable Tourism sector.



Figure 3: Market Transformation Protocol for Sustainable Tourism.

Based on conversations with a broad base of actors in the country and Cameron-Cole's observations and research, we believe that the transformation of the tourism industry in Palau would be accelerated by bringing a more strategic and national focus, rather than the state-level planning and execution process that has been undertaken to date.

We now apply the fundamental and supporting elements of the MTP to Palau to demonstrate how they will collectively provide a path to Sustainable Tourism.

⁶ Cameron-Cole, in its role as the successful bidder in the SPREP RFP for the Regional Assessment of Sustainable Tourism in the Pacific, is utilising with permission the Market Transformation Protocol™ developed by Principal Investigator, Robert Watson.



Step 1: Strategic Market Transformation Plan (SMTP) for Palau

Palau has engaged in several excellent planning exercises over the last two decades, covering most of the key elements that would be addressed by a SMTP and culminating in the Palau Responsible Tourism Policy Framework (PRTPF). For this reason, we do not believe that a new full-fledged planning process is necessary.⁷

For example, the conservation management plans for the states supported by the Palau Conservation Society (PCS) and the Protected Areas Network (PAN) form an excellent foundation from the resource assessment perspective. These protected area/conservation management plans⁸ need to be supplemented with economic development elements to form the integrated market transformation approach necessary to achieve Palau's goals.

Cameron-Cole strongly supports the recommendation of the PRTPF convening a National Tourism Coordination Board (NTCB)⁹ to evaluate and adapt or adopt our market transformation recommendations in support of the Tourism Policy Framework's vision and goals.

Regional Strategic Project: National Travel Agency for Palau

Most travel arrangements today are made via the Internet, in particular through search and review aggregation sites such as Booking and TripAdvisor. As a region-wide recommendation, we suggest establishing a National Travel Agency (NTA) for each of the Pacific countries. The NTA perhaps could be developed and/or overseen by the NTCB. We believe that Sustainable Tourism in Palau would benefit tremendously from such an approach which is consistent with both Target 1 (Responsible Tourism Awareness and Alignment Is a National Priority) and Target 2 (Palau's Visitor Economy Is Responsibly Managed) of the PRTPF.¹⁰ Our principal suggestion in launching a Palau NTA is to allow direct booking from a single Palau-focused travel site, perhaps www.pristineparadisepalau.com. This recently launched tourism portal by the Palau Visitor's Authority is beginning to have some of the elements that a good information/booking site should have, but it needs to go much farther.

At present, visitors must visit up to three different websites and then further navigate 2–3 other pages/sites or make an international phone call or send a set itinerary to a third-party travel agent before they can book or confirm their itinerary. Moreover, at present, online information about access to Palau's less developed areas and many of its smaller establishments—especially its ecotourism-oriented facilities—is partial at best.

An NTA portal, set up like TripAdvisor or other Web-based information and booking sites, would allow guests to get information, compare options and then reserve lodging, events, etc. through a single portal, creating a 'one stop shopping' experience, but one managed and controlled by the country. These additional features will create a strategic tool that Palau can use to make its tourism sector more economically and environmentally sustainable. Perhaps most importantly for Palau, if all country booking needs to be done through the NTA portal, it will help prevent low-cost charter companies from circumventing Palauan businesses, which was one of the greatest problems described in the PRTPF, and result in more tourism dollars left in the country.

⁷ Note that many of the sustainability recommendations contained in this report have been previously suggested for Palau, in some cases as early as 20 years ago, and are already reflected in the PRTPF.

⁸ <http://www.palauconservation.org/cms/index.php/resources>

⁹ PRTPF, Footnote 2 above, Section 3.1. We applaud the authors for recommending excellent comprehensive participation in the Framework development effort.

¹⁰ Ibid, at p. 9.



Moreover, as we described in Deliverable 4, having an NTA would allow strategic allocation of visitation to areas that are underutilised and away from areas that are overexploited. This could be done by limiting reservations to certain islands or bookings to certain activities, as well as providing incentives in the form of higher or lower tariffs to accommodations on islands that are being promoted or restricted. It would not be difficult to develop a revenue-sharing formula that would compensate area businesses if their area is chosen for a ‘sabbatical’.

SPTO should take the lead in concert with Palau and other PICTs in negotiating with key travel aggregation websites to develop both a regional and country-focused overlay to their search engines.

In addition to the NTA, the appropriate entity—to be determined by the NTCB—in Palau could work with SPTO to develop a country-specific Sustainable Tourism app. The app could be developed by local Palauan IT professionals, possibly using an Application Programming Interface (API) developed by or provided by SPTO with support from SPREP. The Palau Sustainable Tourism app could have a specific ecotourism section and give different levels of information and access to preferred bookings depending on the level of package procured through the NTA.¹¹

The issue of Internet access will need to be assessed as part of this effort. Similar to enabling legislation, enabling technology infrastructure may also need to be grown.

Step 2: Market-Specific Enabling Legislation

Overall, the legislative underpinning to support a transformation toward Sustainable Tourism is quite strong in Palau. The PRTPF does mention the passage of legislation regarding reforms to the tax system to support Sustainable Tourism.¹² Below, we make some additional suggestions for modifications or additions to Palau’s national legislative framework.

Sustainable Tourism

Titles 2 (Executive), 24 (Environmental Protection) and 28 (Foreign Relations and Trade) mention Sustainable Tourism and ecotourism and cover many of the environmental aspects of tourism. By and large, the administrative structure exists to implement a Sustainable Tourism approach.

Building Standards

Currently there are no national building codes or standards addressed by Palau’s Public Health, Safety and Welfare—Title 34 or Real and Personal Property—Title 39. We recommend that basic mandatory life safety requirements for new construction be implemented under this existing legislation and any other pertinent legislation. The initial building code should emphasise health and safety: in particular, emergency egress requirements and structural standards. One piece of energy efficiency would not be very disruptive: a requirement that exit lighting be energy-efficient LED lighting. More in-depth energy efficiency and sustainability elements can be integrated in the next iteration through integration of appliance and equipment standards.

¹¹ For more discussion about the Sustainable Tourism app, please see Deliverable 4: Priority Recommendations for Promoting Sustainable Tourism.

¹² See PRTPF Action Plan, Objective 2.3, Footnote 2 above, at p. 26.



Equipment Standards

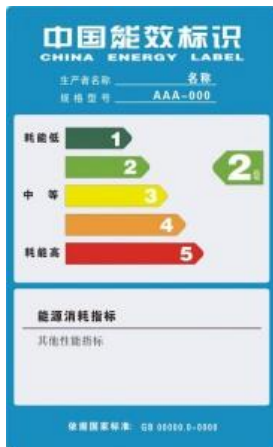


Figure 4: Chinese Appliance Efficiency.

Applying efficiency standards to equipment is an easy measure to save significant amounts of energy. Equipment markets are largely global, so finding high-efficiency equipment is not difficult. Equipment should be limited to ENERGY STAR®-certified equipment or restricted to the top two efficiency levels of China's, Korea's or Japan's efficiency label. Key equipment types are: air conditioning; refrigeration; water heating (solar should be highly promoted); plumbing and sanitary fixtures should also be restricted in their flow and flush rates. These standards would apply to new construction as well as replacement equipment.

Vehicle Standards

Recommended vehicle standards for all new and used cars imported into Palau:

Fuel economy: one tier before best of S. Korea/Japan with China equivalent.

Emissions: one tier before best of S. Korea/Japan with China equivalent.

This will raise the cost of vehicles, particularly used vehicles. This burden can be offset by providing some of the mass transit options described below.

Activity Standards

Palau has a tour guide certification programme¹³ that mentions sustainability, but many of the sustainability elements are couched in softer optional language as opposed to more mandatory wording. For example, on page 31 of the Tour Guide Manual the wording reads:

Optional: 'Be careful where you get into and out of the water to avoid walking on corals'.

More direct language would be helpful, such as:

'Walking on corals is prohibited, so snorkelers cannot be discharged and gathered on the coral portions of reefs. Passengers may only be discharged or gathered on a sandy spot or from a designated mooring away from the shallow areas of the reef'.

Cameron-Cole recommends that this certification programme be expanded to include an add-on sustainability module plus an advanced environmental certification option.

Designation and Protection of Places and Species

Palau has an excellent network of MPAs already established. The relative responsibilities for protecting close-in waters need to be more clearly delineated between the state level and the national level.

Because it is essentially impossible to identify prohibited and permitted fish once they have been cleaned, we recommend that Palau modify Title 27-Fishing, the Administrative Procedures Act, and any other relevant legislation to prohibit the 'cooler trade' of any seafood leaving the country.

¹³ <http://www.kororstat.gov.com/pdf/rangers/Tour%20Guide%20Manual.pdf>



Infrastructure Standards Need Updating

Palau's Title 34, Public Health, Safety and Welfare legislation, conveys the appropriate level of responsibility to implementing agencies to address water supply and wastewater treatment infrastructure. Amendments to this title should emphasise modular, scalable treatment technologies, such as continuous backwash upflow media (CBUM)¹⁴ over larger-scale, centralised activated sludge types of treatment plants.

Step 3: Demonstration Projects: Code Minimum and Beyond Minimum

At least two sets of demonstration projects—one implementing mandatory standards and one implementing voluntary standards should be completed within the next 12–18 months.

Demonstration Projects: Required Practise

Life safety standards for buildings. New hotels and apartment buildings would be an excellent place to demonstrate new mandatory construction standards for Palau that emphasise life and safety with a small nod to energy efficiency.¹⁵

Supporting Elements

The key supporting elements are:

1. Indicators

Key indicators for implementation of mandatory standards can be initially developed during the demonstration phase through consultations with local Palauan stakeholders. Such indicators could include compliance rate, number of trained officials, number of trained professionals, response time for inspections and other measures of compliance efficiency and effectiveness.

2. Training Programmes

Although most designers and engineers implementing larger-scale projects are familiar with the basic life safety code elements being suggested by this report, Palau should create training programmes for domestic architects and engineers to learn from the demonstration projects. Administrative incentives, such as preference to participate on government projects in the future, can be provided to local professionals.

3. Procurement

The government of Palau should ensure that there are no restrictions on the availability of materials or equipment needed to fulfil the requirements of the standards.

¹⁴ <http://www.waterworld.com/articles/print/volume-23/issue-2/product-focus/upflow-media-filtration-tackles-demanding-treatment-applications.html>

¹⁵ Objectives 1.1 and 4.1 in the PRTPF Action plan address measures to improve the development and design of buildings. While Cameron-Cole appreciates the desire to have 'internationally recognised building safety assurances', we believe this level of performance will most effectively be reached following our recommendations. Architect Cliff Terry of Koror (trbarchitects@gmail.com) has developed a simple draft code that would provide an excellent point at which to begin the conversation. As noted in previous reports, emergency egress and structural integrity should be the main emphasis. Energy-efficient exit signs can also be included.



4. Incentives

Typically, financial incentives succeed when two key factors are in place: 1) the recipient of the incentive is expending additional funds to meet the new standards, and 2) the cost of the incentive to the sponsoring agency is lower than the expenditure that would be made otherwise. For example, energy-efficient equipment is generally more expensive than inefficient equipment. However, it costs less to incentivise efficient equipment than it does to build new power plants to operate inefficient equipment.

In the case of mandatory building codes, perhaps the most effective incentives would be administrative, rather than financial. Expedited siting review and approval for projects agreeing to adopt the new code early can be powerful incentives to developers in these situations. Complementary incentives for design and engineering professionals can also be adopted.

5. Industry Development

Experience and information sharing programmes around the new standards can be developed within the Palau Visitors Association and local architecture and engineering societies.

6. Public Education

There needs to be a parallel programme informing the general public about the importance of life safety standards and the key components thereof. This would allow broader reporting of violations noticed by the general public.

Demonstration Projects: Voluntary Best Practise

Multiple ‘best practise’ demonstration projects are possible and even desirable in Palau, although listing the full number of potential projects is beyond the scope of this effort. We will explore one in detail and leave the rest as a list to be developed in-country.

Green building demonstration projects: Palau should demonstrate green hotel certification in one or more of the higher-end developments the country is seeking. Any recognised international green certification programmes such as LEED, Australia’s Green Star, or Earthcheck could be demonstrated.¹⁶

Other Projects:

- Multi-state destination development cooperation for Ngarmadu Bay. Destination host state develops the marine site and adjacent states develop the supporting infrastructure (hotels, tours, crafts, shopping, land-based activities, etc.).
- As recommended in Objective 4.I of the PRTPF, develop a ‘Complete Streets’ demonstration in Koror. In addition to the pedestrian amenities and landscaping elements envisioned, implement electric trolley service running from Main Street to the Belau National Museum. Consider implementing a parking fee in downtown Koror to incentivise expansion of the trolley service to the full length of Main Street and one or more lines extended into Malakal and Meyungs Islands. Park & Ride and charging facilities could be constructed in existing parking lot footprints.

¹⁶ The building code recommendations in Objective 4.I of the Action Plan would most effectively apply to these types of projects.



- Protect and restore fragile ecosystems by distributing visitors. Although the erosion of Palau's reputation as a world-class dive destination was mentioned as a significant issue in the PRTPF (p. 8), there were no specific actions recommended to address this problem. As described in Cameron-Cole's report for Deliverable 2: *Analysis of the Current Pacific Marine Ecotourism Industry and Key Supply Side Constraints for the Pacific*, existing or proposed Terrestrial and Marine Protected Areas (T/MPAs) can be considered 'scarce resources'. One of the best ways to sustainably protect these scarce resources is to provide a balance between access and protection.
- Restricted access to one or more key diving sites. We recommend that as part of the NTCB process, the relevant parties agree upon a demonstration project focusing on one or more showcase diving sites that are overutilised and experiment with restricting access both in terms of numbers of boats and days per week. This demonstration also should address implications for potential revenue impacts on the participating parties. Other options for determining or regulating access to different sites include:
 - A mutually agreed-upon dive tour visitation schedule that allows recovery periods and equitable distribution of business. For example, the total annual number of dive visitors found to be sustainable for the site could be distributed among different marine tour companies. Even if only one other alternative docking/visitation area is developed, the impact on nearby fragile marine environments would be cut in half.¹⁷
 - Lottery access to permits, for example, can be introduced with early participation in the lottery given to qualified vendors that are either individuals, or companies that have achieved the proper certification or accreditation per established standards.
 - License fees are another way of ensuring proper professionalisation of guides and companies accessing protected areas. As with the lottery, license fees can vary depending on whether an individual or company has been ecotourism- or Sustainable Tourism-certified/accredited.

If implemented, license and lottery fees can be used to support environmental and visitor experience assessments, as well as be used to support the expansion of T/MPA enforcement Rangers or their deputies¹⁸ educating visitors and overseeing adherence to the rules.

Supporting Elements

The key supporting elements are:

I. Indicators

These demonstration projects should track energy and water savings at a minimum, as well as incremental costs.

¹⁷ See Deliverable 2: *Analysis of the Current Pacific Marine Ecotourism Industry and Key Supply Side Constraints for the Pacific* for additional discussion about revenue sharing options that avoid 'feast or famine' situations.

¹⁸ See the New Caledonian example of marine tour industry deputies *Ambassadeurs du Lagon* Case Study in Cameron-Cole Deliverable 3: Key Actions to Support Development of an Ecotourism Sector. Additional information on Ambassadeurs du Lagon can be found here: <https://www.province-sud.nc/content/des-ambassadeurs-pour-une-protection-renforcee-du-lagon> (in French).



2. Training Programmes

Similar to the training for the mandatory standards, design and construction professionals can be trained in green design and construction approaches. Training for sustainability certificates for tour guides could also be developed through established tourism entities. Access to the restricted diving site would be one of the key incentives for obtaining this certificate.

3. Procurement

To support the introduction of green products and materials, governments at all levels can set initial targets for green procurement for their operations.

4. Incentives

Incentives for energy and water saving technology and design costs could be provided by the Palau Public Utilities Corporation based on the levelised capital and operating costs for the energy and water infrastructure required to support an equivalent amount usage for the hotel.

5. Industry Development

These projects could form the impetus for sustainability chapters within local professional and industry associations in buildings and tour guides, each of which could provide training and professional certification services.

6. Public Education

Providing ongoing progress and performance reports to the public can help teach them about green design and construction strategies and benefits.

Step 4: Developing Standards: Mandatory and Voluntary

Developing a comprehensive and complementary suite of minimum (or maximum) voluntary standards and higher-performance voluntary standards is a key component of transforming the tourism industry toward sustainability.

Below, we highlight building standards as one set of mandatory and voluntary standards consistent with the demonstration stage recommendations. Other complementary mandatory and voluntary standards could include:

- Fuel economy and emissions standards for vehicles. We recommend the initial standards require 2nd-tier energy and emissions requirements for China, Korea or Japan. Voluntary standards could do Tier 1 standards. Demonstration of these standards would be effective on fleet vehicles.
- Expanded tour guide standards to encompass sustainability.
- Equipment standards for commercial and residential appliances and equipment—air conditioning, refrigeration, water heating, motors, lighting.

Mandatory Minimum Performance Standards

Please see Appendix A for a draft of some simple life safety standards that would apply to residential units of 2 stories or more. These standards have had a fair amount of input already from the professional community in Palau and should be considered for adoption as quickly as possible. The main purpose of convening a code/standard development group would be to create the next tier of standards, as well as begin to spread the word about the development and implementation of mandatory requirements for residential buildings.



The code development group can also begin looking into similar standards for non-residential buildings. For example, Guam has an energy-saving building code that could serve as an excellent model for a second-phase mandatory/first-phase voluntary building standard for Palau. The reason we do not recommend adoption of this code initially is that it is too complex a code to administer for a jurisdiction without an experienced code enforcement infrastructure.

Supporting Elements

The key supporting elements are:

1. **Indicators; 2. Training Programmes; and 4. Incentives**

These supporting elements have limited applicability to this activity.

3. **Procurement**

Procurement activities are most applicable after the codes and standards¹⁹ have been adopted.

5. **Industry Development**

Developing standards of any kind is a terrific way to develop and involve professional and industry associations. Participants can come from all parts of the building industry: architecture, engineering, interior design, landscaping, civil engineering, construction, operations and maintenance, management, real estate, apartment, hotel and retail owners, product and equipment manufacturers, etc.

6. **Public Education**

Because of significant ‘do it yourself’ activity in Palau, early and continuous education through the media and Chiefs will be key to a smooth adoption of minimum standards and transition to more structure in the economy.

Voluntary Best Practise Performance Standards

On the voluntary front, we recommend the development of 2nd-tier mandatory standards in energy, vehicles, etc., as a 1st-tier set of voluntary ‘best practise’ standards. As recommended in earlier reports, the minimum rung of the best practise standards in most cases should be within 25%–30% of the performance requirements of mandatory standards. Higher performance levels of voluntary standards can be as much as 75% better than required practise. The key supporting elements as described above for the Mandatory Minimum Performance Standards section apply to voluntary standards as well.

Step 5: Pilot-Scale Implementation

Pilot-Scale Implementation—which could alternately be called a ‘ramp up phase’—is an administrative exercise that is designed to build up and test the ability of the market and the professional community to implement mandatory and voluntary standards and programmes at an increasing scale. Developing and refining supporting materials, training programmes and enforcement infrastructure are key aspects of this phase.

¹⁹ We distinguish between Codes and Standards the following way: Standards are voluntary and comprised of performance targets, calculation methods and supporting materials. Codes are mandatory and include all of the content of Standards, plus a legal and procedural framework for enforcement.



Generally speaking, Pilot-Scale Implementation should penetrate at least 15%–25% of the mandatory market and at least enough of the voluntary market to adequately test the ability to administer the growing scale of a voluntary programme. The size of the programme must be large enough to interest suppliers of products and services to respond to the opportunity.

Mandatory Minimum Performance Standards: Pilot-Scale Ramp Up

The stakes are much higher for Pilot-Scale Implementation of a mandatory programme than they are for a voluntary programme, so the resources dedicated must be correspondingly greater. The good news is that all of the market infrastructure that supports a mandatory standard also supports a voluntary standard, even though the implementation framework may be different.

Supporting Elements

The key supporting elements are:

1. Indicators

The key indicators for this stage involve administrative efficiency regarding:

- Numbers of inspections
- Approval of building projects
 - Delays
 - Number of projects per inspector
- Number of violations found
- Number of corrective actions taken

Other indicators in the building standards realm include the number of plan checkers and building inspectors.

2. Training Programmes

With Mandatory Standards (code), the ‘chain breaks at its weakest link’. Architects and engineers must be familiar with the code. The plan checkers in the Building Department (setting up a Building Department should be one of the first steps in the Pilot-Scale Implementation stage) must know the code even better. Builders also must know the code, as well as any subcontractors responsible for items covered by the code. Finally, Building Inspectors must be the most trained in the code for final project approval. Training programmes specific to the perspectives and requirements of each of these key players must be developed and provided throughout the country.

3. Procurement

Similarly, the procurement of goods and services that conform to imminent mandatory or voluntary standards is one of the most high-leverage activities that can be undertaken during market transformation. All national, state and local government solicitations for new buildings should require implementation of the mandatory minimum building codes. Procurement is not limited to government entities; any purchasing entity that specifies mandatory or voluntary standard performance levels during this stage sends a very powerful market signal.

4. Incentives

Once the standards have been adopted, participants in the standards development process can work with implementers to determine the best mix of administrative/non-monetary and monetary incentives. Incentive structures should incorporate both an



Early Adopter (for Mandatory Standards) and a Beyond Minimum (for Voluntary Standards) set of incentives that are designed to minimise the extra first cost of meeting mandatory standards early or higher level standards. Negative ‘incentives’ such as tariffs on non-compliant equipment or vehicles, for example, can also be implemented during this process.

5. Industry Development

The Pilot-Scale Implementation phase is one of the most fertile periods to grow industry knowledge and participation. Using industry and professional associations to disseminate training and as vehicles for Pilot-Scale Implementation projects will be key for overall market transformation. This is true of Pilot-Scale Implementation across any relevant standard or programme.

6. Public Education

As with all elements of the market transformation strategy, public education needs to be ramped up during the Pilot-Scale Implementation stage. Earned media—articles, op-eds, feature pieces, public service announcements—are preferable to paid media, such as advertising. Such a campaign would emphasise both the high-level goals of market transformation, as well as concrete activities, especially specific projects, taking place during the ramp up.

Voluntary Best Practise Performance Standards: Pilot-Scale Ramp Up

The bar is much lower for the Pilot-Scale phase of a voluntary standard, since the ultimate volumes of projects and activities that need to be supported is significantly smaller than with a mandatory code. All of the basic elements needed to support a mandatory code need to be in place for a voluntary standard: trained professionals, product availability in the market, trained evaluators, technical and marketing materials, etc., but at a smaller scale. If the bottom rung of the voluntary standard has not been set too high, then it should ultimately be able to reach 15%–25% of the market.

Supporting Elements

The key supporting elements are:

1. Indicators

In addition to the administrative performance indicators in the mandatory standards pilot ramp up, indicators for the Market-Driven standards should also include environmental performance: energy and water savings, CO₂ reductions, and other programme growth indicators (e.g., number of projects, square footage certified,²⁰ etc.) that cover the whole market, not just the pilot projects.

2. Training Programmes; 5. Industry Development; and 6. Public Education

Our recommendations for these are the same for the voluntary standards as they are for mandatory codes, but focused on the particulars of the voluntary standard.

3. Procurement

All institutions, government and private, should be encouraged to participate at some level in the implementation of the voluntary standard. The proper incentive structure will be key in promoting this activity.

²⁰ Floor/land area under certification is a better overall indicator than number of projects.



4. Incentives

Typically, financial and administrative incentives originate from regulated or government entities, such as utilities or tax agencies. Incentives for voluntary standards tend to take longer to put into place because they tend to be sponsored by private sector organisations.

Palau could dramatically accelerate its market transformation if incentives—both financial and administrative—were coordinated between the mandatory and voluntary standards. For example, expedited project review could be made available to projects that are early code adopters, as well as projects seeking to achieve the voluntary performance target. As noted earlier, ideally the voluntary standard becomes the next tier of mandatory code. Similarly, financial incentives would be based on the marginal cost of saved energy, water, etc. The savings calculated from early code or voluntary standard adoption would be the basis of the incentive, which could be delivered through rebates, lower energy bills or a reduced tax rate.

Step 6: Full-Scale Implementation and Step 7: Continuous Improvement

Mandatory Minimum Performance Standards: Full-Scale Implementation

The launch date of the mandatory minimum performance standards should be set at the beginning of the pilot/ramp up stage. It must allow enough time for the necessary buildup of expertise and compliant products in the market to hit a critical mass. Depending on the type of requirement being put into place, six (6) to eighteen (18) months should be sufficient lead-time for the market to adapt to new mandatory requirements. Adequate enforcement infrastructure must also be in place and prepared for the resulting volume of applicants.

For Continuous Improvement, the cycle time will vary from 12 months for professional standards changes to three years for changes to building codes to around five years for changes in vehicle or appliance standards. The only thing markets hate more than regulation is uncertainty. Cameron-Cole strongly recommends adopting 2 tiers of standards at a time so that industry can plan its investments and the market has some stability and predictability. This will put a greater burden on the rule-making/regulatory development bodies, but we believe it will also result in smoother and more successful implementation.

Thus, for the building standards example, the simple code in the Appendix could be adopted as the first tier and a modified version of the Guam building code²¹ could be adopted in three years. In the meanwhile, the standards-setting group can look at building codes worldwide to develop subsequent performance tiers that would bring Palau's construction industry up to world standards over the next 10–12 years.

Supporting Elements

The key supporting elements are:

1. Indicators

For buildings, both the mandatory and voluntary standards success indicators could include floor area, number of projects, percent market penetration and the reductions in energy and water use and CO₂ emissions reductions.

²¹ <https://www.energycodes.gov/adoption/states/guam>



2. Training Programmes

Cameron-Cole recommends that credential maintenance programmes be implemented that require ongoing professional development. In the building sector, this would apply to architects, engineers, construction managers, building operators, etc. There is a wealth of training materials available online that could be adapted to the situation in Palau.

3. Procurement

On average it is expected that about 15% of the market will not be at all in compliance with mandatory rules and another 5%–10% will be in partial compliance. It is absolutely vital that governmental and institutional entities are in full compliance with code requirements and demonstrate that vital leadership.

4. Incentives

During the first 2/3 of the full-scale adoption cycle, the primary incentive focus should be on Beyond Minimum incentives to prepare the market for the next set of standards. The final 1/3 of the cycle should be focused on Early Adopter incentives for the next tier of mandatory requirements. During the final 1/3 of the adoption cycle, Beyond Minimum incentives should continue to be offered, but the emphasis in marketing and promotion should be on Early Adopters. Essentially, the Beyond Minimum incentives will become Early Adopter incentives and a new tier of Beyond Minimum incentives developed to promote continuous improvement.

5. Industry Development

An effective market transformation plan will give a participatory role to professional and industry associations in the development of standards and the principal role in the delivery of training and professional development.

6. Public Education

Regular, periodic promotion of the importance of adhering to minimum performance standards is vital to maintaining a culture of compliance.

Voluntary Best Practise Performance Standards: Full-Scale Implementation

By contrast with mandatory minimum standards, which are implemented more like a series of steps, voluntary standards are in a state of continual ramping up either in performance requirements or in continuing to gain market share. As with mandatory measures, voluntary performance standards benefit from being on a regular time scale of revision and require the same supporting infrastructure. There is more leeway in allowing for smaller, ongoing continuous improvements, rather than the preparation for the periodic mass changes of a mandatory code. Generally, the principal challenge is not in the development or the stringency of the requirements, or even getting users to take up the standard. Rather, it is adequate support for projects in the pipeline that is the hardest aspect to maintain for voluntary standards. Thus, the training and industry development portions require special attention during the market transformation planning process.

Supporting Elements

The key supporting elements are:



1. Indicators; 2. Training Programmes; 5. Industry Development; and 6. Public Education

Our recommendations in these are the same for the voluntary standards as they are for mandatory codes, but focused on the particulars of the voluntary standard.

3. Procurement

We recommend that between 15% and 25% of institutional procurement be directed toward achieving the higher performance level of the voluntary standard. This suggestion need not be implemented evenly across all divisions or departments of an institution. Some portions of Palau's government (e.g., the Ministry of Natural Resources, Environment and Tourism as opposed to the Ministry of Finance) or private institution may be better suited to do most or all of their procurement according to the higher performance requirements.

4. Incentives

Because Palau is a small country, we strongly recommend that incentives for voluntary standards be developed and implemented on a national level, rather than at the state level. As noted above, coordinating these incentives with those of the mandatory standards will greatly accelerate market transformation.



APPENDIX A

Proposed Life Safety Code for the Republic of Palau

Prepared by Cliff Terry, 23 June 2016. (trbarchitects@gmail.com)

1. Purpose

1.1. The purpose of this Life Safety Code is to protect the lives and health of multiple occupants living temporarily or permanently in buildings of two or more stories in the Republic of Palau.

2. Applicability

2.1. This code shall apply to all buildings of two or more stories used for residential purposes, including apartment buildings, condominiums, hotels and any similar buildings in which people sleep overnight.

2.2. New buildings being designed, permitted or constructed after the adoption of this code shall comply with all requirements listed below before being occupied.

2.3. Existing buildings shall be retrofitted to comply with Sections 6 through 9 of this code within two years following its adoption.

3. Standards

3.1. Where reference is made to fire-resistive construction, the applicable standard shall be ASTM E 119. Where reference is made to fire-resistive doors and frames, the applicable standard shall be NFPA 80.

4. Exits

4.1. Every floor above the ground floor shall be provided with at least one interior exit corridor or exterior exit balcony. An exit stair leading directly to the ground shall be provided at each end of an exit corridor or balcony.

4.2. Minimum exit corridor or exit balcony width shall be 44".

4.3. Interior exit corridors shall be of one-hour fire-resistive construction (floor, walls and ceilings).

4.4. Exterior exit balconies may be used instead of interior exit corridors if designed so smoke cannot build up above the handrail.

5. Exit Stairs

5.1. Every occupied room shall have direct access to all exit stairs.

5.2. Exit stairs from interior exit corridors shall be in full enclosures of one-hour fire-resistive construction separated from corridors or other spaces, and may not be in open atriums or other similar spaces. Enclosures shall be provided with doors and frames in accordance with Section 7, below.

5.3. Exit stairs from exterior exit balconies may be open if designed so smoke cannot build up above the handrail.

5.4. Minimum exit stair width shall be 44".

5.5 Maximum height of steps in exit stairs shall be no more than 7", and minimum depth of tread



shall be not less than 11".

5.6. Exit stairs shall lead directly to the exterior of the building at ground level.

5.7. Where retrofitting an exit stair to an existing building may be prohibitively expensive, an approved exit ladder affixed to the exterior face of the building may be installed.

6. Exit Windows

6.1. Every sleeping room shall have at least one openable exit window to permit emergency escape and rescue.

6.2. Exit windows shall have a minimum net clear opening of 6 square feet, a minimum net clear opening height of 24", a minimum net clear opening width of 20", and a maximum sill height of 42".

6.3. Security bars or grilles may be installed on exterior walls over required exit windows if equipped with manual quick-release mechanisms accessible inside the rooms.

7. Doors and Frames

7.1. Doors from occupied rooms and doors into exit stairs shall be of not less than 20-minute fire resistive construction and shall have commercial-grade closers and latches or locks.

7.2. Doors shall not open into exit corridors or balconies. Doors shall open into exit stairs but shall not obstruct the minimum required exit width.

7.3. Frames for doors shall be of not less than 20-minute fire-resistive construction.

7.4. Doors at the bottom of exit stairs leading to the exterior of the building shall open outward and shall be secured by locking or latching hardware provided with push bars. No hardware is required on the exterior side of exit doors. Doors shall have commercial-grade closers.

8. Signage

8.1. Corridors shall have illuminated exit signs clearly visible from any point indicating the direction to the nearest exit.

8.2. Exits shall be marked with illuminated exit signs clearly visible from any point of an exit corridor or balcony.

8.3. Rooms with high occupant loads such as dining rooms and conference rooms shall have illuminated exit signs at exit doors.

8.4. Exit signs shall be powered by the building electrical system and shall have built-in batteries to provide illumination in the event of a power outage.

8.5 Exit signs shall utilise energy-efficient, long-life LED lamps

9. Smoke Detectors and Fire Alarms

9.1. All exit corridors and all occupied rooms shall be equipped with smoke detectors. Smoke detectors in occupied rooms shall be powered by both the building electrical system and batteries. Smoke detectors in corridors shall be powered by the fire alarm system.

9.2. All smoke detectors in residences such as apartments and condominiums shall be circuited so that activation of any one detector will activate all others in the building.

9.3. All exit corridors shall be provided with pull stations connected to a central fire alarm system with audible alarm devices in all corridors and all occupied rooms. The fire alarm system shall be circuited so that activation of any one-pull station will activate all alarm devices.



10. Exit Illumination

10.1. Exit corridors and stairs shall be provided with emergency lighting fixtures powered by the building electrical system. Fixtures shall be provided with battery backup power so that in the event of a power outage, the fixtures will automatically be illuminated for a minimum of 90 minutes.

10.2. Emergency lighting fixtures shall be located so that no portion of an exit corridor or stair is not illuminated when the fixtures are activated.



COUNTRY 2 — TONGA



Tonga has significant potential for growth in tourism, especially in cruise tourism. However, unlike the other countries we visited, Tonga's tourism activity has actually declined over the last five years, principally due to the fall-off in cruise ship visitation. Based on conversations with a broad base of actors in the country and our own observations and research, **issues around access to tourism destinations and services appears to be one of the significant barriers to development of Sustainable Tourism in Tonga and tourism in general.** In our report below, we suggest ways to spur transformation of the tourism industry toward sustainability by increasing access to jobs, customers, destinations and activities.

Country 2 —Tonga¹: Tourism Sector Analysis

Moving the tourism sector to economic and social sustainability will be especially important for Tonga, since the ability to realise the untapped potential in the conventional and Sustainable Tourism industry could create beneficial work for Tongans in a way that protects and enhances their unique and fragile environment.

Tonga collects and analyses visitor data by mode of transportation (e.g., air, ship, yacht) and purpose of visit (e.g., holiday, business).² A 'Visitor' is a person other than a Tongan citizen, permit holder and exempted person, who usually stays at least 24 hours in the kingdom, or who stays overnight in accommodations within Tonga. Cruise ship passengers are defined as those who arrive and depart in the same vessel, which is a cruise ship, and use that vessel's accommodations during their stay in Tonga. They are also known as 'Excursionists'. As recommended in Deliverable 4, 'Priority Recommendations for Promoting Sustainable Tourism' Tonga should work with SPTO and SPREP to develop consistent definitions for 'Visitors' and their 'activities' that would be adopted regionally. A common visitor information form for the region, including common definitions for each type of visitation, would go a long way to ensuring proper data collection and will aid subsequent analysis in the future.

As noted above, Tonga's tourism activity has declined over the last five years, as shown in Table I. The decline is due to the sharp average annual decline in visitors (-14.4%) arriving by sea, compared with overall regional growth of 11.7%.³ In absolute terms, Tonga's greatest number of visitors arrive by air; its growth has averaged 4% annually. From a regional perspective, its visitor growth rate (-3.1%) is much lower than that of other Pacific Island and Country Territories (PICTs) in our study (5.4%). Its growth in air visitors, however, slightly exceeds that of other PICTs (4.0% vs. 3.4%). See Deliverable I 'Sector Profile of Sustainable Tourism in the Pacific' for additional regional comparison details.

¹ Cameron-Cole, in its role as the successful bidder in the SPREP RFP for the Regional Assessment of Sustainable Tourism in the Pacific, is utilising with permission the Market Transformation Protocol™ developed by Principal Investigator, Robert Watson.

² The source of all data in the Tourism Sector Analysis section is <http://tonga.prism.spc.int/social/migration-statistics> and Immigration Department, Customs. Numbers and percentages on top of stacked columns in Figures represent total numbers in that year and range of percentages in those years, respectively.

³ The PICTs Cameron-Cole visited for this study are French Polynesia, New Caledonia, Palau, Tonga and Vanuatu. However, our regional tourism sector analysis also includes data from Fiji, Guam and Samoa, which we use as the basis for an overall regional comparison with Tonga. Regional averages presented here exclude the subject country (Tonga) from those figures to create a true comparison.



Air & Sea Visitors	2011	2012	2013	2014	2015	AARG ⁴	Total Visitors
Tonga	73,646	63,722	68,707	58,393	63,184	-3.1%	327,652
Air Visitors							
Tonga	46,005	47,457	48,188	50,436	53,752	4.0%	245,838
Sea Visitors							
Tonga	27,641	16,265	20,519	7,957	9,432	-14.4%	81,814

Table I: Annual Visitors by Mode of Arrival.

Figure 1 shows the trend in visitor arrival types from 2004 to 2015. The total number of visitors in that 12 year period was 709,160; the mean number of visitors per year was 59,097 and the median number was 60,746. In cases where a reason for visit is known, those arriving by air or yacht for holiday or visiting friends and/or family account for the greatest number of visitors, as do those arriving by ship in many years (although these numbers are declining as previously noted). Prior to 2010, the Not Stated category dominated and the purpose of visit was unknown; since then, the Not Stated numbers have diminished offering a clearer picture of the reason visitors come to Tonga. It's not clear why the Not Stated numbers have increased since 2013, but any effort to reduce the Not Stated numbers would be helpful in understanding visitation trends going forward.

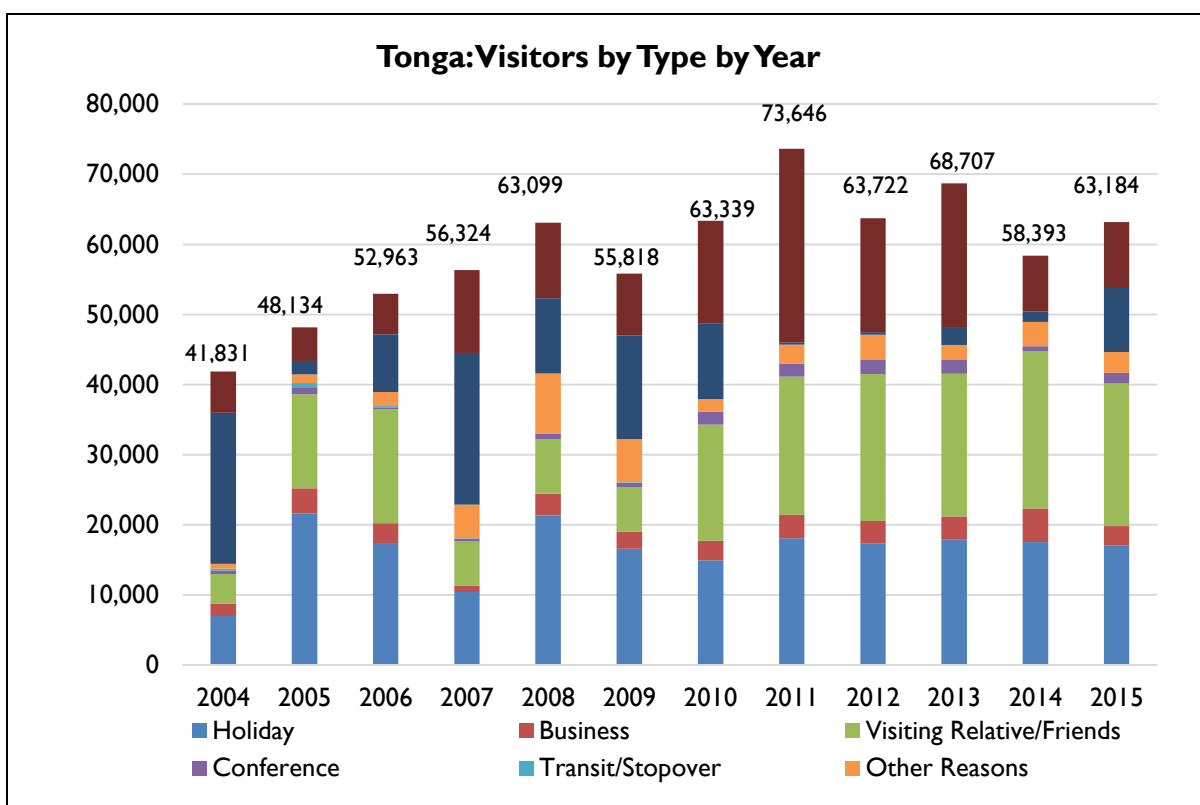


Figure 1: Visitors by Type by Year.

⁴ Average annual rate of growth.



As can be seen in Table 2, 73% of all visitors from 2004–2015 can be accounted for by holiday visitors (28%, air and yacht), visitors coming to see friends and family (25%, air and yacht) and those arriving by ship (20%, whom should be considered holiday visitors).

Visitor Type ⁵	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	TOTAL VISITORS
	Col % Row %	Col % Row %	Col % Row %	Col % Row %	Col % Row %	Col % Row %	Col % Row %	Col % Row %	Col % Row %	Col % Row %	Col % Row %	Col % Row %	Col % Row %
Holiday	6,950 17% 4%	21,572 45% 11%	17,377 33% 9%	10,415 18% 5%	21,305 34% 11%	16,540 30% 8%	14,904 24% 8%	18,046 25% 9%	17,290 27% 9%	17,909 26% 9%	17,524 30% 9%	17,064 27% 9%	196,896 28% 100%
Business	1,789 4% 5%	3,636 8% 10%	2,835 5% 8%	852 2% 2%	3,125 5% 9%	2,433 4% 7%	2,773 4% 8%	3,407 5% 10%	3,257 5% 9%	3,274 5% 9%	4,797 8% 14%	2,758 4% 8%	34,936 5% 100%
Visiting Relatives/ Friends	4,208 10% 2%	13,414 28% 8%	16,246 31% 9%	6,323 11% 4%	7,783 12% 4%	6,379 11% 4%	16,606 26% 10%	19,655 27% 11%	20,955 33% 12%	20,332 30% 12%	22,429 38% 13%	20,347 32% 12%	174,677 25% 100%
Conference	490 1% 4%	996 2% 7%	300 1% 2%	434 1% 3%	740 1% 5%	632 1% 5%	1,862 3% 14%	1,902 3% 14%	1,971 3% 15%	1,968 3% 15%	728 1% 5%	1,499 2% 11%	13,522 2% 100%
Transit/ Stopover	279 1% 22%	611 1% 48%	170 0% 13%	46 0% 4%	69 0% 5%	89 0% 7%	0 0% 0%	0 0% 0%	0 0% 0%	0 0% 0%	0 0% 0%	0 0% 0%	1,264 0% 100%
Other Reasons	712 2% 2%	1,231 3% 3%	1,989 4% 5%	4,772 8% 12%	8,576 14% 21%	6,158 11% 15%	1,782 3% 4%	2,668 4% 7%	3,619 6% 9%	2,164 3% 5%	3,445 6% 9%	2,950 5% 7%	40,066 6% 100%
Not Stated	21,527 51% 21%	1,920 4% 2%	8,219 16% 8%	21,642 38% 21%	10,692 17% 10%	14,797 27% 14%	10,813 17% 10%	327 0% 0%	365 1% 0%	2,541 4% 2%	1,513 3% 1%	9,134 14% 9%	103,490 15% 100%
Ship	5,876 14% 4%	4,754 10% 3%	5,827 11% 4%	11,840 21% 8%	10,809 17% 7%	8,790 16% 6%	14,599 23% 10%	27,641 38% 19%	16,265 26% 11%	20,519 30% 14%	7,957 14% 6%	9,432 15% 7%	144,309 20% 100%
TOTAL VISITORS	41,831 100% 5.9%	48,134 100% 6.8%	52,963 100% 7.5%	56,324 100% 7.9%	63,099 100% 8.9%	55,818 100% 7.9%	63,339 100% 8.9%	73,646 100% 10.4%	63,722 100% 9.0%	68,707 100% 9.7%	58,393 100% 8.2%	63,184 100% 8.9%	709,160 100% 100%

Table 2: Visitors by Type of Visit by Year.

Figure 2 shows the top geographical regions where all visitors to Tonga originate by their citizenship. While useful, the data don't allow us to determine how the types of visitors (e.g., holiday, business) are distributed among the country citizenships shown. For example, most holiday visitors may be citizens of New Zealand, whereas business visitors may be U.S. citizens or visitor

⁵ All of the visits by type reflect air and yacht arrivals. Ship arrivals do not list a purpose and are assumed to all be 'holiday'.



types may be uniformly distributed among the countries. Knowing from where different types of visitors originate may inform potential, targeted Sustainable Tourism marketing efforts, especially if their country of residence is known. Therefore, we suggest further analysing the data by citizenship and type of visitor. Of all the visitors arriving by air and yacht—data which is most readily available—New Zealand sends the greatest number of visitors, followed by Australia. Based on scheduled dockings, cruise visitors appear to originate approximately evenly between the two countries. Since 2004, the percentage of Tongan visitors originating in Australia and New Zealand has grown from approximately 55% to nearly 70%. The U.S. represents the next largest visitor origin but has showed some decline from approximately 19% to 12% of annual visitors. The balance of the visitors, approximately 20%, originate from the EU, Asia and other PICTs.

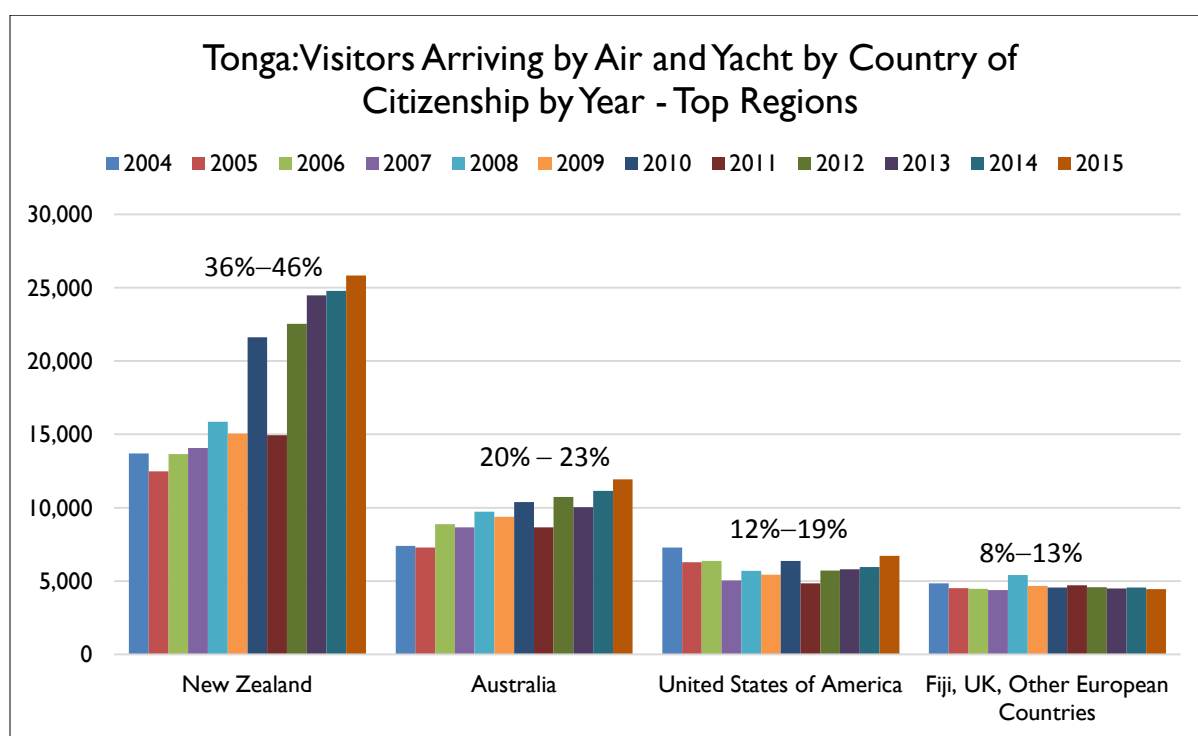


Figure 2: Visitors by Country of Citizenship.⁶

Tonga: Strategic Market Transformation Protocol

Cameron-Cole is basing its recommendations to achieve Sustainable Tourism on the Sustainable Tourism Market Transformation Protocol⁷ (Figure 3) developed by Principal Investigator Rob Watson, which has been demonstrated to be effective in transforming various sectors from utilities and energy conservation to green buildings. The Market Transformation Protocol (MTP) was introduced in Deliverable 1 and referenced extensively in Deliverables 3 and 4. It is composed of seven fundamental elements (e.g., Strategic Market Transformation Plan, Enabling Legislation)—five of which are either Regulatory or Market Driven—and six supporting elements (e.g., Indicators, Training Programmes). Together, they form the necessary framework

⁶ Does not include visitors from Asia and other PICTs, comprising the remaining 12%–13%.

⁷ See Footnote 1.



and process to fulfil the three key elements identified in the introduction to build a viable and thriving Sustainable Tourism sector. Below, we apply the fundamental and supporting elements of the Market Transformation Plan (MTP) to Tonga to demonstrate how they will collectively provide a path to Sustainable Tourism.



Figure 3: Market Transformation Protocol for Sustainable Tourism.

Country Market Transformation Theme: Access

Based on conversations with a broad base of actors in the country and Cameron-Cole's observations and research, we believe that fostering greater access to Tonga as a tourism destination and access to tourism activities and locations within Tonga would accelerate the transformation of the tourism industry.

Access to Tonga's Rich Tourism Opportunities

Most travel arrangements today are made via the Internet, in particular through search and review aggregation sites such as Kayak and TripAdvisor. Unfortunately, online information about access to Tonga's outer islands and many of its smaller establishments—especially its ecotourism-oriented facilities—is only partial to non-existent. For example, it was extremely difficult to find online fares to Vava'u or Ha'apai from Auckland, NZ, via any major online search engine. The few fares that we found went through Nadi or Suva, as opposed to Tongatapu. This was also true searching Kayak, Momondo, Expedia and Google Flights. Moreover, no travel search engine even listed direct flights between Tongatapu and Ha'apai or Vava'u!

Below, we recommend establishing a National Travel Agency (NTA) for Tonga, which can work with Internet travel aggregation sites to provide better access to Tonga's outlying regions and bring a more strategic and national focus to the tourism sector, which to date has been something of an afterthought from an economic development perspective.



Step 1: Strategic Market Transformation Plan (SMTP) for Tonga

Cameron-Cole suggests convening a ‘Tourism Market Transformation Working Group’ led by the Ministry of Tourism, the Tonga Tourism Authority and the Tonga Visitors Bureau with working group members from the Chamber of Commerce, respected tourism industry leaders from each of the Island Groups, and other key national organisations. This oversight group would supervise the development of MTPs for Tongatapu, ‘Eua, Ha’apai and Vava’u Island Groups and then synthesise these island plans into an integrated master plan for the country. We recommend during this process to have plenary meetings between the Island Group development teams to share thinking and facilitate the final coordination and integration of the national SMTP.

Step 2: Market-Specific Enabling Legislation⁸

Many elements of the necessary legislative underpinning to support a transformation toward Sustainable Tourism is in place, but significant additions or modifications will be necessary to support a viable market transformation toward sustainability for this key sector.

Sustainable Tourism Standards

The Tourism Authority Act (2012) notes that economic and environmental sustainability are important elements to consider when developing strategic tourism plans for the country. We recommend some modifications to the Act that address sustainability in the tourism industry more holistically as outlined in this report, and to specifically describe and distinguish ecotourism from conventional tourism with special designations for trained and certified ecotourism guides and companies engaged in marine activities, including snorkeling, diving and whale watchers that go beyond existing guidance developed by the Tonga Tourism Authority. Tonga should consider adapting the requirements of Australia’s ECO Certification Program for certified ecolodges and destinations to local conditions (see the Vanuatu Country Report for more detail).

Building Standards

Tonga developed a building code in 2007 that has yet to be ratified and adopted by the kingdom. We could not find a detailed draft of the requirements, but some sources indicate that it is based in part on the New Zealand building code, which does have a chapter dedicated to energy efficiency. Often, developed country standards will emphasise a performance approach, which can be very difficult to comply with and enforce in a developing economy. We generally recommend that initial standards focus on simple, prescriptive standards to help establish the compliance infrastructure. Please see the Palau Country Report for more details.

Equipment Standards

Applying efficiency standards to equipment is an easy measure to save significant amounts of energy. Equipment markets are largely global, so finding high-efficiency equipment is not difficult. Standards governing equipment importation should be limited to ENERGY STAR®-certified equipment or restricted to four stars and above under Australia and New Zealand’s energy-efficient appliance



⁸ A comprehensive, in-depth legal review of Tongan law in this area is beyond the scope of this project, however, we have attempted to identify a few key areas in core pieces of legislation that would support and further market transformation.



standards. Key equipment types are: air conditioning; refrigeration; water heating (solar should be highly promoted); computer equipment; plumbing and sanitary fixtures should also be restricted in their flow and flush rates. These standards would apply to new construction as well as replacement equipment. While higher efficiency equipment costs more, the investment is paid back in energy savings very quickly and can be offset by incentives.

Vehicle Standards

Although, adopting vehicle standards will raise the cost of vehicles, particularly used vehicles, improving Tonga's mass transit and vehicle sharing options, as described below, will help offset the financial burden of these regulations. Recommended vehicle standards for all new and used cars imported into Tonga are as follows:

Fuel economy: New cars: current mandatory fuel economy requirements by class for China, Japan or the United States. Used cars should be no more than 5–8 years old and demonstrate that they adhere to the previous tier of fuel economy requirements.

Emissions: New Zealand standards for new or used vehicles imported on or after January 2008.⁹

Activity Standards

While Tonga's Whale Watch and Swim Regulations (2013)¹⁰ represent best practise guidelines for human-whale interactions, it is well documented that the presence of whale watchers and swimmers can negatively affect the behaviour of whales.¹¹ Consistent with our recommendation below for expanding Marine Protected Area (MPA) designations within Tongan waters, the Whale Watch and Swim Regulations might be modified to include allowances for ecotourism franchises and restricting access to MPAs for ecocertified whale watch guides. Initially, extra restrictions in the legislation should principally focus on limiting access and numbers to MPA Zones and enforcement of those limits, rather than adding additional procedural rules.

Designation and Protection of Places and Species

The World Database on Protected Areas shows that Tonga only has one small MPA, representing 1.5% of the recommended coverage of marine protection. Given the importance of Tonga as a cetacean breeding and calving ground, we believe that designating key areas as protected areas, and possibly even seeking international recognition for this protection, could be a powerful marketing tool, while at the same time also making the area safer and more attractive for marine life.

Establish the 'Eua Whale Sanctuary

The Ministry of Environment and Climate Change (MECC) has the ability to propose and recommend potential marine reserves sites for designation in accordance with the Parks & Reserves Act (1988), which gives the power to designate marine reserves and the Fisheries Act (1989) for inshore areas. We recommend that the MECC, Ministry of Lands, Surveys & Natural Resources and Environment (MLSNRE), Ministry of Agriculture, Food, Forests and Fisheries (MAFF) and other relevant ministries designate the **Tongan 'Eua Island Whale Sanctuary and Reserve as a Zoned Multi-Use MPA**¹² subject to ecotourism principles as articulated more fully below. This reserve would extend 10 km from the 'Eua Island shoreline in all

⁹ <http://vehicleinspection.nzta.govt.nz/virms/entry-certification/i-and-c/exhaust/exhaust-emissions#up> Table 11-2-3 and Table 11-2-4 (On or after 1 January 2011 and before 1 January 2012).

¹⁰ <http://www.mcti.gov.to/wp-content/uploads/2013/07/WhaleWatchingandSwimmingRegulations2013English-2.pdf>

¹¹ <https://www.hindawi.com/journals/jmb/2012/807294/> ;

<http://www.sciencedirect.com/science/article/pii/S096456911500099X>

¹² See Table 4.



directions. Establishment of this area could be coordinated with the people of 'Eua to include community management areas that allow local 'Eua fishermen access within the restrictions of the ecological goals of the MPA.

Implement Ridge to Reef for Protected Land Areas

The Forest Act CAP 126 should be modified to integrate the findings of the Ridge to Reef programme analysis sponsored by the Global Environment Facility (GEF) on the 'Integrated Environmental Management of the Fanga'uta Lagoon Catchment'.¹³

Forest Buffer Zones

Over 15% of Tongan land area is protected, making it a leader in the region. However, our visit to a spectacular overlook of a protected area on the island of 'Eua was marred by having to travel through an unsustainable clear-cut: we almost could not find the access point to the overlook due to the mess left behind by the logging. We strongly recommend buffer zones between protected areas and forests where logging is permitted. These buffer zones might allow selective timber removal practises, but should restrict clear-cutting.¹⁴



Figure 4: Logging Road and Clear-Cutting at Entrance of Protected Area Overlook on 'Eua Island.

¹³ https://info.undp.org/docs/pdc/Documents/TON/Tonga%20R2R%20MSP%20ProDoc_Final.docx

¹⁴ <http://www.fao.org/docrep/u6010e/u6010e04.htm>



Infrastructure Standards

Wastewater and solid waste are growing problems in Tonga that impact the country's limited land area, as well as coastal zones. The current septic system setup leaches pollutants into the groundwater and coastal waters. Cameron-Cole recommends that the Tonga Waste Management Authority and other relevant ministries¹⁵ convene a National Wastewater Management and Sanitation Committee under the authority of the relevant ministry/ministries to address these growing issues. In addition, the Renewable Energy Act (2008) should be modified to allow for easier installation of self-generating solar panels, on residences, for self consumption.

Step 3: Demonstration Projects: Code Minimum and Beyond Minimum

The theme of our recommendations for Tonga revolves around the topic of 'access'. In the context of transforming the market to sustainability, 'access' refers to giving tourists access to sustainable and ecotourist destinations and infrastructure in Tonga as well as giving local Tongans access to economic opportunities.

We believe that the island of 'Eua, already considered to be Tonga's principal ecotourism destination, would be an excellent site to conduct various demonstrations of providing access to ecotourists and giving 'Eua's people access to associated economic benefits. This comprehensive demonstration project would implement and evaluate the environmental and economic impact of a whale and shark MPA sanctuary around 'Eua Island. In addition, forests adjacent to protected areas would be an excellent place to demonstrate buffer zones and selective harvesting, rather than clear-cutting.

Demonstration Projects: Required Practise

The waters surrounding 'Eua are increasingly being visited by high-speed tour boats from Tongatapu for whale watching, diving and spearfishing. It was reported by local tour companies during interviews that these boats engaged in 'leapfrogging',¹⁶ which is not allowed under national Whale Watch and Swim Regulations. In addition, concern was expressed about the potential disruption of whale activity and harm to whales from an increase in visitation by these high-speed vessels.

The Mandatory Minimum performance demonstration would emphasise:

- Rigorous enforcement of existing regulations regarding swimming and diving and whale watching.
- Developing mandatory minimum standards for tour activities outside of existing whale watch and swim guides that are based on more environmentally advanced guidelines for the MPA and associated land-based protected areas. These standards would be designed to ultimately fit into Australia's ECO Certification Program that is being adopted in Vanuatu and under consideration by other countries in the region.

Other Sustainable Tourism demonstrations of Mandatory Standards could include:

- Fuel economy and emissions standards for fleet and tour land vehicles. Early Adopters could be supported by additional training in maintenance and purchase incentives.

¹⁵ <http://ict.sopac.org/VirLib/MR0671.pdf>

¹⁶ The practise of interposing between an existing whale watch boat and the whales that are being interacted with.



- Demonstration of minimum building standards. These standards would apply to residential and commercial buildings in excess of two stories and emphasise life and safety elements, structural reinforcements for cyclones and some basic energy efficiency items, such as LED Exit Sign requirements. Equipment standards would address much of the energy-saving potential in buildings in the interim. See the Palau Country Report for a model life safety standard for residential buildings.
- Equipment standards for commercial and residential appliances and equipment. Energy-efficient air conditioning, refrigeration, water heating (especially solar), motors, and lighting can be demonstrated in new and existing government projects and new construction or renovation projects for other leading institutions.

Supporting Elements

The key supporting elements are:

1. Indicators

The development of key indicators should be done during the demonstration phase through consultations with local Tongan stakeholders.

2. Training Programmes

Traditionally, tour guide and whale watch training programmes are held in a single centralised location that can be too expensive for small tour companies to afford. If these trainings could be held on the islands where the tour companies were located, it would be more affordable for local tour companies to participate.

3. Procurement

The core 'Eua Whale Marine Protected Area demonstration project does not have a significant procurement component. However, other demonstration project options do. The government of Tonga can help ensure that there are fewer restrictions on the availability of materials or equipment needed to fulfil the requirements of the standards by purchasing these items as part of demonstration projects.

4. Incentives

For the core demonstration project, incentives for local 'Eua businesses should be tested. Surveys of tourism businesses on the island could identify key barriers to growing their business or adopting more advanced certification standards or improved equipment. For example, the high cost of travelling to training was one barrier, so an incentive might be to defray travel cost or training cost, or locating the training on 'Eua or Tongatapu.

For the other demonstration projects, there are opportunities to test different types of incentives. Typically, financial incentives succeed when two key factors are in place: 1) the recipient of the incentive is expending additional funds to meet the new standards, and 2) the cost of the incentive to the sponsoring agency is lower than the expenditure that would be made otherwise. For example, energy-efficient equipment is generally more expensive than inefficient equipment. However, it costs less to incentivise efficient equipment than it does to build new power plants to operate inefficient equipment.

In the case of building efficiency demonstrations, often the most effective incentives can be administrative, rather than financial. For example, expedited siting review and approval for projects agreeing to adopt the new code early can be powerful incentives



to developers in these situations. Complementary incentives for design and engineering professionals can also be adopted.

5. Industry Development

The 'Eua Ecotourism Association should be a primary focus for capacity building during this MPA zone demonstration.

For building and equipment demonstrations, the Tonga Institute of Architects and South Pacific Engineers Association should both be involved. Experience and information sharing programmes around the new standards can be developed within the Tonga Visitors Association and local architecture and engineering societies.

6. Public Education

There needs to be a national programme informing the general public about the opportunities in, and the importance of, promoting Sustainable Tourism and ecotourism areas and businesses, especially as an alternative to overseas seasonal work as fruit and produce pickers. This would allow Tongans to see the tourism industry as a potential future and a source of national pride.

Demonstration Projects: Voluntary Best Practise

Multiple 'best practise' demonstration projects are possible and even desirable in Tonga, although listing the full number of potential projects is beyond the scope of this effort. We will explore one in detail and leave the rest as a list to be developed in-country.

- Tonga should develop advanced voluntary standards for tour activities outside of existing whale watch and swim guides that are based on more environmentally advanced guidelines for MPA and associated land-based protected areas. Australia's ECO Certification Program would be the ideal base standard to adapt due to its adoption in Vanuatu and consideration by other countries in the region.
- Establish a MPA around the island of 'Eua. This MPA would extend 10 km from the 'Eua shoreline and emphasise the protection and sanctuary of whales, rays and sharks. MPA regulations would limit the total number of tours inside the MPA and the total number of tour operators allowed and the possible restriction of certain activities, such as spearfishing with scuba gear or expanding the spearfishing prohibition beyond turtles. Initial exclusivity would be given to 'Eua Island tour operators for advanced ecocertification.
- Ecotourism destination access and development cooperation for 'Eua Island. Working with the 'Eua Ecotourism Association and local residents, the Tonga Tourism Authority could identify existing tourism sites and activities that need further improvement or help discover new sites that can be developed. The adequacy of existing infrastructure and the need for proposed supporting infrastructure, such as hotels, restaurants, tours, crafts, shopping, land-based activities, etc. would be evaluated and one or two key sites demonstrated.
- Access to 'Eua Island could be improved through demonstrating a high-speed catamaran ferry that would allow cruise passengers to embark from Nuku'alofa in the morning, engage in ecotourism activities on 'Eua, then return by evening. *The impact of higher speed ferries on whale behaviour would need to be assessed.* These faster ferries could also provide improved access to the Ha'apai and Vava'u Island Groups. The demonstration



project would entail leasing a catamaran¹⁷ for a 1–3 month period in the fall when cruise dockings are most frequent. Coordination would be needed with the ‘Eua Ecotourism Association and the cruise lines to ensure that tour offerings and programmes are consistent with the desires and capacities of ‘Eua Island.

- Tonga should create a NTA that acts as the booking and/or financial intermediary between visitors, transportation companies and local hospitality and tourism activity providers. While it falls short on key usability elements (e.g., the inability to book directly through the site and few tools to customise and sort searches), www.TongaHoliday.com already provides some of these services, so would not require too much additional work to implement a basic level of functionality. Having the NTA Internet gateway to the country would help small local businesses, which would not need to register individually with many different travel sites—the NTA could provide that service for them automatically when they register as a Tonga-based business. Based on anticipated bookings and traffic, a NTA website could develop deals and other incentives to visit other parts of the country to distribute visitation and activities more widely.
 - SPTO should take the lead in concert with New Caledonia and other PICTs in negotiating with key travel aggregation websites to develop both a regional and country-focused overlay to their search engines.
- In addition to the NTA, Tonga could work with SPTO to develop a country-specific Sustainable Tourism app. The app could be developed by local Tongan IT professionals, possibly using an Application Programming Interface (API) developed by or provided by SPTO with support from SPREP. The Tonga Sustainable Tourism app could have a specific ecotourism section and give different levels of information and access to preferred bookings depending on the level of package procured through the NTA.¹⁸
 - The issue of Internet access will need to be assessed as part of this effort. Similar to enabling legislation, enabling technology infrastructure may also need to be grown.

Other Projects:

- ‘Complete Streets’ demonstrations in Nuku‘alofa. Complete Streets is a comprehensive plan for making streetscapes more pedestrian and bicycle-friendly.¹⁹ Measures include establishing alternatives to personal automobiles, such as electric shuttle buses, bicycle- and pedestrian-friendly streets with good landscaping and sidewalks. A free electric demonstration shuttle bus could run from the InterIsland Ferry Terminal to Alaivahamama‘o Bypass along Vuna and Taufa‘ahau Road. Battery charging stations²⁰ could be located at both ends of the route, as well as at the intersection of Vuna and Taufa‘ahau.

¹⁷ The Friendly Islands Shipping Agency leased a SeaLink high-speed ferry in 2016 when the MV ‘Otunga’ofa had problems with its rudder. <http://spto.org/news/18-news/5542-friendly-islands-shipping-agency-launches-fast-inter-islands-catamaran-ferry-service-in-tonga>

¹⁸ For more discussion about the Sustainable Tourism app, please see Deliverable 4: Priority Recommendations for Promoting Sustainable Tourism.

¹⁹ https://en.wikipedia.org/wiki/Complete_streets

²⁰ Tonga should consider utilising portable solar battery technology for its charging stations. This would permit flexibility, while also reducing infrastructure costs. An example of this technology is the EV ARC: <http://www.envisionsolar.com/>



- Green building demonstration projects: Tonga should demonstrate green building certification in one or more of the development projects for the Pacific Games, the new Cruise Wharf or other government projects. Any recognised international green certification programmes such as LEED, Australia's Green Star, or Earthcheck could be demonstrated.
- Sustainability certificate for tour guides. Access to restricted whale watching areas would be one of the key incentives for obtaining this certificate.

Supporting Elements

The key supporting elements are:

1. Indicators

In preparation for the development of key indicators for marine and land protected area performance, an inventory of current levels of whale and marine activity tourism, whale sightings and counts and other indicators of marine life in the proposed MPA should be undertaken by marine and terrestrial scientists, supported by local guides.²¹ This baseline would enable tracking of the impact of establishing the protected area. Key indicators for implementation of mandatory standards for activities in the protected areas could include: permissible tours, type of activity, number of visitors, etc.

Indicators would need to be developed for each demonstration according to the key objectives of the demonstration. For the Sustainable Tourism/ecotourism demonstration, key indicators might be: number of visitors to the island; broken down by activity; tourism revenues.

For the Complete Streets demonstration it might be number of passengers on the shuttle bus or the number of pedestrian visitors at different points along the route. The building demonstration(s) might look at energy and water savings, while the tour guide certification demonstration might track numbers of participants in the training programme and the number of tours conducted and the number of tourists served.

2. Training Programmes

The demonstration projects themselves will be training, so close attention should be paid to the needs and barriers faced by participants in order to develop training programmes based on the lessons learned.

3. Procurement

To support the introduction of green products and materials, governments at all levels can set initial targets for green procurement for their operations.

4. Incentives

Incentives for best practise demonstrations should seek to minimise hurdles to participation by willing firms or individuals. Participants will already be making substantial investments of time and resources in engaging in the projects. Incentives that save time or share initial increased costs will be important.

²¹ See Deliverable 4: Priority Recommendations for more discussion of developing indicators. Research in Palau shows significantly greater fish biomass in protected areas compared with open fishing areas.
<http://journals.plos.org/plosone/article?id=10.1371/journal.pone.0174787>



5. Industry Development

As above, the demonstration projects can help professional or geographical organisations develop, and training and incentives should be included to support broader application of the lessons from these activities.

6. Public Education

Providing ongoing progress and performance reports to the public can help teach them about Sustainable Tourism and ecotourism strategies and benefits.

Step 4: Developing Standards: Mandatory and Voluntary

Developing a comprehensive and complementary suite of minimum (or maximum) voluntary standards and higher-performance voluntary standards is a key component of transforming the tourism industry toward sustainability. Table 3 shows how these standards might work together.

Mandatory Standards	Voluntary Standards
Tier 1: Basic life/safety requirements to establish enforcement.	Tier 1: Initial environmental/efficiency performance requirements, to be used as Tier 2 mandatory standards. Ideally it would be based on well-established regional or international standards.
Tier 2: Use the Tier 1 Voluntary Standards performance level as the mandatory requirement.	Tier 2: Next generation of environmental/efficiency performance; will become Tier 3 mandatory standards. We suggest no more than 20%-25% improvement in stringency.
Tier 3: Use the Tier 2 Voluntary Standards performance level as the mandatory requirement.	Tier 3: Next generation of environmental/efficiency performance; will become Tier 4 mandatory standards. We suggest no more than 20%-25% improvement in stringency.

Table 3: Coordination Between Mandatory and Voluntary Standards.

Mandatory Minimum Performance Standards

Protected Area Standards

For land-based protected areas, management, access and utilisation standards based on Ridge to Reef principles should be developed and applied to Tonga's existing protected areas.²²

An MPA's hierarchy should be developed for Tonga's waters. Table 4 shows the hierarchy adapted by the U.S. that could be helpful to guide Tonga's efforts. Different levels of protection and different conservation focuses can be assigned to different MPAs. At a minimum, Tonga should adopt several Uniform or Zoned Multiple-Use MPAs for its waters, in consultation with impacted stakeholders.

²² See Footnote 11.



Level of Protection	Key Attributes	Other Aspects
Uniform Multiple-Use	Lowest protection level; multiple uses, including extractive activities, allowed.	<u>Conservation Focus</u> Natural Heritage Cultural Heritage Sustainable Production
Zoned Multiple-Use	Higher protection, with particular areas restricted from extractive activities, including fishing or harvesting cultural relics.	<u>Scale of Protection</u> Ecosystem Focal Resource
No Take	Human access is allowed, as well as some potentially harmful uses, but no extraction allowed, except for limited traditional fishing.	<u>Constancy of Protection</u> Year-round Seasonal Rotating
No Impact	Human access allowed, but all activities that could harm the site's resources or disrupt the ecological and cultural services they provide are prohibited.	<u>Permanence of Protection</u> Permanent Conditional Temporary
No Access	Human access prohibited, except for occasional scientific monitoring or restoration activities.	

Table 4: Marine Protected Area Classification Options.²³

Particularly important will be standards governing the amount and degree of access to these areas and what activities are permitted. Depending on the protected area and the history of traditional utilisation, each area's access and utilisation plan should seek to balance the need for protection with historic usage and access by surrounding peoples. Tonga should look to the example of Palau and the Palau Conservation Society, which has some excellent protected area planning and management models that would be quite applicable to this process.²⁴

Updated Tourism Standards

Based on the principal demonstration projects described above, comprehensive standards for Sustainable Tourism (Mandatory) should be developed. These standards would include tour guide standards that also encompass sustainability. We recommend that the Australia ECO nature tourism certification standards be used as a framework as is being undertaken in Vanuatu. See the Vanuatu Country Report for more details.

Standards for Vehicles, Buildings and Equipment:

- Fuel economy and emissions mandatory standards for vehicles. We recommend the initial standards require 2nd-tier energy and emissions requirements for Australia and New Zealand. Pilot-scale demonstration of these standards would be effective on government and other fleet vehicles.
- Equipment standards for commercial and residential appliances and equipment. Efficiency and labelling requirements for equipment used to supply air conditioning, refrigeration, water heating, motors, and lighting should be consistent with New Zealand's, as noted above.

²³ http://marineprotectedareas.noaa.gov/pdf/helpful-resources/factsheets/mpa_classification_may2011.pdf#level_of_protection

²⁴ <http://www.palauconservation.org/cms/index.php>



Supporting Elements

The key supporting elements are:

1. **Indicators; 2. Training Programmes; and 4. Incentives**

These supporting elements would be geared to activities based on these standards after adoption, rather than implemented during the standards setting and adoption process.

3. **Procurement**

Procurement activities are most applicable after the codes and standards²⁵ have been adopted.

5. **Industry Development**

It will be vital to involve professional and industry associations in the development of the protected area standards in adapting models to the Tongan situation. Ideally, this process would comprise experts from government, as well as from the Tongan private sector. International firms should be invited to provide expertise, but we caution against having them in a decision-making role initially. There needs to be a levelling of the playing field between local companies and international companies before sharing decision-making responsibilities.²⁶

6. **Public Education**

Because of significant ‘do it yourself’ activity in Tonga, early and continuous education through the media and information provided to/through churches will be key to a smooth adoption of minimum standards and transition to more structure in the economy.

Voluntary Best Practise Performance Standards

Protected Area Standards

For land-based protected areas, management, access and utilisation standards based on Ridge to Reef principles should be developed and applied to Tonga’s existing protected areas.²⁷ Similarly, for MPAs, strong No Take or No Impact guidelines—as per Table 4—should to be adopted for the waters around ‘Eua initially. Other areas should be considered for the full range of MPA protected status, including No Access, on a rotating basis. As noted earlier, MPA restricted areas would need to be balanced with zones allowing traditional fishing and harvesting.

Particularly important will be standards governing the amount and degree of access to these areas and what activities are permitted. Depending on the protected area and the history of traditional utilisation, each area’s access and utilisation plan should seek to balance the need for protection with historic usage and access by surrounding peoples. Palau has some excellent protected area planning and management models that would be quite applicable to this process.

Updated Tourism Standards

Based on the principal demonstration projects described above, comprehensive standards for ecotourism (voluntary, best practise) should be developed. We recommend that the Australia

²⁵ We distinguish between Codes and Standards the following way: Standards are voluntary and comprised of performance targets, calculation methods and supporting materials. Codes are mandatory and include all of the content of Standards, plus a legal and procedural framework for enforcement.

²⁶ A ‘local’ company is one that is capitalised and owned by residents of Tonga. Decisions will need to be made regarding companies owned by Tongans who reside overseas.

²⁷ See Footnote 11.



ECO Certification Program standards be used as a framework as is being undertaken in Vanuatu. See the Vanuatu Country Report for more details.

Updated Efficiency Standards for Vehicles, Buildings and Equipment

On the voluntary front, we recommend the development of a set of voluntary ‘best practise’ standards. These best practise standards can double as the next set of mandatory standards for energy, vehicles, etc. As recommended in Deliverables 1–4, the minimum rung of the best practise standards in most cases should be within 25%–30% of the performance requirements of mandatory standards. Higher performance levels of voluntary standards can be as much as 75% better than required practise.

- Fuel economy and emissions best practise standards for vehicles. We recommend that the voluntary standards match the efficiency level Tier 1 standards from New Zealand.
- Equipment standards for commercial and residential appliances and equipment. Air conditioning, refrigeration, water heating, motors, lighting could be consistent with New Zealand or ENERGY STAR requirements.

Supporting Elements

The key supporting elements are:

1. Indicators; 2. Training Programmes; 3. Procurement; 4. Incentives; 5. Industry Development; and 6. Public Education

The guidance provided under the mandatory standards section also applies to voluntary standards.

Step 5: Pilot-Scale Implementation

Pilot-Scale Implementation—which could alternately be called a ‘ramp up phase’—is an administrative exercise that is designed to build up and test the ability of the market and the professional community to implement mandatory and voluntary standards and programmes at an increasing scale. Developing and refining supporting materials, training programmes and enforcement infrastructure are key aspects of this phase.

Generally-speaking, Pilot-Scale Implementation should penetrate at least 15%–25% of the mandatory market and at least enough of the voluntary market to adequately test the ability to administer the growing scale of a voluntary programme. The size of the programme must be large enough to interest suppliers of products and services to respond to the opportunity.

Mandatory Minimum Performance Standards: Pilot-Scale Ramp Up

The stakes are much higher for Pilot-Scale Implementation of a mandatory programme than they are for a voluntary programme, so the resources dedicated must be correspondingly greater. The good news is that all of the market infrastructure that supports a mandatory standard also supports a voluntary standard, even though the implementation framework may be different.

The ramp up phase would apply to the following mandatory minimum programmes and standards:

- Creation and expansion of enforcement activities in Tonga’s protected areas, both marine and land.



- Standards for vehicles, buildings and equipment and infrastructure would be expanded beyond the demonstration projects to encompass entire kingdom agencies or companies.

Supporting Elements

The key supporting elements are:

1. Indicators

At this level of implementation, Tonga will want to track similar indicators to those developed for the demonstration project stage, with particular attention given to visitation impacts on wildlife-related indicators (number and counts of different species, etc.). In addition to visitation indicators, indicators of violations of the MPA regulations should be tracked for both marine and land-based activities. Hopefully, even as greater access brings greater numbers of visitors to protected areas, the number of violations would decrease in both relative and absolute terms.

2. Training Programmes

It appears that additional training is needed for whale watching tour operators. We recommend adding a yearly professional development element to the 3-year license allotment. In addition, Tonga should expand the non-marine tour training launched during the demonstration phase. This training can benefit from the experience of the ecocertification programme that has developed materials to train a wide variety of professionals across the industry. Operations and maintenance training will be needed for energy.

3. Procurement

The procurement of goods and services that conform to imminent mandatory or voluntary standards is one of the most high-leverage activities that can be undertaken during market transformation. All national, state and local government solicitations for new buildings should require implementation of the mandatory minimum building codes.

Procurement is not limited to government entities; any purchasing entity that specifies mandatory or voluntary standard performance levels during this stage sends a very powerful market signal.

4. Incentives

Once the standards have been adopted, participants in the standards and/or programme development process can work with implementers to determine the best mix of administrative/non-monetary and monetary incentives to promote programme participation and uptake of the standard. Incentive structures should incorporate both an Early Adopter (for mandatory standards) and a Beyond Minimum (for voluntary standards) set of incentives that are designed to minimise the extra first cost of meeting mandatory standards early or higher level standards. Negative 'incentives' such as tariffs on non-compliant equipment or vehicles, for example, can also be implemented during this process.

5. Industry Development

The Pilot-Scale Implementation phase is one of the most fertile periods to grow industry knowledge and participation. Using industry and professional associations to disseminate training and as vehicles for pilot implementation projects will be key for overall market



transformation. The whale watch, fishing and dive tour industry will be particularly important to engage in the review and enforcement of marine activity guidelines, especially in the context of expansion of MPAs. Professional engineering societies will be important to engage in vehicle, building and equipment standards development and implementation. In addition, there may be an important role for the telecommunications industry to play in providing online access for visitors to transportation, lodging and activities.

6. Public Education

As with all elements of the market transformation strategy, public education needs to be ramped up during the Pilot-Scale Implementation stage. Earned media—articles, op-eds, feature pieces, public service announcements—are preferable to paid media, such as advertising. Such a campaign would emphasise both the high-level goals of market transformation, as well as concrete activities, especially specific projects, taking place during the ramp up.

Voluntary Best Practise Performance Standards: Pilot-Scale Ramp Up

The bar is much lower for the Pilot-Scale Implementation phase of a voluntary standard, since the ultimate volumes of projects and activities that need to be supported is significantly smaller than with a mandatory code. All of the basic elements needed to support a mandatory code need to be in place for a voluntary standard: trained professionals, product availability in the market, trained evaluators, technical and marketing materials, etc., but at a smaller scale. If the bottom rung of the voluntary standard has not been set too high, then it should ultimately be able to reach 15%–25% of the market.

The ramp up phase would apply to the following voluntary programmes and standards:

- Creation and expansion of Tonga's protected areas, both marine and land, especially on 'Eua Island.
- Ecotourism certification for marine and land activity guides and expansion of 'Eua ecotourism development strategy.
- Advanced standards for vehicles, buildings, equipment and infrastructure.
- Expansion of the Complete Streets demonstration with pedestrian and cycling amenities.
- Expansion of high-speed boat access to Tonga's outer Island Groups through additional boats or expanded schedules.
- Expanded functionality of the Tonga NTA reservation gateway to greater numbers of travel, lodging and activities that can accommodate direct bookings via the website.

Supporting Elements

The key supporting elements are:

1. Indicators

In addition to the indicators developed for these programmes in the demonstration project phase, tracking the impact of access programmes will be important, including the number of visitors to 'Eua and the whale and shark sanctuary recommended in the demonstration project phase. It will also be important to track the impact of the NTA in



terms of increased bookings, especially for smaller businesses that were previously difficult to find online.

2. Training Programmes; 5. Industry Development; and 6. Public Education

Our recommendations in these are the same for the voluntary standards as they are for mandatory codes, but focused on the particulars of the voluntary standard and projects.

3. Procurement

All institutions, government and private, should be encouraged to participate at some level in the implementation of voluntary standards, projects and programmes. The proper incentive structure will be key in promoting this activity. For large capital items, such as high-speed ferries, government support for private company acquisition may be needed.

4. Incentives

Typically, financial and administrative incentives originate from regulated or government entities, such as utilities or tax agencies. Incentives for voluntary standards tend to take longer to put into place because they tend to be sponsored by private sector organisations, but Beyond Minimum projects and programmes can be implemented by governments, as we recommend here.

Incentive programmes could be developed to upgrade ecotourism infrastructure, which could be paid back from operational savings. Alternately, Tonga could incentivise volunteer experts and labour to support facility ecoupgrades on 'Eua through discounts on travel, accommodation and activity fees. Access to protected areas for ecocertified guides would be a strong incentive for these professionals to undertake training and certification.

Tonga could dramatically accelerate its market transformation if incentives—both financial and administrative—were coordinated between the mandatory and voluntary standards and projects/programmes. As noted earlier, ideally the voluntary standard becomes the next tier of mandatory code. For vehicles, buildings, equipment and infrastructure, financial incentives would be based on the marginal cost of saved energy, water, etc.

Step 6: Full-Scale Implementation and Step 7: Continuous Improvement

Mandatory Minimum Performance Standards: Full-Scale Implementation

The launch date of the mandatory minimum performance standards should be set at the beginning of the pilot/ramp up stage. It must allow enough time for the necessary buildup of expertise and compliant products in the market to hit a critical mass. Depending on the type of requirement being put into place, six months (for professional standards) to eighteen months (for building and equipment standards) should be sufficient lead-time for the market to adapt to new mandatory requirements. Adequate enforcement infrastructure must also be in place and prepared for the resulting volume of applicants. In the case of the recommended tour and activity guide standards, strong participation of the industry will shorten the time needed for full implementation uptake.

For Continuous Improvement, the cycle time will vary from 12 months for professional standards changes to three years for changes to building codes to around five years for changes in vehicle or appliance standards. The only thing markets hate more than regulation is



uncertainty. Cameron Cole strongly recommends adopting two tiers of standards at a time so that industry can plan its investments and the market has some stability and predictability. This will put a greater burden on the rule-making/regulatory development bodies, but we believe it will also result in smoother and more successful implementation.

Supporting Elements

The key supporting elements are:

1. Indicators

Continue monitoring the indicators established during the previous steps. Also the use and impact of incentives, as well as procurement programmes, should be monitored and evaluated to ensure that the incentive programmes are being properly targeted and delivering the improvements in efficiency and increased market penetration that should be expected.

2. Training Programmes

Cameron-Cole recommends that credential maintenance programmes be implemented that require ongoing professional development. In the building sector, this would apply to architects, engineers, construction managers, building operators, etc. There is a wealth of training materials available online that could be adapted to the situation in Tonga.

3. Procurement

On average it is expected that about 15% of the market will not be at all in compliance with mandatory rules and another 5%–10% will be in partial compliance. It is absolutely vital that governmental and institutional entities are in full compliance with code requirements and demonstrate that vital leadership.

4. Incentives

During the first 2/3 of the full-scale adoption cycle, the primary incentive focus should be on Beyond Minimum incentives to prepare the market for the next set of standards. The final 1/3 of the cycle should be focused on Early Adopter incentives for the next tier of mandatory requirements. During the final 1/3 of the adoption cycle, Beyond Minimum incentives should continue to be offered, but the emphasis in marketing and promotion should be on Early Adopters. Essentially, the Beyond Minimum incentives will become Early Adopter incentives and a new tier of Beyond Minimum incentives developed to promote continuous improvement.

5. Industry Development

An effective market transformation plan will give a participatory role to professional and industry associations in the development of standards and the principal role in the delivery of training and professional development.

6. Public Education

Regular, periodic promotion of the importance of adhering to minimum performance standards is vital to maintaining a culture of compliance.

Voluntary Best Practise Performance Standards: Full-Scale Implementation

By contrast with mandatory minimum standards, which are implemented more like a series of steps, voluntary standards are in a state of continual ramping up either in performance requirements or in continuing to gain market share. As with mandatory measures, voluntary



performance standards benefit from being on a regular time scale of revision and require the same supporting infrastructure. There is more leeway in allowing for smaller, ongoing continuous improvements, rather than the preparation for the periodic mass changes of a mandatory code. Generally, the principal challenge is not in the development or the stringency of the requirements, or even getting users to take up the standard; rather, it is adequate support for projects in the pipeline that is the hardest aspect to maintain for voluntary standards. Thus, the training and industry development portions require special attention during the market transformation planning process.

Supporting Elements

The key supporting elements are:

1. Indicators

Key indicators for full-scale voluntary standards should include those established for the technical and pilot-scale demonstrations, as well as tracking the impact of incentives and the impact of procurement programmes. For more conventional standards such as for buildings, equipment and vehicles, both the mandatory and voluntary standards success indicators could include floor area, number of projects covered and the amount of equipment/vehicles sold under the standards, as well as the percent of market penetration and the reductions in energy and water use and CO₂ emissions reductions.

2. Training Programmes; 5. Industry Development; and 6. Public Education

Our recommendations in these are the same for the voluntary standards as they are for mandatory codes, but focused on the particulars of the voluntary standard.

3. Procurement

We recommend that between 15% and 25% of institutional procurement be directed toward achieving the higher performance level of the voluntary standard. This suggestion need not be implemented evenly across all divisions or departments of an institution. Some portions of Tonga's government (e.g., the Ministry of Tourism as opposed to the Ministry of Finance) or certain types of private institutions (e.g., sustainable or ecoresorts) may be better suited to do most or all of their procurement according to the higher performance requirements.

4. Incentives

Because Tonga is a small country, we strongly recommend that incentives for voluntary standards be developed and implemented on a national level. As noted above, coordinating these incentives with those of the mandatory standards will greatly accelerate market transformation.



COUNTRY 3 — FRENCH POLYNESIA



Although it is one of the most-visited Pacific Island and Country Territories (PICTs) that Cameron-Cole studied, French Polynesia still has significant potential for growth in tourism, especially in cruise tourism. As we have recommended in our previous Deliverables 1–4, French Polynesia should go for quality over quantity visitation.

The SWOT¹ analysis for the 2015–2020 Tourist Development Strategy developed by French Polynesia effectively portrays the potential for Sustainable Tourism and ecotourism to be important drivers for the future of the industry in this territory. An emphasis on sustainability will reinforce the ‘civilized (French) tropical paradise’ image and emphasise the unique natural capital of the place. Our Market Transformation Protocol (MTP) can supplement and complement the excellent work already done on the Tourist Development Strategy to bring visitors’ reality more in line with French Polynesia’s image as a ‘tropical paradise with a French touch’, reinforce any missing strategic approaches and provide a unique and structured model for implementation.

Many other tropical destinations are duplicating the ‘villa over water’ experience. By developing a Sustainable Tourism sector more broadly across all the Island Groups, especially through improved access to the more remote islands, French Polynesia has the opportunity to enhance its natural beauty in a way that preserves and does not degrade the environment, while providing unique cultural experiences.

Moving the tourism sector to economic, environmental and social sustainability will be especially important for French Polynesia, since the ability to realise the untapped potential in the conventional and Sustainable Tourism industry could create beneficial work for French Polynesians in a way that protects and enhances their unique and fragile environment. In our report below, we suggest ways to spur transformation of the tourism industry toward sustainability, by increasing access to jobs, customers, destinations and activities.

Country 3 — French Polynesia:² Tourism Sector Analysis

French Polynesia collects and analyses visitor data by mode of transportation (e.g., air, ship).³ To the best of our knowledge, French Polynesia does not categorise visitors according to the purpose of their visit (e.g., holiday, business).

Visitors are made up of ‘*touristes*’ (i.e., *croisiéristes* and ‘*terrestres*’) and ‘*excursionnistes*’. Tourists are visitors who spend at least one night in French Polynesia in lodging on land or in an intra-Polynesian cruise. They are referred to as ‘*croisiéristes*’ (boat-based) or ‘*terrestres*’ (land-based). *Excursionnistes* do not spend an overnight in the country (either in land lodging or an intra-Polynesian cruise). They are passengers in transit who may visit the country for several days but who sleep aboard a trans-Pacific cruise ship. They are counted as visitors but not as tourists.

¹ Strengths, Weaknesses, Opportunities, Threats. *Stratégie De Développement Touristique De La Polynésie Française 2015–2020*. P. 15

² Cameron-Cole, in its role as the successful bidder in the SPREP RFP for the Regional Assessment of Sustainable Tourism in the Pacific, is utilising with permission the Market Transformation Protocol™ developed by Principal Investigator, Robert Watson.

³ The source of all data in the Tourism Sector Analysis section is ISPF; Point de Conjonctures de la Polynésie Française, Années 2011, 2015. Numbers and percentages on top of stacked columns in Figures represent total numbers in that year and range of percentages in those years, respectively.



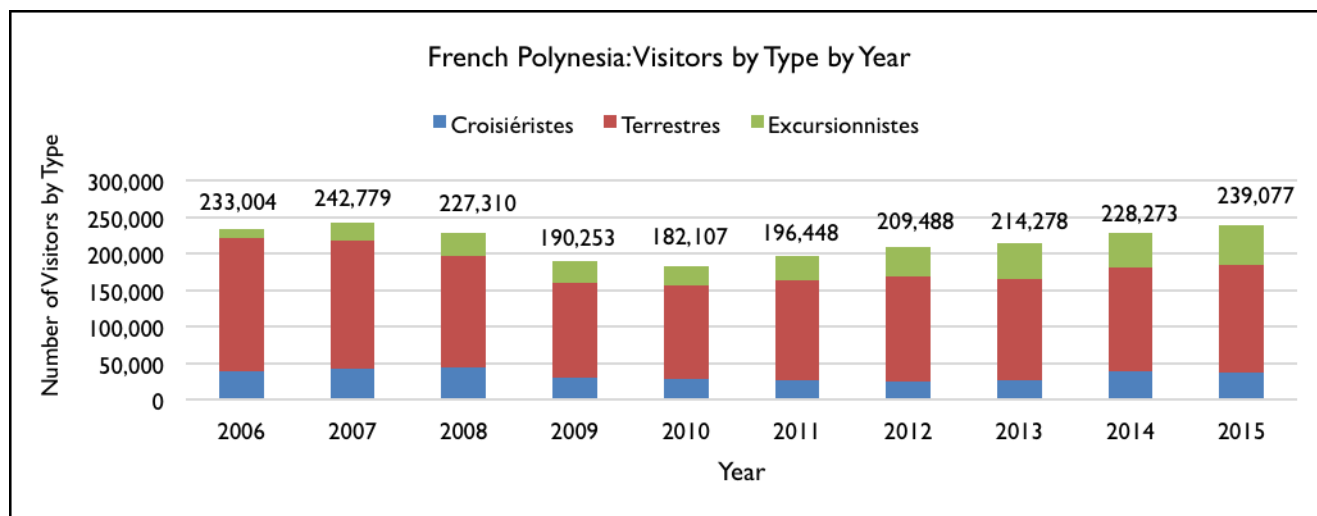
As recommended in Deliverable 4, 'Priority Recommendations for Promoting Sustainable Tourism', French Polynesia should work with SPTO and SPREP to develop consistent definitions for 'visitors' and their 'activities' that would be adopted regionally. A common visitor information form for the region, including common definitions for each type of visitation, would go a long way to ensuring proper data collection and will aid subsequent analysis in the future.

French Polynesia's tourism activity has grown steadily from 2011 to 2015, as shown in Table 1. In absolute terms, French Polynesia's greatest numbers of visitors arrive by air; however, its greatest average annual rate of growth is in visitors arriving by sea (11.2% vs. 2.1% by air). From a regional perspective, its visitor growth rate (5.0%) is comparable to that of other PICTs in our study (5.2%) as is its growth in sea visitors (11.2%) compared to that of the other PICTs (10.8%).⁴ Its growth in air visitors, however, is considerably lower (2.1% vs. 3.5%). See Deliverable 1 'Sector Profile of Sustainable Tourism in the Pacific' for additional regional comparison details.

Air & Sea Visitors	2011	2012	2013	2014	2015	AARG ⁵	Total Visitors
French Polynesia	196,448	209,488	214,278	228,273	239,077	5.0%	1,087,564
Air Visitors							
French Polynesia	136,432	143,682	137,349	141,921	147,651	2.1%	707,035
Sea Visitors							
French Polynesia	60,016	65,806	76,929	86,352	91,426	11.2%	380,529

Table 1: Annual Visitors by Mode of Arrival.

Figure 1 and Table 2 show the trend in visitor arrival types from 2006 to 2015. Over the 10-year period, there were 2,163,017 visitors. The mean number of visitors per year was 216,302 and the median number of visitors per year was 220,794.



⁴ The PICTs Cameron-Cole visited for this study are French Polynesia, New Caledonia, Palau, Tonga and Vanuatu. However, our regional tourism sector analysis also includes data from Fiji, Guam and Samoa, which we use as the basis for an overall regional comparison with French Polynesia. Regional averages presented here exclude the subject country (French Polynesia) from those figures to create a true comparison.

⁵ Average annual rate of growth.



Figure 1: Visitors by Type by Year.

As we can see, *terrestres* far outnumber both *croisiéristes* and *excursionnistes* in every year. *Excursionnistes* are increasing in number; until 2010, *croisiéristes* outnumbered *excursionnistes*, since then the reverse is true. Overall from 2006–2015, *terrestres* account for 68% of all visitors, whereas the *croisiéristes* and *excursionnistes* are tied at 16%. The trend in *terrestres* has been decreasing overall.

Visitor Type	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	TOTAL VISITORS
	Col %	Col %	Col %	Col %	Col %	Col %	Col %	Col %	Col %	Col %	Col %
	Row %	Row %	Row %	Row %	Row %	Row %	Row %	Row %	Row %	Row %	Row %
<i>Terrestres</i>	182,833	175,448	152,976	130,191	129,215	136,432	143,682	137,349	141,921	147,651	1,477,698
	78%	72%	67%	68%	71%	69%	69%	64%	62%	62%	68%
	12%	12%	10%	9%	9%	9%	10%	9%	10%	10%	100%
<i>Croisiéristes</i>	38,716	42,793	43,520	30,256	27,704	26,344	25,296	27,044	38,681	36,180	336,534
	17%	18%	19%	16%	15%	13%	12%	13%	17%	15%	16%
	12%	13%	13%	9%	8%	8%	8%	8%	11%	11%	100%
<i>Excursionnistes</i>	11,455	24,538	30,814	29,806	25,188	33,672	40,510	49,885	47,671	55,246	348,785
	5%	10%	14%	16%	14%	17%	19%	23%	21%	23%	16%
	3%	7%	9%	9%	7%	10%	12%	14%	14%	16%	100%
TOTAL	233,004	242,779	227,310	190,253	182,107	196,448	209,488	214,278	228,273	239,077	2,163,017
VISITORS	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
	11%	11%	11%	9%	8%	9%	10%	10%	11%	11%	100%

Table 2: Visitors by Type by Year.

French Polynesia produces annual reports '*Point de Conjonctures*' which offer tourist visitor analysis (i.e., for *terrestres* and *croisiéristes*) by a large number of countries and aggregates them into regions—but the underlying data were not readily found. Underlying data were found for the U.S., France, Europe (excluding France), Japan, New Zealand and Australia and are shown in Figure 2 and Table 3.⁶

⁶ The countries shown here do not account for all of the tourists in the period, 2006–2015; they do account for between 66.3% (2012) and 89.4% (2009) of all tourist visitors (i.e., *croisiéristes* and *terrestres*). Analogous data for *excursionnistes* visitors were not readily found and are not included.

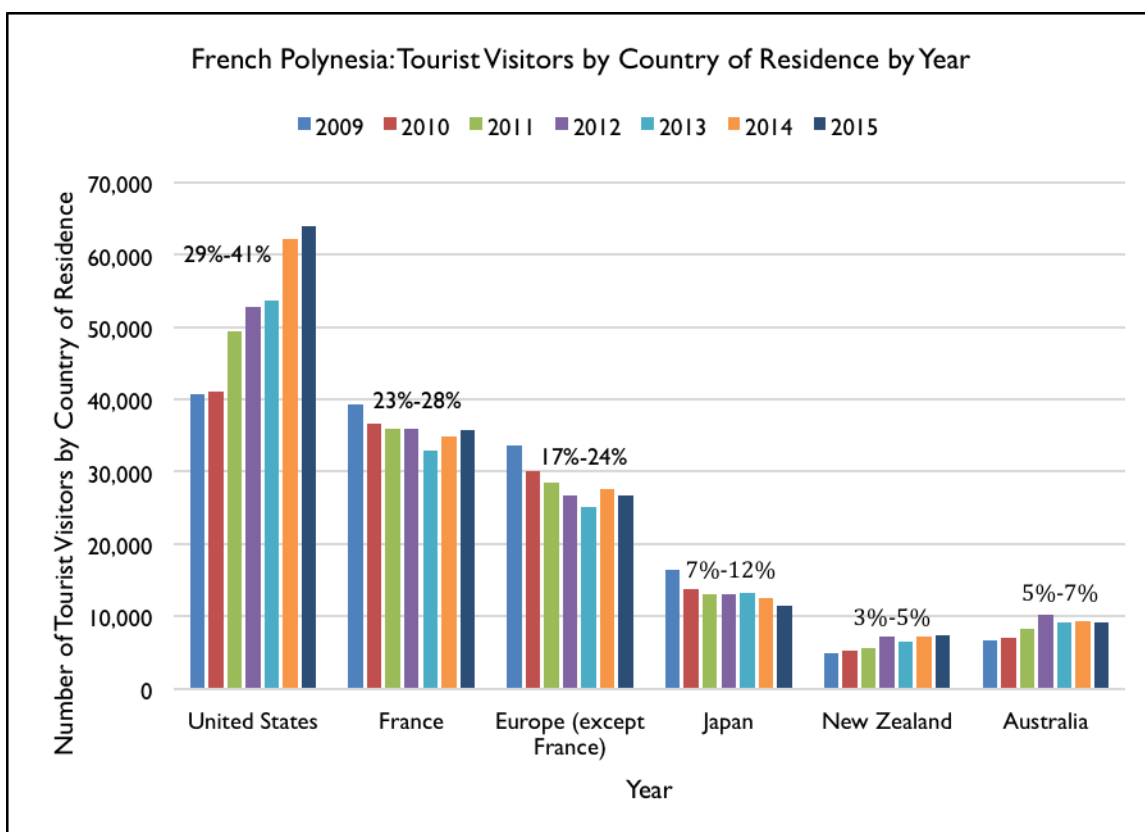


Figure 2: Visitors by Country of Residence by Year.

Regionally, the EU, including France, is the principal origin for visitors, followed by the U.S., where visitation has grown by more than 50% since 2009. Despite their relative proximity, Australia and New Zealand visitors combine to only represent 10% of the non-*Excursionniste* visitation. This is most likely because there are closer destinations—in Fiji for example—that provide a similar high-quality resort experience for less.

<u>Terrestres</u>	2009	2010	2011	2012	2013	2014	2015
United States	40,780	41,020	49,385	52,858	53,633	62,263	63,905
France	39,256	36,544	35,835	35,898	32,946	34,887	35,765
Europe (except France)	33,601	30,017	28,437	26,763	25,099	27,538	26,770
Japan	16,353	13,761	12,990	12,989	13,175	12,527	11,447
New Zealand	4,914	5,128	5,484	7,166	6,477	7,136	7,315
Australia	6,557	6,945	8,236	10,224	9,167	9,315	9,167
Total	143,470	135,425	142,378	147,910	142,510	155,680	156,384
<i>Croisiéristes</i> (no country listed)	16,977	21,494	20,398	21,068	21,883	24,922	27,447
Total <i>Croisiéristes</i> + <i>Terrestres</i>	160,447	156,919	162,776	168,978	164,393	180,602	183,831
% of <i>Touristes</i>	89.4%	86.3%	87.5%	87.5%	86.7%	86.2%	85.1%
% of <i>Croisiéristes</i>	10.6%	13.7%	12.5%	12.5%	13.3%	13.8%	14.9%

Table 3: Visitors by Country of Residence (Partial Counts).



French Polynesia: Strategic Market Transformation Protocol

Cameron-Cole is basing its recommendations to achieve Sustainable Tourism on the Sustainable Tourism Market Transformation Protocol⁷ (Figure 3) developed by Principal Investigator Rob Watson, which has been demonstrated to be effective in transforming various sectors from utilities and energy conservation to green buildings. The Market Transformation Protocol (MTP) was introduced in Deliverable 1 and referenced extensively in Deliverables 3 and 4.

It is composed of seven fundamental elements (e.g., Strategic Market Transformation Plan, Enabling Legislation)—five of which are either Regulatory or Market Driven—and six supporting elements (e.g., Indicators, Training Programmes). Together, they form the necessary framework and process to fulfil the key recommendations necessary to build a viable and thriving Sustainable Tourism sector. Below, we apply the fundamental and supporting elements of the MTP to French Polynesia to demonstrate how they will collectively provide a path to Sustainable Tourism.



Figure 3: Market Transformation Protocol for Sustainable Tourism.

Territory Market Transformation Theme: Public Education & Involvement

Based on conversations with a broad base of actors in the territory and Cameron-Cole's observations and research, French Polynesia's example shows many of the benefits of public education and involvement in environmental and economic decision-making, as well as provides opportunities for making a good process better. In addition to the common elements of a market transformation approach to making the tourism sector more sustainable, we will highlight specific elements related to the supporting element of Public Education and Participation (Figure 3, 6S).

⁷ See Footnote 2.



Step 1 — Strategic Market Transformation Plan (SMTP) for French Polynesia

The Tourist Development Strategy for French Polynesia 2015–2020⁸ (Tourist Development Strategy) contains a lot of excellent market research and many recommendations that are consistent with promoting Sustainable Tourism. Cameron-Cole believes that the Tourist Development Strategy would benefit from a complementary and supplementary overlay of our market transformation framework.

Tourism Market Transformation Working Group

To accomplish this, we suggest convening a ‘Tourism Market Transformation Working Group’ led by the Ministry of Tourism, International Air Transport, Modernisation of the Administration and the Public Service, with working group members from the Chamber of Commerce, Industry, Services and Trades,⁹ respected tourism industry leaders from each of the Island Groups,¹⁰ and other key national organisations, including, but not limited to: PROGEM, Te Mana O Te Moana, CRIOBE and others. This Working Group would supervise the development of market transformation plans for the Austral, Gambier, Marquesas, Society and Tuamotu Island Groups and then synthesise these plans into an integrated master plan for the territory. We recommend during this process to supplement the Island-Group-focused working groups with plenary meetings between all of the Island Group development teams to share thinking and facilitate the final coordination and integration of the national SMTP. French Polynesia also should include a strategic plan for Marine and Land¹¹ Protected Areas management, access and utilisation, in this strategic market transformation plan.

Marine Protected Areas Hierarchy

An expanded and internationally recognised Marine Protected Areas (MPAs) hierarchy should be developed for French Polynesian waters. At present, the territory self-certifies the vast majority of its ‘protected’ areas.¹² While there are at least 10 internationally recognised MPAs, they do not even reach 0.1% of the waters in French Polynesia’s exclusive economic zone (EEZ).¹³

Table 4 shows a marine area usage and protection hierarchy that could be helpful to guide French Polynesia’s efforts. Different levels of protection and different conservation focuses can be assigned to different MPAs. Below, Cameron-Cole will make suggestions regarding possible ways to implement a more comprehensive MPA and terrestrial protected area programme.

⁸ *Stratégie De Développement Touristique De La Polynésie Française 2015–2020*; http://www.tahiti-infos.com/Pour-relever-le-tourisme-le-plan-est-de-transformer-la-Polynesie-en-paradis-ecolo_a135789.html

⁹ <http://www.ccism.pf/>

¹⁰ Austral, Gambier, Marquesas, Society and Tuamotu.

¹¹ Based on Ridge to Reef principles. <https://sustainabledevelopment.un.org/partnership/?p=7315>

¹² <http://www.aires-marines.com/content/view/full/12834> See Deliverable 1, p. 17 for a discussion of self-certification vs. third-party certification.

¹³ <https://protectedplanet.net/country/PF>



Level of Protection	Key MPA Attributes	Other Aspects
Uniform Multiple-Use	Lowest protection level; multiple uses, including extractive activities, allowed.	<u>Conservation Focus</u> -Natural Heritage -Cultural Heritage -Sustainable Production
Zoned Multiple-Use	Higher protection, with particular areas restricted from extractive activities, including fishing or harvesting cultural relics.	<u>Scale of Protection</u> -Ecosystem -Focal Resource
No Take	Human access is allowed, as well as some potentially harmful uses, but no extraction allowed, except for limited traditional fishing.	<u>Constancy of Protection</u> -Year-round -Seasonal -Rotating
No Impact	Human access allowed, but all activities that could harm the site's resources or disrupt the ecological and cultural services they provide are prohibited.	<u>Permanence of Protection</u> -Permanent -Conditional -Temporary
No Access	Human access prohibited, except for occasional scientific monitoring or restoration activities.	

Table 4: Marine Protected Area Classification Options.¹⁴

Particularly important will be standards governing the amount and degree of access to these areas and what activities are permitted. Depending on the protected area and the history of traditional utilisation, each area's access and utilisation plan should seek to balance the need for protection with historic usage and access by surrounding peoples. French Polynesia should look to the example of Palau and the Palau Conservation Society, which has some excellent protected area planning and management models that would be quite applicable to this process.¹⁵

Regional Strategic Project: National Travel Agency for French Polynesia

Most travel arrangements today are made via the Internet, in particular through search and review aggregation sites such as Kayak and TripAdvisor. As a region-wide recommendation, we suggest establishing a National Travel Agency (NTA) for each of the Pacific countries, and French Polynesia's site currently is the closest example of what we are recommending. Of all the countries we visited, French Polynesia has the most complete online presence; the <http://www.tahiti-tourisme.com/> site has all of the information a tourist could want to plan a vacation there.¹⁶ Our concept of an NTA would dovetail with the Tourist Development Strategy's Recommendation #51 to create a complete tourism website. In addition, to give consumers confidence in the travel packages put together by the NTA, French Polynesia can adopt—and aggressively promote—the EU Package Travel Directive (2015/2302/EU).¹⁷

¹⁴ http://marineprotectedareas.noaa.gov/pdf/helpful-resources/factsheets/mpa_classification_may2011.pdf#level_of_protection This hierarchy inversely maps to the IUCN classification, where Category I has the highest protection and Category IV to lowest. <https://www.iucn.org/theme/protected-areas/about/protected-areas-categories>

¹⁵ <http://www.palauconservation.org/cms/index.php>

¹⁶ Fiji's official travel site <http://www.fiji.travel/> is similarly comprehensive.

¹⁷ http://ec.europa.eu/consumers/consumer_rights/travel/package/index_en.htm



Our principal suggestion in launching the NTA is to allow direct booking from the Tahiti-Tourisme site. At present, visitors must navigate 2–3 other pages/sites or make an international phone call or send a set itinerary to a third-party travel agent before they can book or confirm their itinerary. Moreover, at present, online information about access to French Polynesia’s outer islands and many of its smaller establishments—especially its ecotourism-oriented facilities—is partial at best.

An NTA portal, set up like TripAdvisor or other Web-based information and booking sites, would allow guests to get information, compare options and then reserve lodging, events, etc. through a single portal, creating a ‘one stop shopping’ experience. These additional features will create a strategic tool that French Polynesia can use to make its tourism sector more economically and environmentally sustainable.

Moreover, as we described in Deliverable 4, ‘Priority Recommendations for Promoting Sustainable Tourism’, having an NTA would allow strategic allocation of visitation to areas that are underutilised and away from areas that are overexploited. This could be done by limiting reservations to certain islands or bookings to certain activities, as well as providing incentives in the form of higher or lower tariffs to accommodations on islands that are being promoted or restricted. It would not be difficult to develop a revenue sharing formula that would compensate island businesses if their island is chosen for a ‘sabbatical’.

SPTO should take the lead in concert with French Polynesia and other PICTs in negotiating with key travel aggregation websites to develop both a regional and country-focused overlay to their search engines.

In addition to the NTA, French Polynesia could work with SPTO to develop a country-specific Sustainable Tourism app. The app could be developed by local French Polynesian IT professionals, possibly using an Application Programming Interface (API) developed by or provided by SPTO with support from SPREP. The French Polynesia Sustainable Tourism app could have a specific ecotourism section and give different levels of information and access to preferred bookings depending on the level of package procured through the NTA.¹⁸

The issue of Internet access will need to be assessed as part of this effort. Similar to enabling legislation, enabling technology infrastructure may also need to be grown.

Public Education as a Highlighted Market Transformation Element

The theme of our recommendations for French Polynesia revolves around the market transformation supporting element of ‘Public Education and Participation’. While public education and participation may slow down the policy-making process, they ultimately result in better policy that is more effectively implemented. Thus, in many of our recommendations we include successful examples of public education and participation from French Polynesia—such as Te Mana o Te Moana’s partnership with schools—and recommend that these examples be expanded in scope and scale.

¹⁸ For more discussion about the Sustainable Tourism app, please see Deliverable 4: Priority Recommendations for Promoting Sustainable Tourism.



Step 2: Market-Specific Enabling Legislation¹⁹

Many elements of the necessary legislative underpinning to support a transformation toward Sustainable Tourism is in place, but significant additions or modifications will be necessary to support a viable market transformation toward sustainability for the tourism sector.

Sustainable Tourism Standards

A review of the Pacific Legal Library indicates that most countries in the Pacific have specific standards and regulations governing the conduct of the Tourism Industry.²⁰ While France and the EU have extensive standards, regulations and laws governing aspects of tourism (e.g., Hospitality), '[tourism] is not understood to fall within the EU's competence or to be an EU policy area'.²¹

Given the importance of tourism to GDP—approximately 15% direct and 20% total²²—to the economy of French Polynesia, the territorial government should consider developing comprehensive legislation around the sector, with an emphasis on holistically addressing economic and environmental sustainability, in part as outlined in this report. Ideally, such legislation would specifically describe and distinguish ecotourism from conventional tourism with special designations for trained and certified ecotourism guides and companies engaged in marine activities, including snorkeling, diving and whale watching that go beyond existing guidance developed by the Tahiti Tourisme and the Ministry of Tourism, International Air Transport, Modernisation of the Administration and the Public Service. In addition, as Cameron-Cole is recommending this standard for the region as a whole, French Polynesia should consider adapting the requirements of Australia's ECO Certification Program for certified ecolodges and destinations to local conditions (see the Vanuatu Country Report for more details).

Activity Standards

While the French/EU regulations regarding travel agencies and foreign exchange are under review, we could not find any reference to standards for operating marine resource tours, such as whale watching or land-based activities in protected areas. We note that in the Tourist Development Strategy, Recommendation #96 is to reinforce the level of professionalism via obligatory certification programmes for service providers. Such performance and qualification standards are becoming more common and we recommend that French Polynesia formally adopt legislation requiring training and professional accreditation for guides and companies engaged in encounters with sensitive creatures, such as cetaceans.²³ Ecotourism Australia also

¹⁹ A comprehensive, in-depth legal review of French Polynesian law in this area is beyond the scope of this project, however, we have attempted to identify a few key areas in core pieces of legislation that would support and further market transformation.

²⁰ A global search for 'Tourism' brings up relevant legislation and/or regulations in Cook Islands, Fiji, Kiribati, Marshall Islands, Niue, Palau, Papua New Guinea, Samoa, Solomon Islands, Tonga and Vanuatu. http://www.paclii.org/cgi-bin/sinodisp.cgi?query=tourism&results=50&submit=Search&mask_world=&mask_path=&callback=on&method=auto&meta=%2Fpaclii

²¹ <http://www.europarl.europa.eu/sides/getDoc.do?type=TA&language=EN&reference=P6-TA-2007-0575>

²² http://www.ieom.fr/IMG/pdf/ne147_eclairage_tourisme_pf.pdf. Typically, tourism multipliers will be on the order of 1.3 to 1.4x for a small island economy as a whole. <https://msu.edu/course/pr/840/econimpact/multipliers.htm>.

²³ For the type of behaviour that must be discouraged, see: <https://blogs.umass.edu/rvllr/2013/07/16/rangiroa-to-moorea-french-polynesia/> Tonga has a good model for whale watch guides that could be adapted by French Polynesia. http://www.paclii.org/cgi-bin/sinodisp/to/legis/sub_leg/wwasa2008wwasr2013623/index.html?stem=&synonyms=&query=whale%20watching



has programmes and training for certifying ecoguides, which we are recommending for the region.²⁴

Designation and Protection of Places and Species

The World Database on Protected Areas shows that French Polynesia only has ten small MPAs, not even representing 0.1% of the recommended coverage of marine protection.²⁵ Given the biodiversity importance²⁶ of French Polynesian waters and land, we believe that designating key regions as Marine or Terrestrial Protected Areas, and seeking international recognition for this protection, could be a powerful marketing tool, while at the same time also making the area safer and more attractive for marine life. Significant work has been done to support designation of an MPA for the Austral Islands (Rahui Nui No Tuha'a Pae), which could provide significant benefits to the country and the global environment.²⁷

Proposed Zoning for *Rāhui Nui nō Tuha'a Pae*

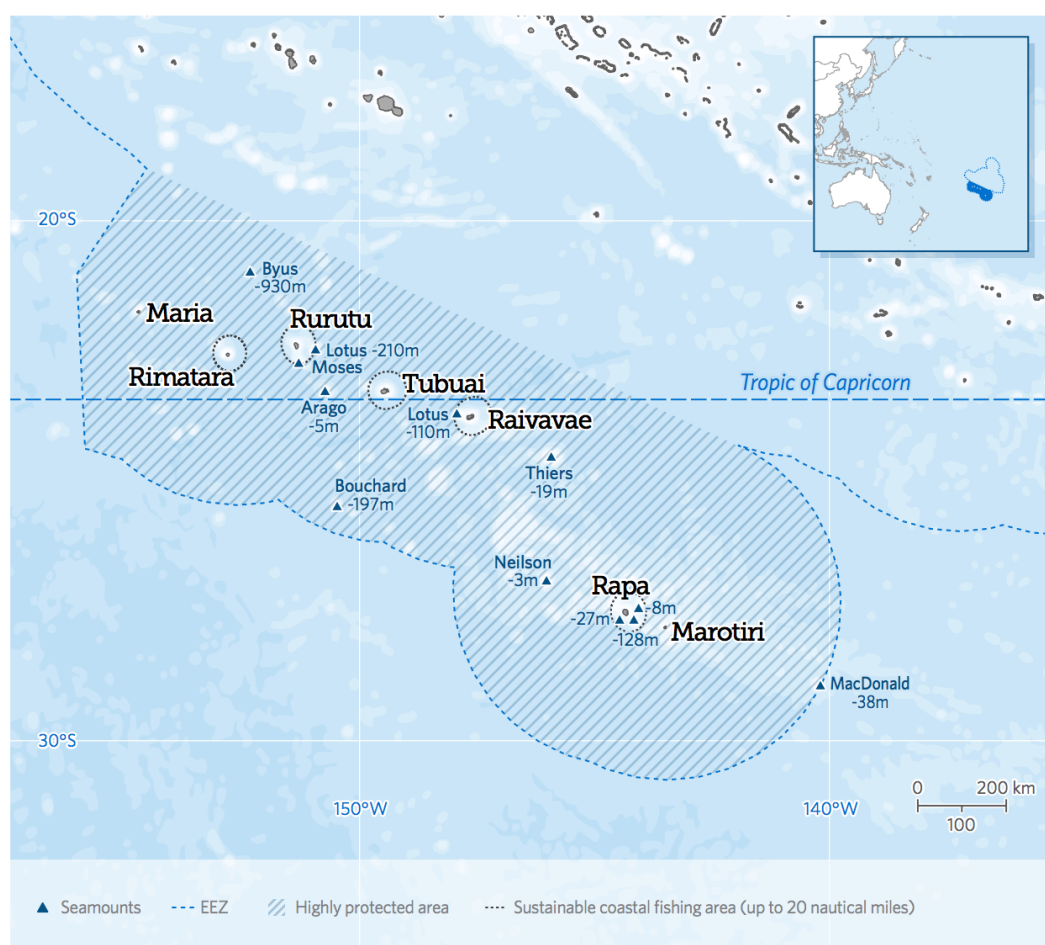


Figure 4: Proposed Marine Protected Area for the Waters Surrounding the Austral Islands.²⁸

²⁴ <https://www.ecotourism.org.au/our-certification-programs/eco-certification-5/>

²⁵ <https://protectedplanet.net/country/PF>

²⁶ French Polynesia has over 60 endemic freshwater and saltwater marine species and nearly 40 endemic terrestrial species.

²⁷ <http://www.pewtrusts.org/en/research-and-analysis/issue-briefs/2016/04/rahui-nui-no-tuhaa-pae>

²⁸ http://www.pewtrusts.org/~media/assets/2016/04/rahui_nui_no_tuhaa_pae.pdf



In contrast with its richly biodiverse lands, less than 2% of the country's land area is designated as protected. Given the importance of upstream activities in keeping coastal waters clean, expanding this protection will be vital.

Public Participation Rules

To provide the necessary legislative underpinning for robust public participation in environmental decision-making, Cameron-Cole recommends that French Polynesia adopt or adapt the public participation requirements of the following EU directives on public participation in environmental decision-making:

- Espoo Convention²⁹
- EIA Directive³⁰
- Aarhus Convention & Directive³¹

Infrastructure Standards

Wastewater and solid waste are growing problems in French Polynesia that impact the territory's limited land area, as well as coastal zones. There is a new wastewater treatment plant—Te Ora No Ananahi—in Pape'ete, while the adjacent towns of Mahina and Faa'a anticipate sanitation facilities to be installed by 2020. The approach of mini-sanitation stations also shows much promise.³² In the absence of treatment plants, the current septic system setup leaches pollutants into the groundwater and coastal waters. Cameron-Cole recommends that the French Polynesia Environment Division and other relevant ministries convene a National Wastewater Management and Sanitation Committee under the authority of the relevant Ministry/Ministries to address these growing issues.³³

Building Standards

Given the importance of energy and water to overall sustainability, we recommend that French Polynesia pass legislation that requires the territory to adapt EU mandatory regulations on buildings (RT 2005, with 2012 as 2nd tier) to the weather conditions of French Polynesia buildings. On the voluntary side, the legislation would require adaptation of an existing green building standard such as the French High Quality Environment (HQE) standards, the Australian Green Star system, or LEED.³⁴ Often, developed country standards will emphasise a performance approach, which can be very difficult to comply with and enforce in a developing economy. We generally recommend that initial efforts focus on simple, prescriptive standards to help establish the compliance infrastructure. Please see the Palau Country Report for more details on a simple staged approach for adopting building standards.

Equipment Standards

EU performance requirements for equipment, vehicle fuel economy and emissions should also be considered for adaptation and adoption. Applying efficiency standards to equipment is an easy measure to save significant amounts of energy in both new and existing buildings. Equipment markets are largely global, so finding high-efficiency equipment for importation is not difficult. Given the very high cost of imported fuels for remote countries, such as French Polynesia,

²⁹ <http://www.unece.org/fileadmin/DAM/env/eia/eia.htm>

³⁰ <http://ec.europa.eu/environment/eia/eia-legalcontext.htm>

³¹ <http://ec.europa.eu/environment/aarhus/>

³² <http://www.aqualter.com/2016/09/24/polynesie-francaise-inauguration-de-la-station-depuration-de-papeete/?lang=en>

³³ <http://www.environnement.pf/l-assainissement-des-eaux-usees>

³⁴ HQE: <http://www.behqe.com/>, Green Star: <http://new.gbca.org.au/green-star/rating-system/>, LEED: www.usgbc.org/leed



standards governing equipment importation should be limited to energy-efficient products that qualify for sale in the EU and are labelled in the top 3 tiers, as applicable to the type of equipment, of the Energy Labelling Framework Directive (2010/30/EU).³⁵

Alternately, ENERGY STAR®-certified equipment, or products earning four stars and above under Australia and New Zealand's energy-efficient appliance standards could be acceptable alternatives. Key equipment types are: air conditioning; refrigeration; water heating (solar hot water should be highly, if not exclusively, promoted); computer equipment; plumbing and sanitary fixtures should also be restricted in their flow and flush rates. These standards would apply to new construction as well as replacement equipment. While higher efficiency equipment costs more, the investment is paid back in energy savings very quickly and can be offset by incentives.

Vehicle Standards

Although adopting vehicle standards will raise the cost of vehicles, particularly used vehicles, improving French Polynesia's mass transit and vehicle sharing options, as described below, will help offset the overall financial burden of providing transportation services that these regulations might impose. Recommended vehicle standards for all new and used cars imported into French Polynesia are as follows:

Fuel economy: New cars: current mandatory fuel economy requirements by class for China, Japan or the United States. Used cars should be no more than 5–8 years old and demonstrate that they adhere to the previous tier of fuel economy requirements.

Emissions: New Zealand standards for new or used vehicles imported on or after January 2008.³⁶

Step 3: Demonstration Projects: Code Minimum and Beyond Minimum

Demonstration Projects: Required Practise

- Mandatory minimum tour guide training. This training would emphasise the strengths of French Polynesian tourism defined by the Tourist Development Strategy SWOT analysis, while also seeking to eliminate the weaknesses and minimise the threats. Such training would emphasise the Polynesian way, but with a French 'twist'. Basic eco-friendly practises would be required and would include a prohibition on behaviour that is damaging to wildlife (this should include fish feeding in the wild).
- Fuel economy and emissions standards for fleet and tour land vehicles. Early Adopters could be supported by additional training in maintenance and purchase incentives.
- Demonstration of minimum building standards. These standards would apply to residential and commercial buildings in excess of two stories and emphasise life and safety elements, structural reinforcements for cyclones and some basic energy efficiency items, such as LED Exit Sign requirements. Equipment standards would address much of the energy-saving potential in buildings in the interim. See the Palau Country Report for a model life safety standard for residential buildings.

³⁵ <http://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX:32010L0030>

³⁶ <http://vehicleinspection.nzta.govt.nz/virms/entry-certification/i-and-c/exhaust/exhaust-emissions#up> Table 11-2-3 and Table 11-2-4 (On or after 1 January 2011 and before 1 January 2012).



- Demonstration of energy performance standards for commercial and residential appliances and equipment. Energy-efficient air conditioning, refrigeration, water heating (especially solar), motors, lighting can be demonstrated in new and existing government projects and new construction or renovation projects for other leading institutions.

Supporting Elements

The key supporting elements are:

1. Indicators

The development of key indicators should be done during the demonstration phase through consultations with local French Polynesian stakeholders. For the MPA demonstration, these might include tracking levels of marine activity tourism and marine life counts in the proposed MPA that are undertaken by marine and terrestrial scientists, supported by local guides.³⁷ This baseline would enable tracking of the impact of establishing the protected area. For terrestrial protected areas, key indicators for implementation of mandatory standards for activities could include: number of permissible tours by type of activity, number of visitors, etc.

2. Training Programmes

Ideally, tourist access to MPAs would be restricted to trained and certified local guides. This would provide strong incentive to undertake training to become certified as an ecoguide. On the infrastructure side, local engineers and architects could be trained in the EU building standards, particularly in how to upgrade existing large facilities to these standards. Mechanics could receive training in how to maintain low-emitting, fuel-efficient vehicles. These training initiatives would strengthen and expand on Recommendations #90-#98 in the Tourist Development Strategy which aim to train professionals in the tourism track, including those in lodging, food service and tourist activities.

3. Procurement

The core demonstration project does not have a significant procurement component. However, other demonstration project options do, particularly demonstrations involving buildings, equipment and vehicles. The territory government of French Polynesia can help ensure that there are fewer restrictions on the availability of materials or equipment needed to fulfil the requirements of building and vehicle standards by purchasing these items as part of demonstration projects.

4. Incentives

For the other demonstration projects, there are opportunities to test different types of incentives. Typically, financial incentives succeed when two key factors are in place: 1) the recipient of the incentive is expending additional funds to meet the new standards and 2) the cost of the incentive to the sponsoring agency is lower than the expenditure that would be made otherwise. For example, energy-efficient equipment is generally more expensive than inefficient equipment. However, it costs less to incentivise efficient equipment than it does to build new power plants to provide enough electricity to power the inefficient equipment, or even to purchase expensive fossil fuels to operate existing power generators.

³⁷ See Deliverable 4: Priority Recommendations for more discussion of developing Indicators. Research in Palau shows significantly greater fish biomass in protected areas compared with open fishing areas.
<http://journals.plos.org/plosone/article?id=10.1371/journal.pone.0174787>



In the case of building efficiency demonstrations, often the most effective incentives can be administrative, rather than financial. For example, expedited siting review and approval for projects agreeing to adopt the new code early can be powerful incentives to developers in these situations. Indeed, this approach would complement Recommendation #114 in the Tourist Development Strategy which seeks to ease regulations on construction permits by rewriting codes related to the environment and sanitation, for example. Complementary incentives for design and engineering professionals can also be adopted.

5. Industry Development

For building and equipment demonstrations, the Pae Tai–Pae Uta Society of French Polynesia and other relevant professional societies should be involved.³⁸ Experience and information sharing programmes around the new standards can be developed within the French Polynesia Visitors Association and local architecture and engineering societies.

6. Public Education

Cameron-Cole recommends the development of a national programme informing the general public about the importance of promoting Sustainable Tourism and ecotourism areas and businesses. This would allow French Polynesians to see the tourism industry as a potential future career and a source of national pride.

Demonstration Projects: Voluntary Best Practise

Multiple ‘best practise’ demonstration projects are possible and even desirable in French Polynesia, although listing the full number of potential projects is beyond the scope of this effort. We will explore one in detail—the Austral Islands Marine Protected Area—and leave the rest as a list to be developed.

Core (Beyond Minimum) Demonstration Project: Austral Islands MPA

- Designating the Austral Islands as a Category I IUCN Protected Area, would be a spectacular achievement for French Polynesia, one that would strongly complement the goals of the Tourist Development Strategy of promoting the territory’s natural heritage and bring the territory’s actions in line with its ‘myth’.

The good news is that there has already been extensive scientific evaluation and a lengthy public involvement process for designating an MPA there—the Rāhui Nui nō Tuha’a Pae marine reserve proposal.³⁹ Outside of traditional fishing grounds, this MPA would encompass approximately 1 million square kilometres, making it one of the largest marine reserves in the world.⁴⁰

There is a strong scientific underpinning for protection—the proposed MPA underwent a 2-year scientific review from credible local and international scientific organisations,⁴¹ as well as an extensive and collaborative public consultation among the local councils

³⁸ <http://ptpu.org/accueil/index.php/site-map>

³⁹ http://www.pewtrusts.org/~media/assets/2016/04/rahui_nui_no_tuhaa_pae.pdf

⁴⁰ https://en.wikipedia.org/wiki/List_of_largest_protected_areas

⁴¹ Partners included: National Geographic Society; the Auckland Museum of New Zealand; the French Polynesia Department of Culture and Heritage; PROGEM (*Protection et Gestion des Ecosystèmes Marins*) consultancy and the French Polynesia Directorate of the Environment.



and populations of the five populated Austral Islands, which registered their strong desire for the No Take MPA.⁴²

- Expanded student education on MPA. Another demonstration project would be to expand the *Te Mana O Te Moana* MPA education programme throughout French Polynesia and the rest of the PICTs. To raise awareness during the Austral Island MPA proposal development process, *Te Mana O Te Moana* visited 35 Elementary and Middle schools on 6 islands: Rimatara, Tubuai, Rurutu, Raivavae, Tahiti, and Moorea and built awareness over 680 children.
- Regional tourism/hospitality training centre demonstration project. As part of a regional Sustainable Tourism training initiative with SPTO and SPREP, French Polynesia could expand the *Lycée Hôtelier* in Faa'a to serve as demonstration project for a regional hospitality and Sustainable Tourism training centre. The programme and curriculum developed there could be shared regionally with other training centres. This is consistent with the Tourist Development Strategy, which promotes the expansion and diversification of the course offerings at the *Lycée Hôtelier*, as well as providing continuing education and partnerships with internationally acclaimed chefs to raise the level of food service training (Recommendation #87). Moreover, Recommendation #92 suggests creating a school of hospitality and tourism, although we are confused as to whether this refers to expanding the existing *Lycée Hôtelier* or if the Strategy recommends a separate entity. To gauge success of this Recommendation, the Tourist Development Strategy uses a metric of the number of professors and courses offered, but Cameron-Cole suggests that the number of graduating students that are offered jobs in the hospitality industry is a better indicator of success.

Other Projects:

- To complement the basic tour guide training recommended above, French Polynesia should develop advanced voluntary standards for tour activities including dolphin and whale watch and swim guides that are based on more environmentally advanced guidelines for the MPA, as well as similar standards for land-based protected areas. Australia's ECO Certification Program would be the ideal base standard to adapt due to its adoption in Vanuatu and its being under consideration by other countries in the region.
- 'Complete Streets' demonstrations in Pape'ete. Complete Streets is a comprehensive plan for making streetscapes more pedestrian and bicycle-friendly that would complement the good job the city has done making the central area pedestrian-friendly with good landscaping and sidewalks.⁴³ Additional Complete Streets measures include establishing alternatives to personal automobiles, such as electric shuttle buses and bicycle-friendly streets. This would work well given the Tourist Development Strategy's goal of increasing bicycle rentals (Recommendation #81) to promote 'light (low-carbon) transportation'. A free electric demonstration shuttle bus initially could run in a loop or a two-way route from the Tahiti Nui Hotel down to the *Lycée Gauguin* on *Rue des Poilus*

⁴² Rimatara, Rurutu, Tubuai, Rapa, Raivavae; http://www.huffingtonpost.com/tuanainai-narii/a-marine-reserve-will-pro_b_9617156.html

⁴³ https://en.wikipedia.org/wiki/Complete_streets



Tahitiens. Battery charging stations⁴⁴ could be located at both ends of the route, as well as near Place Jacques Chirac if needed.

- Green building demonstration projects: French Polynesia already has the highest rated green resorts in the world: the LEED Platinum Brando resort on Tetiaroa. The territory should try to demonstrate a green building renovation certification for an existing resort complex. Any recognised international green certification programmes such as LEED, Australia's Green Star, or Earthcheck could be demonstrated.
- Sustainability certificate for tour guides. Access to restricted MPAs in the Australs or elsewhere would be one of the key incentives for obtaining this certificate. As noted earlier, French Polynesia's Tourist Development Strategy states the commitment to training professionals in the tourism track. More specifically, Recommendation #96 seeks to raise the level of professionalism by creating a pathway to certification for service providers. A sustainability certificate for tour guides would be in keeping with French Polynesia's commitment to Sustainable Tourism.

Supporting Elements

The key supporting elements are:

1. Indicators

In preparation for the development of key indicators for Marine and Land Protected Area performance, an inventory of current levels of whale and marine activity tourism, whale sightings and counts and other indicators of marine life in the proposed MPA should be undertaken by marine and terrestrial scientists, supported by local guides.⁴⁵ This baseline would enable tracking of the impact of establishing the protected area. Key indicators for implementation of mandatory standards for activities in the protected areas could include: number of permissible tours by type of activity, number of visitors, etc. Indicators would need to be developed for each demonstration according to the key objectives of the demonstration.

For the Sustainable Tourism/ecotourism demonstration key indicators might be: the number of visitors to the island, broken down by activity and tourism revenues.

For the Complete Streets demonstration key indicators might be number of passengers on the shuttle bus or the number of pedestrian visitors, as well as changes in commercial activity (e.g. store revenues) at different points along the route.

The building demonstration(s) indicators might look at energy and water savings.

The tour guide certification demonstration might track numbers of participants in the training programme and the number of tours conducted and the number of tourists served.

2. Training Programmes

The demonstration projects themselves will be training, so close attention should be paid to the needs and barriers faced by participants in order to develop training programmes based on the lessons learned.

⁴⁴ <http://www.envisionsolar.com/>

⁴⁵ See Footnote 37.



3. Procurement

To support the introduction of green products and materials, governments at all levels can set initial targets for green procurement for their operations.

4. Incentives

Incentives for best practise demonstrations should seek to minimise hurdles to participation by willing firms or individuals. Participants will already be making substantial investments of time and resources in engaging in the projects. Incentives that save time or share initial increased costs will be important.

One specific incentive programme Cameron-Cole recommends is to reward tourism/hospitality industry organisations (both public and private) for hiring graduates of the hospitality and tourism demonstration programme described above.

5. Industry Development

As above, the demonstration projects can help professional or geographical organisations develop, and training and incentives should be included to support broader application of the lessons from these activities.

6. Public Education

Providing ongoing progress and performance reports to the public can help teach them about Sustainable Tourism and ecotourism strategies and benefits.

Step 4: Developing Standards: Mandatory and Voluntary

Developing a comprehensive and complementary suite of minimum (or maximum) voluntary standards and higher-performance voluntary standards is a key component of transforming the tourism industry toward sustainability. Table 5 shows how these standards might work together.

Mandatory Standards	Voluntary Standards
Tier 1: Basic life/safety requirements to establish enforcement.	Tier 1: Initial environmental/efficiency performance requirements, to be used as Tier 2 mandatory standards. Ideally it would be based on well-established regional or international standards.
Tier 2: Use the Tier 1 Voluntary Standards performance level as the mandatory requirement.	Tier 2: Next generation of environmental/efficiency performance; will become Tier 3 mandatory standards. We suggest no more than 20%–25% improvement in stringency.
Tier 3: Use the Tier 2 Voluntary Standards performance level as the mandatory requirement.	Tier 3: Next generation of environmental/efficiency performance; will become Tier 4 mandatory standards. We suggest no more than 20%–25% improvement in stringency.

Table 5: Coordination Between Mandatory and Voluntary Standards.

Mandatory Minimum Performance Standards

Protected Area Standards

For land-based protected areas, management, access and utilisation standards based on Ridge to Reef principles should be developed and applied to French Polynesia's existing and potential new Marine and Terrestrial Protected Areas.⁴⁶

⁴⁶ See Footnote 13.



An MPA hierarchy should be developed for French Polynesia's waters. Table 4 above shows the hierarchy adapted by the U.S. that could be helpful to guide French Polynesia's efforts. Different levels of protection and different conservation focuses can be assigned to different MPAs. To achieve international recognition, the basic categories and definitions should be consistent with IUCN classifications.⁴⁷ At a minimum, French Polynesia should adopt several Uniform or Zoned Multiple-Use MPAs for its waters, in consultation with impacted stakeholders.

Updated Mandatory Tourism Standards

Based on the principal demonstration projects described above, comprehensive standards for Sustainable Tourism (Mandatory) should be developed. These standards would include tour guide professional standards that also encompass sustainability. We recommend that the Australia ECO Certification Nature Tourism standards be used as a framework as is being undertaken in Vanuatu (see the Vanuatu Country Report for more details).

Standards for Vehicles, Buildings and Equipment

- Fuel economy and emissions mandatory standards for vehicles. We recommend the initial standards require 2nd-tier energy and emissions requirements for Australia and New Zealand. Pilot-scale demonstration of these standards would be effective on government and other fleet vehicles.
- Equipment standards for commercial and residential appliances and equipment. Efficiency and labelling requirements for equipment used to supply air conditioning, refrigeration, water heating, motors, and lighting should be consistent with New Zealand's, as noted above.

Supporting Elements

The key supporting elements are:

1. Indicators; 2. Training Programmes; and 4. Incentives

These supporting elements would be geared to activities based on these standards after adoption, rather than implemented during the standards setting and adoption process.

3. Procurement

Procurement activities are most applicable after the codes and standards⁴⁸ have been adopted.

5. Industry Development

It will be vital to involve professional and industry associations in the development of the protected area standards in adapting models to the French Polynesian situation. Ideally, this process would comprise experts from government, as well as from the French Polynesian private sector. There needs to be a levelling of the playing field between local companies and international companies before sharing decision-making responsibilities.⁴⁹

⁴⁷ <https://www.iucn.org/theme/protected-areas/about/protected-areas-categories>

⁴⁸ We distinguish between Codes and Standards the following way: Standards are voluntary and comprised of performance targets, calculation methods and supporting materials. Codes are mandatory and include all of the content of Standards, plus a legal and procedural framework for enforcement.

⁴⁹ A 'local' company is one that is capitalised and owned by residents of French Polynesia. Decisions will need to be made regarding companies owned by French Polynesians who reside overseas.



6. Public Education

Because of significant ‘do it yourself’ activity in French Polynesia, early and continuous education through the media and information provided to/through churches will be key to a smooth adoption of minimum standards and transition to more structure in the economy.

Voluntary Best Practise Performance Standards

Protected Area Standards

For land-based protected areas, management, access and utilisation standards based on Ridge to Reef principles should be developed and applied to French Polynesia’s existing protected areas.⁵⁰ Similarly, for MPAs, strong No Take or No Impact guidelines—as per Table 4—should be adopted for the Austral Islands initially. Other areas should be considered for the full range of MPA protected status, including No Access, on a rotating basis. As noted earlier, MPA restricted areas would need to be balanced with zones allowing traditional fishing and harvesting.

Particularly important will be standards governing the amount and degree of access to these areas and what activities are permitted. Depending on the protected area and the history of traditional utilisation, each area’s access and utilisation plan should seek to balance the need for protection with historic usage and access by surrounding peoples. Palau has some excellent protected area planning and management models that would be quite applicable to this process.

Updated Best Practise Tourism Standards

Based on the principal demonstration projects described above, comprehensive standards for ecotourism (Voluntary, Best Practise) should be developed. We recommend that the Australia ECO Certification standards be used as a framework as is being undertaken in Vanuatu (see the Vanuatu Country Report for more details).

Updated Efficiency Standards for Vehicles, Buildings and Equipment

On the voluntary front, we recommend the development of a set of voluntary ‘best practise’ standards. These best practise standards can double as the next set of mandatory standards for energy, vehicles, etc. As recommended in Deliverables 1–4, the minimum rung of the best practise standards in most cases should be within 25%–30% of the performance requirements of mandatory standards. Higher performance levels of voluntary standards can be as much as 75% better than required practice.

- Fuel economy and emissions best practise standards for vehicles. We recommend that the Voluntary Standards match the efficiency level Tier 1 standards from New Zealand.
- Equipment standards for commercial and residential appliances and equipment. Air conditioning, refrigeration, water heating, motors, lighting could be consistent with New Zealand or ENERGY STAR requirements.

⁵⁰ See Footnote 13.



Supporting Elements

The key supporting elements are:

1. Indicators; 2. Training Programmes; 3. Procurement; 4. Incentives; 5. Industry Development; and 6. Public Education

The guidance provided under the mandatory standards section also applies to voluntary standards.

Step 5: Pilot-Scale Implementation

Pilot-Scale Implementation—which could alternately be called a ‘ramp up phase’—is an administrative exercise that is designed to build up and test the ability of the market and the professional community to implement mandatory and voluntary standards and programmes at an increasing scale. Developing and refining supporting materials, training programmes and enforcement infrastructure are key aspects of this phase.

Generally-speaking, Pilot-Scale Implementation should penetrate at least 15%–25% of the mandatory market and at least enough of the voluntary market to adequately test the ability to administer the growing scale of a voluntary programme. The size of the programme must be large enough to interest suppliers of products and services to respond to the opportunity.

Mandatory Minimum Performance Standards: Pilot-Scale Ramp Up

The stakes are much higher for Pilot-Scale Implementation of a mandatory programme than they are for a voluntary programme, so the resources dedicated must be correspondingly greater. The good news is that all of the market infrastructure that supports a mandatory standard also supports a voluntary standard, even though the implementation framework may be different.

The ramp up phase would apply to the following mandatory minimum programmes and standards:

- Creation and expansion of enforcement activities in French Polynesia’s protected areas, both marine and land.
- Standards for vehicles, buildings and equipment and infrastructure would be expanded beyond the demonstration projects to encompass agencies or companies across the entire territory.

Supporting Elements

The key supporting elements are:

1. Indicators

At this level of implementation, French Polynesia will want to track similar indicators to those developed for the demonstration project stage, with particular attention given to visitation impacts on wildlife-related indicators (number and counts of different species, etc.). In addition to visitation indicators, indicators of violations of the MPA regulations should be tracked for both marine and land-based activities. Hopefully, even as greater access brings greater numbers of visitors to protected areas, the number of violations would decrease in both relative and absolute terms.



2. Training Programmes

It appears that additional training is needed for whale watch tour operators. We recommend adding a yearly professional development element to the 3-year license allotment. In addition, French Polynesia should expand the non-marine tour training launched during the demonstration phase. This training can benefit from the experience of the Australia ECO Certification Program that has developed materials to train a wide variety of professionals across the industry. Operations and maintenance training will be needed for energy-efficient buildings, equipment and vehicles.

3. Procurement

The procurement of goods and services that conform to imminent mandatory or voluntary standards is one of the most high-leverage activities that can be undertaken during market transformation. All national, state and local government solicitations for new buildings should require implementation of the mandatory minimum building codes.

Procurement is not limited to government entities; any purchasing entity that specifies mandatory or voluntary standard performance levels during this stage sends a very powerful market signal.

4. Incentives

Once the standards have been adopted, participants in the standards and/or programme development process can work with implementers to determine the best mix of administrative/non-monetary and monetary incentives to promote programme participation and uptake of the standard. Incentive structures should incorporate both an 'Early Adopter' (for mandatory standards) and a 'Beyond Minimum' (for voluntary standards) set of incentives that are designed to minimise the extra first cost of meeting mandatory standards early or higher level standards. Negative 'incentives' such as tariffs on non-compliant equipment or vehicles, for example, can also be implemented during this process.

5. Industry Development

The Pilot-Scale Implementation phase is one of the most fertile periods to grow industry knowledge and participation. Using industry and professional associations to disseminate training and as vehicles for Pilot-Scale Implementation projects will be key for overall market transformation. The whale watch, fishing and dive tour industry will be particularly important to engage in the review and enforcement of marine activity guidelines, especially in the context of expansion of MPAs. Professional engineering societies will be important to engage in vehicle, building and equipment standards development and implementation. In addition, there may be an important role for the telecommunications industry to play in providing online access for visitors to transportation, lodging and activities.

6. Public Education

As with all elements of the market transformation strategy, public education needs to be ramped up during the Pilot-Scale Implementation stage. Earned media—articles, op-eds, feature pieces, public service announcements—are preferable to paid media, such as advertising. Such a campaign would emphasise both the high-level goals of market transformation, as well as concrete activities, especially specific projects, taking place during the ramp up.



Voluntary Best Practise Performance Standards: Pilot-Scale Ramp Up

The bar is much lower for the pilot-scale phase of a voluntary standard, since the ultimate volumes of projects and activities that need to be supported is significantly smaller than with a mandatory code. All of the basic elements needed to support a mandatory code need to be in place for a voluntary standard: trained professionals, product availability in the market, trained evaluators, technical and marketing materials, etc., but at a smaller scale. If the bottom rung of the voluntary standard has not been set too high, then it should ultimately be able to reach 15%–25% of the market.

The ramp up phase would apply to the following voluntary programmes and standards:

- Creation and expansion of French Polynesia's protected areas, both marine and land, especially in the Austral Islands.
- Ecotourism certification for marine and land activity guides and expansion of Austral Island ecotourism development strategy.
- Advanced standards for vehicles, buildings, equipment and infrastructure.
- Expansion of the Complete Streets demonstration with pedestrian and cycling amenities.
- Expansion of high-speed boat access to French Polynesia's outer Island Groups through additional boats or expanded schedules.
- Expanded functionality of the French Polynesia NTA reservation gateway to greater numbers of travel, lodging and activities that can accommodate direct bookings via the website.

Supporting Elements

The key supporting elements are:

1. Indicators

In addition to the indicators developed for these programmes in the demonstration project phase, tracking the impact of access programmes will be important, including the number of visitors to the Austral Island MPA recommended in the demonstration project phase. It will also be important to track the impact of the NTA in terms of increased bookings, especially for smaller businesses that were previously difficult to find online.

2. Training Programmes; 5. Industry Development; and 6. Public Education

Our recommendations in these are the same for the voluntary standards as they are for mandatory codes, but focused on the particulars of the voluntary standard and projects.

3. Procurement

All institutions, government and private, should be encouraged to participate at some level in the implementation of voluntary standards, projects and programmes. The proper incentive structure will be key in promoting this activity. For large capital items, such as high-speed ferries, government support for private company acquisition may be needed.

4. Incentives

Typically, financial and administrative incentives originate from regulated or government entities, such as utilities or tax agencies. Incentives for voluntary standards tend to take



longer to put into place because they tend to be sponsored by private sector organisations, but Beyond Minimum projects and programmes can be implemented by governments, as we recommend here.

Incentive programmes could be developed to upgrade ecotourism infrastructure, which could be paid back from operational savings. Alternately, French Polynesia could incentivise volunteer experts and labour to support facility ecoupgrades in the Austral Islands through discounts on travel, accommodation and activity fees. Access to protected areas for ecocertified guides would be a strong incentive for these professionals to undertake training and certification.

French Polynesia could dramatically accelerate its market transformation if incentives—both financial and administrative—were coordinated between the mandatory and voluntary standards and projects/programmes. As noted earlier, ideally the voluntary standard becomes the next tier of mandatory code. For vehicles, buildings, equipment and infrastructure, financial incentives would be based on the marginal cost of saved energy, water, etc.

Step 6: Full-Scale Implementation and Step 7: Continuous Improvement

Mandatory Minimum Performance Standards: Full-Scale Implementation

The launch date of the mandatory minimum performance standards should be set at the beginning of the pilot/ramp up stage. It must allow enough time for the necessary buildup of expertise and compliant products in the market to hit a critical mass. Depending on the type of requirement being put into place, six months (for professional standards) to eighteen months (for building and equipment standards) should be sufficient lead-time for the market to adapt to new mandatory requirements. Adequate enforcement infrastructure must also be in place and prepared for the resulting volume of applicants. In the case of the recommended tour and activity guide standards, strong participation of the industry will shorten the time needed for full implementation uptake.

For Continuous Improvement, the cycle time will vary from 12 months for professional standards changes to three years for changes to building codes to around five years for changes in vehicle or appliance standards. The only thing markets hate more than regulation is uncertainty. Cameron-Cole strongly recommends adopting two tiers of standards at a time so that industry can plan its investments and the market has some stability and predictability. This will put a greater burden on the rule-making/regulatory development bodies, but we believe it will also result in smoother and more successful implementation.

Supporting Elements

The key supporting elements are:

I. Indicators

Continue monitoring the indicators established during the previous steps. Also the use and impact of incentives, as well as procurement programmes, should be monitored and evaluated to ensure that the incentive programmes are being properly targeted and delivering the improvements in efficiency and increased market penetration that should be expected.



2. Training Programmes

Cameron-Cole recommends that credential maintenance programmes be implemented that require ongoing professional development. In the building sector, this would apply to architects, engineers, construction managers, building operators, etc. There is a wealth of training materials available online that could be adapted to the situation in French Polynesia.

3. Procurement

On average it is expected that about 15% of the market will not be at all in compliance with mandatory rules and another 5%–10% will be in partial compliance. It is absolutely vital that governmental and institutional entities are in full compliance with code requirements and demonstrate that vital leadership.

4. Incentives

During the first 2/3 of the full-scale adoption cycle, the primary incentive focus should be on Beyond Minimum incentives to prepare the market for the next set of standards. The final 1/3 of the cycle should be focused on Early Adopter incentives for the next tier of mandatory requirements. During the final 1/3 of the adoption cycle, Beyond Minimum incentives should continue to be offered, but the emphasis in marketing and promotion should be on Early Adopters. Essentially, the Beyond Minimum incentives will become Early Adopter incentives and a new tier of Beyond Minimum incentives developed to promote continuous improvement.

5. Industry Development

An effective market transformation plan will give a participatory role to professional and industry associations in the development of standards and the principal role in the delivery of training and professional development.

6. Public Education

Regular, periodic promotion of the importance of adhering to minimum performance standards is vital to maintaining a culture of compliance.

Voluntary Best Practise Performance Standards: Full-Scale Implementation

By contrast with mandatory minimum standards, which are implemented more like a series of steps, voluntary standards are in a state of continual ramping up either in performance requirements or in continuing to gain market share. As with mandatory measures, voluntary performance standards benefit from being on a regular time scale of revision and require the same supporting infrastructure. There is more leeway in allowing for smaller, ongoing continuous improvements, rather than the preparation for the periodic mass changes of a mandatory code. Generally, the principal challenge is not in the development or the stringency of the requirements, or even getting users to take up the standard; rather, it is adequate support for projects in the pipeline that is the hardest aspect to maintain for voluntary standards. Thus, the training and industry development portions require special attention during the market transformation planning process.

Supporting Elements

The key supporting elements are:

1. Indicators

Key indicators for full-scale Voluntary Standards should include those established for the technical and pilot-scale demonstrations, as well as tracking the impact of incentives and



the impact of procurement programmes. For more conventional standards such as for buildings, equipment and vehicles, both the mandatory and voluntary standards success indicators could include floor area, number of projects covered and the amount of equipment/vehicles sold under the standards, as well as the percent of market penetration and the reductions in energy and water use and CO₂ emissions reductions.

2. **Training Programmes; 5. Industry Development; and 6. Public Education**

Our recommendations in these are the same for the voluntary standards as they are for mandatory codes, but focused on the particulars of the voluntary standard.

3. **Procurement**

We recommend that between 15% and 25% of institutional procurement be directed toward achieving the higher performance level of the voluntary standard. This suggestion need not be implemented evenly across all divisions or departments of an institution. Some portions of French Polynesia's government (e.g., the Ministry of Tourism as opposed to the Ministry of Finance) or certain types of private institutions (e.g., sustainable or ecoresorts) may be better suited to do most or all of their procurement according to the higher performance requirements.

4. **Incentives**

We strongly recommend that incentives for voluntary standards be developed and implemented at the territory level. As noted above, coordinating these incentives with those of the mandatory standards will greatly accelerate market transformation.



COUNTRY 4 — NEW CALEDONIA



New Caledonia has the second largest landmass of the Pacific Island Country Territories (PICTs) behind the Solomon Islands,¹ ranks 3rd in visitation but still has significant potential for growth in tourism. This potential is in part reflected by plans to more than double cruise tourism visitation, which is already the largest in the region. Although the potential for growth in New Caledonia tourism—especially if done sustainably—is great, it is not clear that this path of development or economic activity is desired or valued by the territory's government and the majority of the territory's residents. Unlike most of the other PICTs, nickel mining and related industry are the dominant economic drivers in New Caledonia, with tourism representing only about 5% of GDP. However, given the global downturn in nickel markets, there has been recent work on developing a national tourism strategy and growing tourism to 7% of GDP.² The other significant unknown facing the further development of tourism is the outcome of the impending independence referendum.³

In terms of Sustainable Tourism, New Caledonia's biggest challenge will be improving the distribution of visitors. At present, the vast majority of visitors, both air and sea, arrive and stay in the southern portion of the main island, seldom venturing more than an hour or two from the capital city of Noumea. Cruise visitation is also growing rapidly in the smaller and more fragile Île des Pins, as well as Lifou and Maré in the Loyalty Islands.

Tourism development and promotion is carried out by each of the Provinces—Northern, Southern and the Loyalty Islands—rather than territory-wide. The result of this structure of the tourism industry is a self-reinforcing cycle—to wit: lack of infrastructure and access to tourist activities results in low visitation—that hinders resources from being available to develop tourism infrastructure, particularly in the north. Because visitation is so heavily concentrated in a few areas in the south, there is already visible degradation at key sites in the Southern Province, including the Noumea Lagoon and key sites at Île des Pins. Below we will describe how an integrated territory-level tourism approach would result in greater economic benefits to New Caledonia and help preserve its unique natural beauty. These issues have been recognised and there is a national process to unify the industry through the creation of a national Tourism Development Bureau (*Agence de Développement Touristique*).⁴

Country 4 — New Caledonia: Tourism Sector Analysis

New Caledonia collects and analyses visitor data according to mode of transportation (i.e., air and cruise ship), as well as by purpose of visit (e.g., holiday, business).⁵ Visitors ('*touristes*', i.e., Business, Holiday, Friends, Family, Other and Unknown) arrive at the international airport, *L'aéroport de Tontouta*. Visitor numbers are actually underreported, since they exclude visitors from French Polynesia, Wallis and Futuna, and Vanuatu; New Caledonia chooses not to include visitors from these islands in its totals and we are following its example.

¹ As noted in Deliverable 1, 'Sector Profile of Sustainable Tourism in the Pacific', we have excluded Papua New Guinea, for the purpose of this analysis.

² *Stratégie De Développement Touristique Des Services Et Des Loisirs 2025*, Gouvernement de la Nouvelle Calédonie; Province Îles Loyauté, Province Nord, Province Sud. (2016) at page 30.
https://gouv.nc/sites/default/files/atoms/files/dossier_les_ateliers_du_tourisme_091216_v7.pdf

³ It is beyond the scope of this analysis to opine on the impacts on tourism of the different possible outcomes of the referendum.

⁴ *Stratégie*, Footnote 3 above, at page 40.

⁵ The source of all data in the Tourism Sector Analysis section is www.isee.nc; Numbers and percentages on top of stacked columns in Figures represent total numbers in that year and range of percentages in those years, respectively.



As recommended in Deliverable 4, 'Priority Recommendations for Promoting Sustainable Tourism', New Caledonia should work with SPTO and SPREP to develop consistent definitions for 'visitors' and their 'activities' that would be adopted regionally. A common visitor information form for the region, including common definitions for each type of visitation, would go a long way to ensuring proper data collection and will aid subsequent analysis in the future.

Air & Sea Visitors	2011	2012	2013	2014	2015	AARG	Total Visitors
New Caledonia	347,559	390,145	493,678	528,823	558,075	12.9%	2,318,280
Air Visitors							
New Caledonia	111,875	112,204	107,753	107,187	113,951	0.5%	552,970
Sea Visitors							
New Caledonia	235,684	277,941	385,925	421,636	444,124	17.8%	1,765,310

Table 1: Annual Visitors by Mode of Arrival.

New Caledonia's tourism activity has grown steadily from 2011 to 2015. From a regional perspective, its overall visitor growth rate (12.9%) is more than triple that of other PICTs in our study (4.0%).⁶ As shown in Table 1, the vast majority of this growth results from visitors arriving by sea. In contrast to the nearly flat growth of air visitor arrivals (0.5% AARG⁷), cruise visitation is soaring: growing an average of nearly 18% per year, which is almost triple the growth of cruise ship visitation across the region (6.6%).⁸

Although the territory is fairly close by air to the Australia and New Zealand markets, its growth in air visitors is much lower than the regional average (0.5% vs. 3.5%). Cameron-Cole believes that one reason might be the relative difficulty in accessing destinations from the La Tontouta International Airport, which is quite remote. Below, we will discuss opportunities for greater utilisation of the Tontouta facility as a way of improving access to other regions of New Caledonia and relieving some of the stress on the South Province's environmental resources.

Figure 1 and Table 2 show the trend in visitor arrival types from 2006–2015. Over the 10-year period, there were 3,564,937 visitors. The mean number of visitors per year was 356,494 and the median number of visitors per year was 314,683. By far, the greatest percent of visitors are holiday visitors for a total of 85%: importantly, 69% of those arrive by cruise ship whereas only 16% arrive by air. Moreover, cruise ship passengers more than tripled in this time period.

⁶ The PICTs Cameron-Cole visited for this study are French Polynesia, New Caledonia, Palau, Tonga and Vanuatu. However, our regional tourism sector analysis also includes data from Fiji, Guam and Samoa, which we use as the basis for an overall regional comparison with New Caledonia. Regional averages presented here exclude the subject country (New Caledonia) from those figures to create a true comparison.

⁷ Average annual rate of growth.

⁸ Ibid.

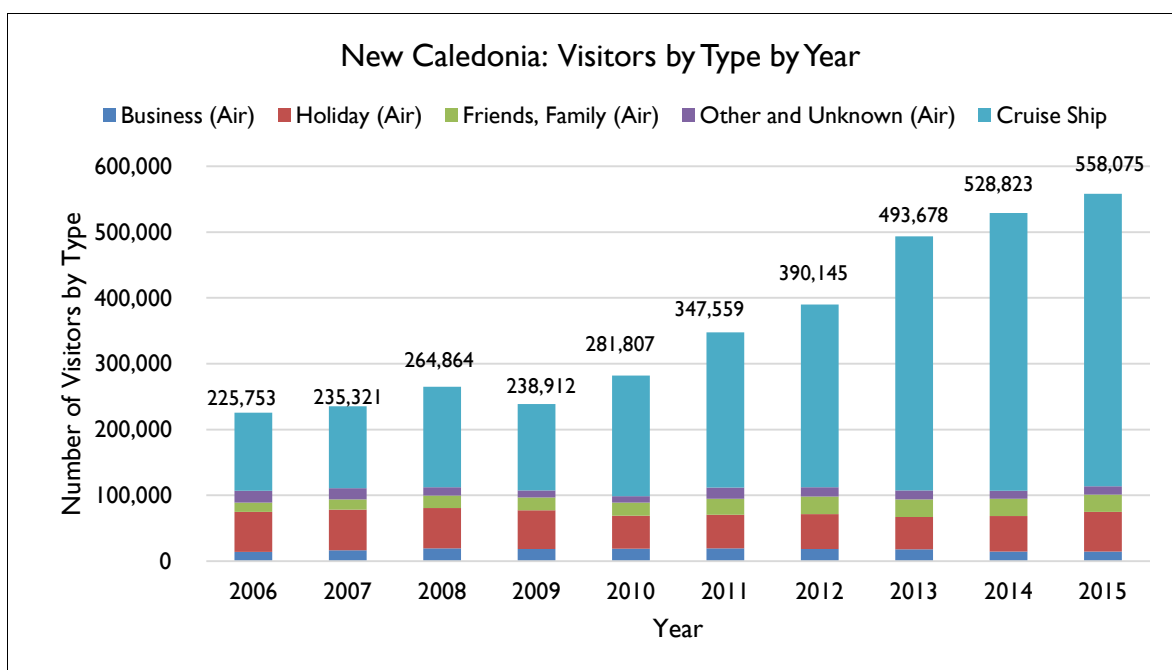


Figure 1: Visitors by Type by Year.

Visitor Type ⁹	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	TOTAL VISITORS
	Col % Row %	Col % Row %	Col % Row %	Col % Row %	Col % Row %	Col % Row %	Col % Row %	Col % Row %	Col % Row %	Col % Row %	Col % Row %
Business (Air)	14,178 6% 8%	16,705 7% 10%	19,670 7% 11%	18,493 8% 11%	19,196 7% 11%	19,500 6% 11%	18,677 5% 11%	18,241 4% 10%	14,862 3% 9%	14,936 3% 9%	174,458 5% 100%
Holiday (Air)	60,555 27% 11%	61,741 26% 11%	61,320 23% 11%	58,982 25% 11%	49,745 18% 9%	51,064 15% 9%	52,725 14% 9%	48,753 10% 9%	53,757 10% 10%	60,046 11% 11%	558,688 16% 100%
Friends, Family (Air)	14,382 6% 7%	15,691 7% 7%	19,000 7% 9%	19,529 8% 9%	19,933 7% 9%	24,276 7% 11%	27,009 7% 12%	26,918 5% 12%	26,321 5% 12%	26,281 5% 12%	219,340 6% 100%
Other and Unknown (Air)	17,740 8% 13%	16,717 7% 12%	12,624 5% 9%	10,677 4% 8%	9,688 3% 7%	17,035 5% 12%	13,793 4% 10%	13,841 3% 10%	12,247 2% 9%	12,688 2% 9%	137,050 4% 100%
Cruise Ship (assumed purpose is Holiday)	118,898 53% 5%	124,467 53% 5%	152,250 57% 6%	131,231 55% 5%	183,245 65% 7%	235,684 68% 10%	277,941 71% 11%	385,925 78% 16%	421,636 80% 17%	444,124 80% 18%	2,475,401 69% 100%
TOTAL VISITORS	225,753 100% 6%	235,321 100% 7%	264,864 100% 7%	238,912 100% 7%	281,807 100% 8%	347,559 100% 10%	390,145 100% 11%	493,678 100% 14%	528,823 100% 15%	558,075 100% 16%	3,564,937 100% 100%

Table 2: Visitors by Type by Year.

⁹ All of the visits by type reflect air and yacht arrivals. Ship arrivals do not list a purpose and are assumed to all be 'holiday'.



Figure 2 shows New Caledonia's visitors arriving at La Tontouta International Airport by country of residence between 2006 and 2015. These include all visitors (e.g., business), not just holiday visitors. *Métropole* (France) is the largest source of visitors and has been increasing in recent years, followed by Other.¹⁰ Given the proximity of New Zealand to New Caledonia and the frequency of cruises from New Zealand ports, we can surmise that the relatively low air arrival visitation from that country is offset by cruise tourist visitors. Cruise ship passenger data are not available by country of residence.

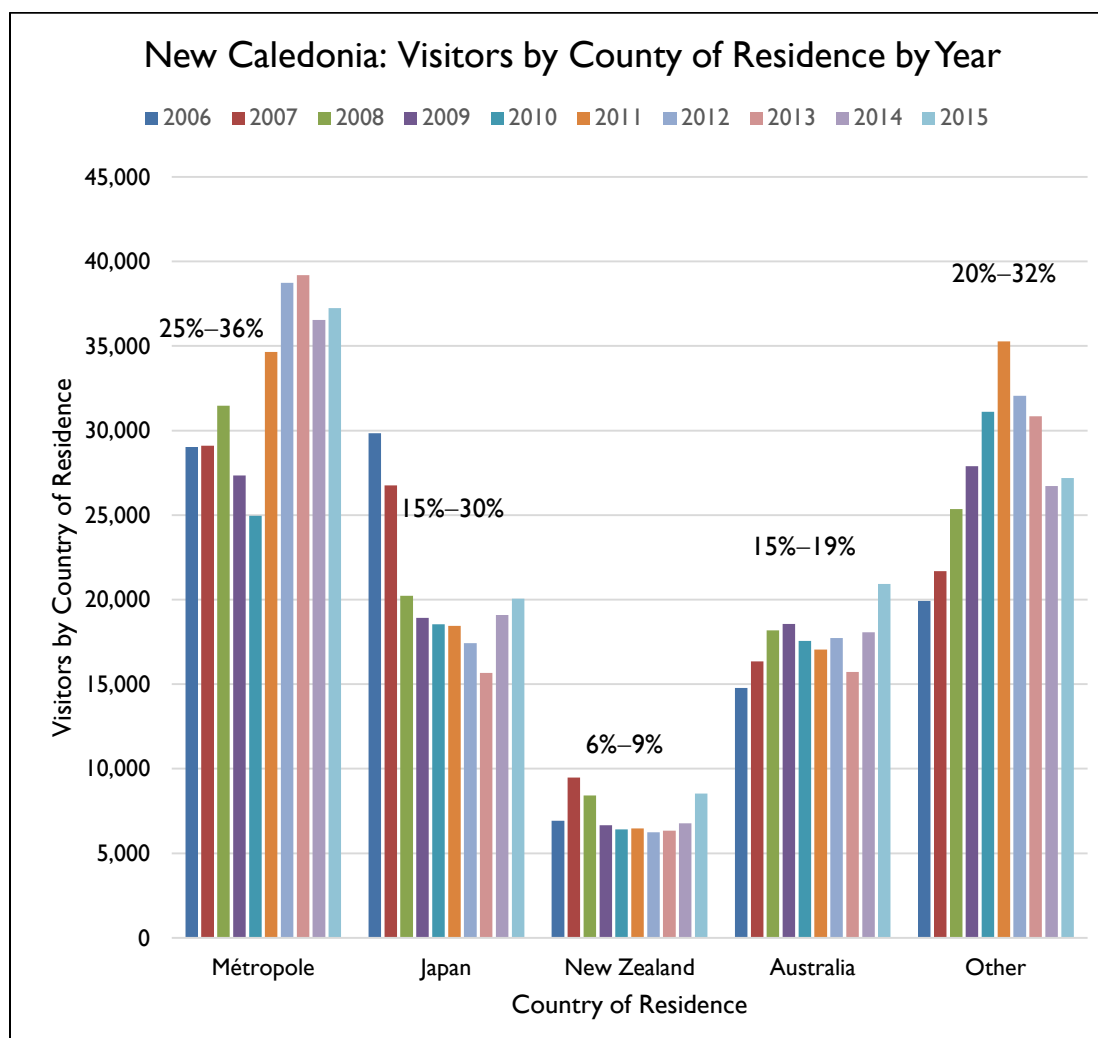


Figure 2: Visitors by Country of Residence by Year.

¹⁰ Visitor counts exclude French Polynesia, Wallis and Futuna, and Vanuatu, therefore the data gathered likely undercounts the total number.



New Caledonia: Strategic Market Transformation Protocol

Cameron-Cole is basing its recommendations to achieve Sustainable Tourism on the Sustainable Tourism Market Transformation Protocol¹¹ (Figure 3) developed by Principal Investigator Rob Watson, which has been demonstrated to be effective in transforming various sectors from utilities and energy conservation to green buildings. The Market Transformation Protocol (MTP) was introduced in Deliverable 1 and referenced extensively in Deliverables 3 and 4.

It is composed of seven fundamental elements (e.g., Strategic Market Transformation Plan, Enabling Legislation)—five of which are either Regulatory or Market Driven—and six supporting elements (e.g., Indicators, Training Programmes). Together, they form the necessary framework and process to build a viable and thriving Sustainable Tourism sector. Below, we apply the fundamental and supporting elements of the MTP to New Caledonia to demonstrate how they will collectively provide a path to Sustainable Tourism.



Figure 3: Market Transformation Protocol for Sustainable Tourism.

Territory Market Transformation Theme: Enforcement

The positive impact of rules and regulations, both mandatory and voluntary, is only as great as the efforts to enforce their requirements. It does little good—and in fact can be counter-productive—to have a strong set of standards on the books, but little to no enforcement. If

¹¹ Cameron-Cole, in its role as the successful bidder in the SPREP RFP for the Regional Assessment of Sustainable Tourism in the Pacific, is utilising with permission the Market Transformation Protocol™ developed by Principal Investigator, Robert Watson.



standards are not enforced, then the market sees them as little more than a political show and the result is the development of a culture of non-compliance. If such a culture develops, it becomes much more difficult to effectively implement performance standards in the future, because no one will take the requirements seriously. It is better to have modest standards enforced well than to have strict standards that are poorly enforced.

Below, we will highlight enforcement issues and some of the innovative private-public partnership and local community-driven programmes that New Caledonia has developed with regards to protecting its Lagoon World Heritage Site and other sensitive marine and terrestrial sites.

New Caledonia is a standout in the region with regard to its protected areas. No other PICT we visited has this degree of internationally recognised Terrestrial (54%) and Marine (96%) Protected Areas (T/MPAs).¹² It is for this reason that the focus of the New Caledonia Country Report is on enforcement.

Particularly important will be standards governing the amount and degree of access to these areas and what activities are permitted. Depending on the protected area and the history of traditional utilisation, each area's access and utilisation plan should seek to balance the need for protection with historic usage and access by surrounding peoples. New Caledonia should look to the example of Palau and the Palau Conservation Society, which has some excellent protected area planning and management models that would be quite applicable to this process.¹³

Step 1: Strategic Market Transformation Plan (SMTP) for New Caledonia

As noted above, New Caledonia develops and markets its tourism industry at the provincial level. At present, there is insufficient cooperation between the North, South and Loyalty Island Provinces to effectively develop and implement a Sustainable Tourism strategy for the territory.

While it may be possible for the North Province to develop cruise port infrastructure independent of the South Province, the international airport and the major domestic airport both are located in the South. For this and other reasons, without significant cooperation and participation between the North and South Provinces and the Loyalty Islands, the potential for developing a Sustainable Tourism market transformation strategy for the territory remains slim.

For example, even though the North and South Provinces ostensibly market the other through their websites, they use different names for the same areas (e.g., Oceanic Coast vs. East Coast) and neither province mentions the other—on the South Province website, the North is subsumed into East Coast and West Coast and not mentioned at all, while the North Province website does not mention the Loyalty Islands and names the South Province the 'Mineral North'!¹⁴ The Loyalty Islands travel site does not mention the main island at all.¹⁵

¹² <https://www.protectedplanet.net/country/NC> Palau is the next most protected country with 28% of its land covered by terrestrial protected areas and 83% of its ocean resources within designated MPAs.

¹³ <http://www.palauconservation.org/cms/index.php>

¹⁴ South Province: <http://www.nouvellecaledonie.travel/fr/>; North Province: <http://www.tourismeprovincenord.nc/fr/>

¹⁵ <http://www.iles-loyaute.com/en/>



Tourism Market Transformation Working Group

To develop a Sustainable Tourism market transformation strategy, we suggest convening a 'Tourism Market Transformation Working Group' led by the North Province Tourism Office with working group members including the South Province Tourism Office, Loyalty Island Tourism Office, New Caledonia Chamber of Commerce, GIE Tourisme Province Nord, GIE Tourisme Province Sud and GIE Tourisme Îles Loyauté, and other key national organisations, including, but not limited to EPLP (Nickel Industry Association), *Institut de Recherche pour le Développement* (IRD), the FLNKS and other representative groups of the Kanak people.

This Working Group would supervise the development of market transformation plans for the North and South Provinces as well as the Loyalty Islands and then synthesise these plans into an integrated master plan for the entire territory. We recommend during this process to supplement the province or district-focused working groups with plenary meetings between the three provincial development teams to share thinking and facilitate the final coordination and integration of the national strategic tourism market transformation plan. The territory also should include a strategic plan for marine and land¹⁶ protected areas management, as well as access and utilisation, in this SMTP.

Regional Strategic Project: National Travel Agency for New Caledonia

Most travel arrangements today are made via the Internet, in particular through search and review aggregation sites such as Booking and TripAdvisor. As a region-wide recommendation, we suggest establishing a National Travel Agency (NTA) for each of the Pacific countries, and we believe that Sustainable Tourism in New Caledonia would benefit tremendously from such an approach. As noted above, each province has its own travel information website, but each of the websites contain different branding and naming for the same regions, which is confusing to visitors.¹⁷

Our concept of an NTA would support a national strategic approach to tourism in the territory. In addition, to give consumers confidence in the travel packages put together by the NTA, New Caledonia can adopt—and aggressively promote—the EU Package Travel Directive (2015/2302/EU).¹⁸

Our principal suggestion in launching the New Caledonian NTA is to allow direct booking from a single New Caledonia-focused travel site. At present, visitors must visit up to three different websites and then further navigate 2–3 other pages/sites or make an international phone call or send a set itinerary to a third-party travel agent before they can book or confirm their itinerary. Moreover, at present, online information about access to New Caledonia's less developed areas and many of its smaller establishments—especially its ecotourism-oriented facilities—is partial at best.

¹⁶ Based on Ridge to Reef principles. <https://sustainabledevelopment.un.org/partnership/?p=7315>

¹⁷ There is conflicting regional information on the North and South Province websites about how New Caledonia is divided in terms of destination areas. For example, the South Province site website, <http://www.nouvellecaledonie.travel/fr/>, lists New Caledonian tourism regions as Noumea, West Coast, East Coast, 'Grand South' and Loyalty Islands—North does not even exist! Similarly, the North Province website <http://www.tourismeprovincenord.nc/fr/>, meanwhile, lists tourist areas as Far North, the Oceanic Coast, the West Coast, and the 'Mineral North'. The 'Mineral North' home page mentions the mineral South, once you click through to the page. Cameron-Cole cannot see any benefit to these inconsistent treatments.

¹⁸ http://ec.europa.eu/consumers/consumer_rights/travel/package/index_en.htm



An NTA portal, set up like TripAdvisor or other Web-based information and booking sites, would allow guests to get information, compare options and then reserve lodging, events, etc. through a single portal, creating a ‘one stop shopping’ experience. These additional features will create a strategic tool that New Caledonia can use to make its tourism sector more economically and environmentally sustainable.

Moreover, as we described in Deliverable 4, having an NTA would allow strategic allocation of visitation to areas that are underutilised and away from areas that are overexploited. This could be done by limiting reservations to certain islands or bookings to certain activities, as well as providing incentives in the form of higher or lower tariffs to accommodations on islands that are being promoted or restricted. It would not be difficult to develop a revenue sharing formula that would compensate area businesses if their area is chosen for a ‘sabbatical’.

SPTO should take the lead in concert with New Caledonia and other PICTs in negotiating with key travel aggregation websites to develop both a regional and country-focused overlay to their search engines.

In addition to the NTA, New Caledonia could work with SPTO to develop a country-specific Sustainable Tourism app. The app could be developed by local New Caledonian IT professionals, possibly using an Application Programming Interface (API) developed by or provided by SPTO with support from SPREP. The New Caledonia Sustainable Tourism app could have a specific ecotourism section and give different levels of information and access to preferred bookings depending on the level of package procured through the NTA.¹⁹

The issue of Internet access will need to be assessed as part of this effort. Similar to enabling legislation, enabling technology infrastructure may also need to be grown.

Enforcement as a Highlighted Market Transformation Element

The theme of our recommendations for New Caledonia revolves around the market transformation issue of Enforcement. While Enforcement is not a separate stage or supporting element of the SMTP, it is essential to the success of any market transformation effort.

The strategic plan must determine how to integrate enforcement into the overarching process, and mechanisms to enforce standards must be incorporated into any Enabling Legislation developed for the Sustainable Tourism industry. Although enforcement per se is not part of the Demonstration Project or Pilot stages, it is important to monitor and evaluate these stages to ensure good outcomes. However, for the implementation of standards, whether they are mandatory or voluntary, good enforcement is absolutely essential if the objectives of the standards are to be met.

Step 2: Market-Specific Enabling Legislation²⁰

Many elements of the necessary legislative underpinning to support a transformation toward Sustainable Tourism is in place, but significant additions or modifications will be necessary to support a viable market transformation toward sustainability for the tourism sector. **In keeping with this report’s emphasis, all Enabling Legislation should include clear provisions**

¹⁹ For more discussion about the Sustainable Tourism app, please see Deliverable 4: Priority Recommendations for Promoting Sustainable Tourism.

²⁰ A comprehensive, in-depth legal review of New Caledonian law in this area is beyond the scope of this project, however, we have attempted to identify a few key areas in core pieces of legislation that would support and further market transformation.



for enforcement—both regulatory and voluntary enforcement mechanisms—as well as an adequate budget allowance for doing so.

Sustainable Tourism Standards

A review of the Pacific Legal Library indicates that most countries in the Pacific have specific standards and regulations governing the conduct of the tourism industry.²¹ While France and the EU have extensive standards, regulations and laws governing aspects of tourism (e.g., Hospitality), *‘[tourism] is not understood to fall within the EU’s competence or to be an EU policy area’*.²²

Historically, nickel mining and related industry represented about 25% of New Caledonia’s GDP. However, since global nickel prices are currently only 40% of those seen just 5 years ago, and less than 20% of what they were a decade ago, the territory has been scrambling to find an alternative economic engine. Many in New Caledonia are hoping for a near-term rebound in the nickel market, while others suggest that diversifying the economy to grow the tourism market makes the most sense.²³

Given the uncertainty of the international nickel market and the importance of tourism to GDP—approximately 5% direct and 6%–7% total²⁴—to the economy of New Caledonia, the territorial government should consider developing comprehensive legislation around the sector, with an emphasis on holistically addressing economic, social and environmental sustainability, in part as outlined in this report.

Ideally, such legislation would specifically describe and distinguish ecotourism from conventional tourism with special designations for trained and certified ecotourism guides and companies engaged in marine activities, including snorkeling, diving and whale watch that go beyond existing guidelines. In addition, as Cameron-Cole is recommending this standard for the region as a whole, New Caledonia should consider adapting the requirements of Australia’s ECO Certification Program for certified ecolodges and destinations to local conditions (see the Vanuatu Country Report for more details).

Activity Standards

While the French/EU regulations regarding travel agencies and foreign exchange are under review, we could not find any reference to standards for operating marine resource tours, such as snorkeling and diving, or land-based activities in protected areas. Such performance and qualification standards are becoming more common and we recommend that New Caledonia formally adopt legislation requiring training and professional accreditation for guides and

²¹ A global search for ‘Tourism’ brings up relevant legislation and/or regulations in Cook Islands, Fiji, Kiribati, Marshall Islands, Niue, Palau, Papua New Guinea, Samoa, Solomon Islands, Tonga and Vanuatu. http://www.paclii.org/cgi-bin/sinosrch.cgi?query=tourism&results=50&submit=Search&mask_world=&mask_path=&callback=on&method=auto&meta=%2Fpacli

²² <http://www.europarl.europa.eu/sides/getDoc.do?type=TA&language=EN&reference=P6-TA-2007-0575>

²³ <https://globenewswire.com/news-release/2017/02/23/927159/0/en/ERAMET-group-A-recovery-strategy-which-gives-the-expected-results-a-strong-improvement-in-the-ERAMET-group-performance-in-2016.html>; <http://spto.org/news/item/3896-the-new-caledonia-should-look-for-resources-with-tourism>

²⁴ https://gouv.nc/sites/default/files/atoms/files/dossier_les_ateliers_du_tourisme_091216_v7.pdf Typically, tourism multipliers will be on the order of 1.3 to 1.4x for a small island economy as a whole. <https://msu.edu/course/pr/840/econimpact/multipliers.htm>.



companies engaged in encounters with sensitive ecosystems, such as coral reefs.²⁵ Ecotourism Australia also has programmes and training for certifying ecoguides, which we are recommending for the region.²⁶

Designation and Protection of Places and Species

The World Database on Protected Areas shows that New Caledonia has the greatest percentage (>96%) of protected marine areas within its exclusive economic zone (EEZ), of the recommended coverage of marine protection, as well as nearly 55% of its land area, also the greatest percentage in the region.²⁷ Given the biodiversity importance²⁸ of New Caledonian waters and land, enforcement is all the more important to ensure the preservation of the natural jewel that is New Caledonia. New Caledonia's commitment to preserving its natural environment is further demonstrated by its desire to protect its wetlands for future generations: The Lacs du Grand Sud are Ramsar-registered.²⁹

Although New Caledonia has the largest percentage of protected land, it is also home to one of the world's largest nickel mining and processing industries, which has significant impact on land use, water pollution and air pollution. The nickel industry has undertaken efforts to improve its environmental footprint, but given the fragile and unique nature of New Caledonia's environment and given the importance of properly conducted upstream activities in keeping coastal waters clean, expanding this protection will be vital.

Public Participation Rules

To provide the necessary legislative underpinning for robust public participation in environmental decision-making, Cameron-Cole recommends that New Caledonia adopt or adapt the public participation requirements of the following EU directives on public participation in environmental decision-making:

- Espoo Convention³⁰
- EIA Directive³¹
- Aarhus Convention & Directive³²

Infrastructure Standards

Wastewater and solid waste are growing problems in New Caledonia that strongly impact fragile coastal zones. Currently, only 13% of the territory's population is served by a modern central sewage system.³³ During our own experience snorkeling and swimming in the Noumea Lagoon, the impact of undertreatment of sewage was very apparent from the turbidity of the water and the evident sedimentation around the corals. On the solid waste front, recycling is

²⁵ The training programme for the *Ambassadeurs du Lagon* and the community-driven coral reef education and oversight efforts in Lifou described in this report are good models to integrate into a formal training and certification programme. <https://www.donenright.com/loving-lifou/>

²⁶ <https://www.ecotourism.org.au/our-certification-programs/eco-certification-5/>

²⁷ <https://www.protectedplanet.net/country/NC>

²⁸ New Caledonia is considered a global 'hot spot' with regards to endemic terrestrial species (~2,500) <http://Intreasures.com/nc.html> and marine species <http://science.sciencemag.org/content/295/5558/1280>

²⁹ <http://www.ramsar.org/> The convention on wetlands, called the Ramsar Convention, is an intergovernmental treaty that provides the framework for national action and international cooperation for the conservation and wise use of wetlands and their resources.

³⁰ <http://www.unece.org/fileadmin/DAM/env/eia/eia.htm>

³¹ <http://ec.europa.eu/environment/eia/eia-legalcontext.htm>

³² <http://ec.europa.eu/environment/aarhus/>

³³ <http://www.oel.nc.fr/cause/rejet-deaux-us-es>



minimal due to a lack of infrastructure and there are growing problems with illegal dumping.³⁴ The territory government is trying to manage these issues, but, to be effective, the underlying legislation needs specific discharge requirements, rather than merely advising that responsible citizens don't pollute.³⁵

Building Standards

Given the importance of energy and water to overall sustainability, we recommend that New Caledonia pass legislation that requires the territory to adapt EU mandatory regulations on buildings (RT 2005, with 2012 as 2nd tier) to the weather conditions of New Caledonia, buildings. On the voluntary side, the legislation would require adaptation of an existing green building standard such as the French High Quality Environment (HQE) standards, the Australian Green Star system, or LEED.³⁶ Although developed country standards, which emphasise a performance approach, can be difficult to comply with and enforce in a developing economy, there appears to be adequate professional expertise regularly available to the territory to make such adoption feasible. Consideration for indigenous building techniques and incentives or subsidies can be made available to those who find the requirements onerous.

Equipment Standards

EU performance requirements for equipment, vehicle fuel economy and emissions should also be considered for adaptation and adoption. Applying efficiency standards to equipment is an easy measure to save significant amounts of energy in both new and existing buildings. Equipment markets are largely global, so finding high-efficiency equipment for importation is not difficult. Given the very high cost of imported fuels for remote countries, such as New Caledonia, standards governing equipment importation should be limited to energy-efficient products that qualify for sale in the EU and are labelled in the top 3 tiers, as applicable to the type of equipment, of the Energy Labelling Framework Directive (2010/30/EU).³⁷

Alternately, ENERGY STAR®-certified equipment, or products earning four stars and above under Australia and New Zealand's energy efficient appliance standards could be acceptable alternatives. Key equipment types are: air conditioning; refrigeration; water heating (solar hot water should be highly, if not exclusively, promoted); computer equipment; plumbing and sanitary fixtures should also be restricted in their flow and flush rates. These standards would apply to new construction as well as replacement equipment. While higher efficiency equipment costs more, the investment is paid back in energy savings very quickly and can be offset by incentives.

Vehicle Standards

Although adopting vehicle standards will raise the cost of vehicles, particularly used vehicles, improving New Caledonia's mass transit and vehicle sharing options, as described below, will help offset the overall financial burden of providing transportation services that these regulations might impose. Recommended vehicle standards for all new and used cars imported into New Caledonia are as follows:

³⁴ <http://la1ere.francetvinfo.fr/nouvellecaledonie/2015/05/10/comment-s-organise-le-tri-selectif-sur-le-caillou-253833.html>; <http://outremers360.com/planete/environnement-en-nouvelle-caledonie-une-appli-anti-decharges-sauvages/>

³⁵ <http://www.juridoc.gouv.nc/JuriDoc/JdWebE.nsf/Juristart?openpage>. See 'Livre IV: Prévention Des Pollutions Risques et Nusances, Titre II: Déchets, Chapitre I: Prévention et Gestion des Déchets' Article 421-3.

³⁶ HQE: <http://www.behqe.com/>, Green Star: <http://new.gbca.org.au/green-star/rating-system/>, LEED: www.usgbc.org/leed

³⁷ <http://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX:32010L0030>

Fuel economy: New cars: current mandatory fuel economy requirements by class for China, Japan or the United States. Used cars should be no more than 5–8 years old and demonstrate that they adhere to the previous tier of fuel economy requirements.

Emissions: New Zealand standards for new or used vehicles imported on or after January 2008.³⁸

Step 3: Demonstration Projects: Code Minimum and Beyond Minimum

Demonstration Projects: Required Practise

- **Ecosystem assessment and full enforcement of marine protection requirements at Îlot Canard and Îlot Maître.** In spite of its ‘protected’ status, the only evidence at Îlot Canard that it was a protected area was a sign mostly obscured by vegetation. We observed visitors walking on the coral without intervention. The corals along the underwater ‘Nature Trail’ at this heavily visited islet were heavily degraded and the water was highly turbid from the regular water taxi traffic. Cameron-Cole recommends that a detailed ecosystem assessment be conducted and a restoration and education programme developed and implemented to address the issues found in the assessment. Mitigation actions could include 1) building a dock so that motorboats don’t need to go into shallow water and churn up sand and 2) developing an audio/video presentation of proper activity on the island that would be played either before guests depart on the water taxi or presented during the ride to the island. Given the amount of visitation, such a demonstration could have high impact.



Figure 4: Informational Sign at Îlot Canard.

³⁸ <http://vehicleinspection.nzta.govt.nz/virms/entry-certification/i-and-c/exhaust/exhaust-emissions#up> Table 11-2-3 and Table 11-2-4 (On or after 1 January 2011 and before 1 January 2012).



- Mandatory minimum tour guide training. This training would be based on the *Ambassadeurs du Lagon* training and be required for all marine activity guides, including modules for water taxi drivers. A similar training programme should be developed for terrestrial activities with modules for natural and cultural emphases of the tours.
- Fuel economy and emissions standards for fleet and tour land vehicles. Demonstrate recommended performance standards on a target fleet of a large enterprise or government agency. Early Adopters could be supported by additional training in maintenance and purchase incentives.
- Demonstration of minimum building standards. These standards would apply to residential and commercial buildings in excess of two stories. The demonstration programme would undertake a detailed cost assessment of adapting and implementing EU standards in New Caledonia. This cost information can be used to inform future incentive programmes. Demonstrations should include one or more government and private buildings.
- Demonstration of energy performance standards for commercial and residential appliances and equipment. Energy-efficient air conditioning, refrigeration, water heating (especially solar), motors, lighting can be demonstrated in new and existing government projects and new construction or renovation projects for other leading institutions. The nickel industry would be an excellent candidate to demonstrate industrial energy-efficient equipment.

Supporting Elements

The key supporting elements are:

1. Indicators

The development of key indicators should be done during the demonstration phase through consultations with local New Caledonian stakeholders. For the *Îlot Canard/Maitre* T/MPA enforcement and restoration demonstration, these might include tracking levels of visitors, infractions of T/MPA guidelines, marine activity tourism and marine life counts. The latter should be undertaken by marine and terrestrial scientists, supported by local guides.³⁹ This baseline would enable tracking of the impact of establishing the protected area. For terrestrial protected areas, key indicators for implementation of mandatory standards for activities could include: number of permissible tours, type of activity, number of visitors, etc. Indicators for efficiency demonstrations in buildings, vehicles and equipment would include tracking the scope of the demonstration (number of vehicles or equipment, building floor area) and the estimated and actual energy/emissions savings that result.

2. Training Programmes

Ideally, tourist access to T/MPAs would be restricted to the extent warranted (depending on the level of protection assigned) to visitors accompanied by trained and certified local guides, or to areas staffed by qualified Rangers or Deputies. Providing

³⁹ See Deliverable 4: Priority Recommendations for more discussion of developing Indicators. Research in Palau shows significantly greater fish biomass in protected areas compared with open fishing areas. <http://journals.plos.org/plosone/article?id=10.1371/journal.pone.0174787>



specialised access would provide strong incentive to undertake training to become certified as an ecoguide. On the infrastructure side, local engineers and architects could be trained in the EU building standards, particularly in how to upgrade existing large facilities to these standards. Mechanics could receive training in how to maintain low-emitting, fuel-efficient vehicles.

3. Procurement

The T/MPA enforcement demonstration project does not have a significant procurement component. However, other demonstration project options do, particularly demonstrations involving buildings, equipment and vehicles. Demonstrations involving buildings, equipment and vehicles should be designed to include procurement elements that promote market development. Demonstrations designed to build market availability and demand, rather than simply showing the performance or feasibility of an integrated approach, would pick a technology that has widespread applicability (e.g., LED lighting) and secure a larger number of sites to demonstrate this particular technology in sufficient quantity to attract the interest of distributors and retailers. It will be important for the territory government of New Caledonia to ensure that there are fewer restrictions on the availability of materials or equipment needed to fulfil the requirements of building and vehicle standards by purchasing these items as part of demonstration projects.

4. Incentives

For the equipment and technology demonstration projects, there are opportunities to test different types of incentives. The incentives for the suggested T/MPA demonstrations would be more non-monetary, insofar as access to restricted areas would be tied to having secured accreditation as an ecoguide. Typically, financial incentives succeed when two key factors are in place: 1) the recipient of the incentive is expending additional funds to meet the new standards and 2) the cost of the incentive to the sponsoring agency is lower than the expenditure that would be made otherwise. For example, energy-efficient equipment is generally more expensive than inefficient equipment. However, it costs less to incentivise efficient buildings and equipment than it does to build new power plants to provide enough electricity to power the inefficient equipment, or even to purchase expensive fossil fuels to operate existing power generators.

In the case of building efficiency demonstrations, often the most effective incentives can be administrative, rather than financial. For example, expedited siting review and approval for projects agreeing to adopt the new code early can be powerful incentives to developers in these situations. Complementary incentives for design and engineering professionals can also be adopted.

5. Industry Development

Growing and promoting professional societies—whether they are in the realm of terrestrial or marine guides, or hospitality, or architecture and engineering—will be important for the coordination and growth of Sustainable Tourism in New Caledonia. The relevant association for the type of demonstration project should be chosen (e.g., tour guides for the T/MPA demonstration and architects/engineers for the buildings, etc.). For tourism-related programmes, the Province-level *Groupeement d'Intérêt Économique* (GIE) appear to be good vehicles for promoting sustainability in the



industry. For building and equipment demonstrations, the *Chambre Syndicale des Bureaux d'Études et d'Ingénieurs Conseils* of New Caledonia and other relevant professional societies should be involved.⁴⁰ Experience and information sharing programmes around the new programmes and standards can be developed within the provincial GIE and local architecture and engineering societies.

6. Public Education

Cameron-Cole supports the recommendations in the Tourism Development Strategy⁴¹ that a national programme be developed to inform the general public about the importance of promoting Sustainable Tourism and ecotourism areas and businesses. This would allow New Caledonians to see the tourism industry as a potential future career and a source of national pride.

Demonstration Projects: Voluntary Best Practise

Multiple 'best practise' demonstration projects are possible and even desirable in New Caledonia, although listing the full number of potential projects is beyond the scope of this effort.

- Île des Pins demonstration: T/MPA assessment, enforcement and sensitive area recovery. As with the required practise demonstration, marine and terrestrial biological assessments should be undertaken by qualified experts—supported by local guides and perhaps tourist volunteers (see below)—around the relevant areas being evaluated at *Île des Pins*. Cameron-Cole recommends that *Île des Pins* be the next location where industry/community enforcement of T/MPA regulations and behaviour be demonstrated. In consultation with the Chiefs of the eight tribes⁴² of *Île des Pins* they should determine whether an adaptation of the *Ambassadeurs* programme is appropriate or the community-based model used at Jinek Bay on Lifou is better for helping the island preserve its sensitive environments. Sustainability professionals associated with the New Caledonian cruise and tourism industry also should be consulted for this project.
- Protect and restore fragile ecosystems by distributing visitors. As described in Cameron-Cole's report for Deliverable 2: *Analysis of the Current Pacific Marine Ecotourism Industry and Key Supply Side Constraints for the Pacific*, existing or proposed terrestrial and MPAs can be considered 'scarce resources'. One of the best ways to sustainably protect these scarce resources is to provide a balance between access and protection.
- Île des Pins provides an excellent opportunity to study the impact of visitor distribution on ecosystem health and the visitor experience. Consistent with the recommendation of the Tourism Development Strategy (p. 74), cruise ship visits to sheltered bays could be distributed more evenly across the island and not visit Kuto Bay exclusively. This demonstration has implications for infrastructure requirements on the island, but it could be an interesting opportunity to explore innovative options for access to different locations using scaled up, modernised versions of traditional outrigger boats. Other options for determining or regulating access to different sites include:

⁴⁰ <http://www.csbec.nc/index.htm>

⁴¹ See Footnote 3, above.

⁴² Gadji, Wapan, Touete, Ouatchia, Youwaty, Vao, Comagna, Kere.



- A mutually agreed-upon cruise ship visitation schedule that allows recovery periods. For example, based on the wishes of the island's Chiefs and tribes, total annual visitors could be split evenly between different marine sites that are selected for visitation. Currently, approximately 100 cruise ships visit the island each year, or roughly 2 visits per week. Even if only one other alternative docking/visitation area is developed, the impact on nearby fragile marine environments would be cut in half.⁴³
- Lottery access to permits, for example, can be introduced with early participation in the lottery given to qualified vendors that are either individuals, or companies that have achieved the proper certification or accreditation per established standards.
- License fees are another way of ensuring proper professionalisation of guides and companies accessing protected areas. As with the lottery, license fees can vary depending on whether an individual or company has been ecotourism- or Sustainable Tourism-certified/accredited.

This demonstration could be coordinated with the Enforcement demonstration described above. If implemented, license and lottery fees can be used to support environmental and visitor experience assessments, as well as be used to support the Rangers or their Deputies educating visitors and overseeing adherence to the rules.

- 'Hub and spoke' boat access. Another possibility for reducing visitors on overloaded areas might be to provide cruise and air visitors greater access to land and marine sites away from Noumea via high-speed ferries that would bring visitors to a variety of more remote areas. This would relieve the pressure on the reef surrounding Noumea and give greater access to visitors and residents to unspoiled resources, while providing greater economic opportunity to a wider area.
- Promoting Volunteer Tourism. 'Voluntourism' is a growing trend, principally in the Caribbean and Central America where people include one or more days of service into their itineraries.⁴⁴ This may be an excellent opportunity to engage visitors to help restore degraded environments and eradicate invasive species.

Arrangements could be made with airlines and cruise lines—some of which already support volunteer activities—to offer a limited number of discounted seats or berths for volunteers that come through an organised programme. Similarly, hotels and restaurants might support these activities by offering discounted rooms and meals for registered volunteers. Voluntourism might be a good way to supplement visitation during the off-season in many countries. Additional 'perks' for volunteers might include access to environmentally-restricted areas or reservation preference for limited access to some of the more popular marine areas. Projects that might be supported through volunteer tourism include coral or giant clam planting, reef monitoring, marine life census, removing invasive crown-of-thorns starfish, removing invasive vines, planting or seeding eroded areas, eradicating rats from bird sanctuaries or any other kinds of volunteer activities desired by the host country.

⁴³ See Deliverable 2: *Analysis of the Current Pacific Marine Ecotourism Industry and Key Supply Side Constraints for the Pacific* for additional discussion about revenue sharing options that avoid 'feast or famine' situations.

⁴⁴ <http://abcnews.go.com/Travel/giving-back-volunteer-vacation-trends/story?id=42398847>



Other Voluntary Demonstration Projects:

- To complement the basic tour guide training recommended above, New Caledonia should develop advanced voluntary standards for tour activities that are based on more environmentally advanced guidelines for the MPA, as well as similar standards for land-based protected areas. Australia's ECO Certification Program would be the ideal base standard to adapt due to its adoption in Vanuatu and that it is under consideration by other countries in the region.
- 'Complete Streets' demonstrations in Noumea. Complete Streets is a comprehensive plan for making streetscapes more pedestrian and bicycle-friendly that would complement the good job Noumea has done making the central downtown and waterfront areas pedestrian-friendly with good landscaping and sidewalks.⁴⁵ Additional Complete Streets measures include establishing alternatives to personal automobiles, such as electric trams/shuttle buses and bicycle-friendly streets and a bike-sharing system. A free electric demonstration shuttle bus initially could run in a loop or a two-way route from *Place des Cocotiers* along the waterfront to *Route Du Ouen Toro*. Battery charging stations⁴⁶ could be located at both ends of the route, as well as adjacent to the *Aquarium des Lagons* or the *Mise à l'eau Baie de l'Orphelinat*.
- Green building demonstration projects: The territory should try to demonstrate a green building renovation certification for an existing resort complex and a new building affiliated with the tourism sector. Any recognised international green certification programmes such as LEED, Australia's Green Star, or Earthcheck could be demonstrated.

Supporting Elements

The key supporting elements are:

I. Indicators

In preparation for the development of key indicators for T/MPA performance, an inventory of marine life in the proposed T/MPA should be undertaken by marine and terrestrial scientists, supported by local guides and include a qualified assessment of the environmental carrying capacity of the site.⁴⁷ In addition, baseline surveys of visitor experience should also be taken.⁴⁸ These baselines would enable tracking of the impact of establishing and enforcing rules in a protected area. Based on these assessments, New Caledonia could develop a tiered system of sites that would limit access according to value and vulnerability.

Indicators would need to be developed for each demonstration according to the key objectives of the demonstration:

⁴⁵ https://en.wikipedia.org/wiki/Complete_streets

⁴⁶ Mobile charging stations, such as those by Envision Solar (<http://www.envisionsolar.com/>) could be located at Le Parking du Banian or similar location.

⁴⁷ See Footnote 39.

⁴⁸ An overcrowded visitor experience can be almost as harmful to the tourist experience as a relatively uncrowded visit to a degraded site.



For the Sustainable Tourism/ecotourism enforcement and visitor distribution demonstrations, key indicators could include: number of permissible tours, type of activity, number of visitors, quality of visit, etc.

For the Complete Streets demonstration indicators might be number of passengers on the shuttle bus or the number of pedestrian visitors, as well as changes in commercial activity (e.g., store revenues) at different points along the route.

The building demonstration(s) might look at energy and water savings.

The tour guide certification demonstration might track numbers of participants in the training programme, the number of tours conducted and the number of tourists served.

2. Training Programmes; 3. Procurement; 4. Incentives; 5. Industry Development; and 6. Public Education

These supporting elements are essentially the same between Required Practise and Voluntary Best Practise demonstration projects.

Step 4: Developing Standards: Mandatory and Voluntary

Developing a comprehensive and complementary suite of minimum (or maximum) voluntary standards and higher-performance voluntary standards is a key component of transforming the tourism industry toward sustainability. Table 3 shows how these standards might work together:

Mandatory Standards	Voluntary Standards
Tier 1: Basic life/safety requirements to establish enforcement.	Tier 1: Initial environmental/efficiency performance requirements, to be used as Tier 2 mandatory standards. Ideally it would be based on well-established regional or international standards.
Tier 2: Use the Tier 1 Voluntary Standards performance level as the mandatory requirement.	Tier 2: Next generation of environmental/efficiency performance; will become Tier 3 mandatory standards. We suggest no more than 20%–25% improvement in stringency.
Tier 3: Use the Tier 2 Voluntary Standards performance level as the mandatory requirement.	Tier 3: Next generation of environmental/efficiency performance; will become Tier 4 mandatory standards. We suggest no more than 20%–25% improvement in stringency.

Table 3: Coordination Between Mandatory and Voluntary Standards.

Mandatory Minimum Performance Standards

Protected Area Standards

As noted above, New Caledonia has the highest percentage of land and marine area with international designation as ‘protected’. The proposed demonstration site of *Île des Pins* is part



of a comprehensive sustainability master planning exercise for the 'Great South' of New Caledonia by Integre.⁴⁹ Cameron-Cole's recommendation is to assess how well the 2013–2017 Management Plan developed as part of the Great South project is working to preserve the sensitive terrestrial and marine ecosystems of *Île des Pins* and whether it might be necessary to develop a more thorough enforcement of restrictions for each area. Given plans to more than double the amount of cruise visitors to New Caledonia over the next 5–10 years, a reassessment of the existing management plans will be very important.

Particularly important will be an evaluation of current allowances governing the amount and degree of access to these areas and what activities are permitted. Depending on the protected area and the history of traditional utilisation, each area's access and utilisation plan⁵⁰ should seek to balance the need for protection with historic usage and access by surrounding peoples. New Caledonia should look to the example of Palau and the Palau Conservation Society, which has some excellent protected area planning and management models that would be quite applicable to this process.⁵¹

Updated Tourism Standards

Based on the principal demonstration projects described above, comprehensive Mandatory standards for Sustainable Tourism should be developed. These standards would include tour guide professional standards that also encompass sustainability. We recommend that the Australia ECO Certification Program Nature Tourism standards be used as a framework as is being undertaken in Vanuatu (See the Vanuatu Country Report for more details). The Tourism Strategy Working Group could determine the areas to which this standard is most appropriately applied.

Standards for Vehicles, Buildings and Equipment

- Fuel economy and emissions mandatory standards for vehicles. We recommend the initial standards require 2nd-tier energy and emissions requirements for Australia and New Zealand. Pilot-scale demonstration of these standards would be effective on government and other fleet vehicles.
- Building energy and water efficiency standards. Based on the results of the demonstration projects, EU mandatory energy efficiency standards should be adapted to New Caledonia's climate and adopted by the local building authorities.
- Equipment standards for commercial and residential appliances and equipment. Efficiency and labelling requirements for equipment used to supply air conditioning, refrigeration, water heating, motors, and lighting should be consistent with Australia's or New Zealand's, as noted above.

⁴⁹ <http://integre.spc.int/en-nouvelle-caledonie/le-grand-sud#présentation-du-site>

⁵⁰ As required by Article 211 (4) I.

⁵¹ <http://www.palauconservation.org/cms/index.php>



Supporting Elements

The key supporting elements are:

1. **Indicators; 2. Training Programmes; 3. Procurement; and 4. Incentives**

These supporting elements are geared to activities based on these standards after adoption, rather than implemented during the codes and standards⁵² setting and adoption process.

5. **Industry Development**

It will be vital to involve professional and industry associations in the development of the protected area standards in adapting models to the New Caledonian situation. Ideally, this process would comprise experts from government, as well as from the New Caledonian private sector. There needs to be a levelling of the playing field between local companies and international companies before sharing decision-making responsibilities.⁵³

6. **Public Education**

Because of significant 'do it yourself' activity in New Caledonia, early and continuous education through the media and information provided to/through public service media, Chiefs and tribes, schools and churches will be key to a smooth adoption of minimum standards.

Voluntary Best Practise Performance Standards

Protected Area Standards

Based on the assessments of existing management, access and utilisation standards at *Île des Pins*, New Caledonia should evaluate the extent to which Ridge to Reef principles are being supported and implemented in their existing terrestrial protected areas and changes made to existing standards if appropriate.⁵⁴ Similarly, for MPAs, an assessment of current ecosystem health should be undertaken for the most heavily utilised sites. Any necessary modification of the site's status or governing standards should be made as needed.

Particularly important will be standards governing the amount and degree of access to these areas and what activities are permitted. Depending on the protected area and the history of traditional utilisation, each area's access and utilisation plan should seek to balance the need for protection with historic usage and access by surrounding peoples.

Updated Tourism Standards

Based on the principal demonstration projects described above, comprehensive standards for ecotourism (Voluntary, Best Practise) should be developed. We recommend that the Australia ECO Certification Program standards be used as a framework as is being undertaken in Vanuatu (see the Vanuatu Country Report for more details). The Tourism Strategy Working Group could determine the areas to which this standard is most appropriately applied.

⁵² We distinguish between Codes and Standards the following way: Standards are voluntary and comprised of performance targets, calculation methods and supporting materials. Codes are mandatory and include all of the content of Standards, plus a legal and procedural framework for enforcement.

⁵³ A 'local' company is one that is capitalised and owned by residents of New Caledonia. Decisions will need to be made regarding companies owned by New Caledonians who reside overseas.

⁵⁴ See Footnote 14, above.



Updated Efficiency Standards for Vehicles, Buildings and Equipment

On the voluntary front, we recommend the development of a set of voluntary 'best practise' standards. These best practise standards can double as the next set of mandatory standards for energy, vehicles, etc. As recommended in Deliverables 1–4, the minimum achievement requirement of the best practise standards in most cases should be within 25%–30% of the performance requirements of mandatory standards. The higher performance requirements of voluntary standards can be as much as 75% better than required practise.

- Fuel economy and emissions best practise standards for vehicles. We recommend that the Voluntary standards match the efficiency level Tier 1 standards from New Zealand.
- Voluntary green building standards. Based on the results of the demonstration projects, the green building standard most appropriate to New Caledonia could be adapted to the territory's requirements and adopted by local professional societies.
- Equipment standards for commercial and residential appliances and equipment. Air conditioning, refrigeration, water heating, motors, lighting could be consistent with top-tier New Zealand standards or ENERGY STAR requirements.

Supporting Elements

The key supporting elements are:

1. Indicators; 2. Training Programmes; 3. Procurement; 4. Incentives; 5. Industry Development; and 6. Public Education

The supporting element guidance provided under the mandatory standards section also applies to voluntary standards.

Step 5: Pilot-Scale Implementation

Pilot-Scale Implementation—which could alternately be called a 'ramp up phase'—is an administrative exercise that is designed to build up and test the ability of the market and the professional community to implement mandatory and voluntary standards and programmes at an increasing scale. Developing and refining supporting materials, training programmes and enforcement infrastructure are key aspects of this phase.

Generally-speaking, Pilot-Scale Implementation should penetrate at least 15%–25% of the mandatory market and at least enough of the voluntary market to adequately test the ability to administer the growing scale of a voluntary programme. The size of the programme must be large enough to interest suppliers of products and services to respond to the opportunity.

Mandatory Minimum Performance Standards: Pilot-Scale Ramp Up

The stakes are much higher for Pilot-Scale Implementation of a mandatory programme than they are for a voluntary programme, therefore the resources dedicated must be correspondingly greater. The good news is that all of the market infrastructure that supports a mandatory standard also supports a voluntary standard, even though the implementation framework may be different.

The ramp up phase would apply to the following mandatory minimum programmes and standards:



- Creation and expansion of enforcement activities of minimum required practise in New Caledonia's T/MPAs.
- Required practise tourism standards—ECO Nature Tourism.
- Mandatory minimum standards for vehicles, buildings and equipment and infrastructure would be expanded beyond the demonstration projects to encompass agencies or companies across the entire territory.

Supporting Elements

The key supporting elements are:

1. Indicators

At this level of implementation, New Caledonia will want to track similar indicators to those developed for the demonstration project stage, with particular attention given to visitation impacts on wildlife-related indicators (number and counts of different species, etc.). In addition to visitation indicators, indicators of violations of the T/MPA regulations should be tracked for both marine and land-based activities. Hopefully, even as greater access brings greater numbers of visitors to protected areas, the number of violations would decrease in both relative and absolute terms.

2. Training Programmes

The training programme developed for the *Ambassadeurs* programme can be adopted for ramping up the programme in other T/MPA regions, as well as provide a model that can be adapted to community-based enforcement programmes. The experience of the Australia ECO Certification Program that has developed materials to train a wide variety of professionals across the tourism industry can benefit the development of tourism industry training programmes. Operations and maintenance training will be needed for energy-efficient buildings, equipment and vehicles.

3. Procurement

The procurement of goods and services that conform to imminent mandatory or voluntary standards is one of the most high-leverage activities that can be undertaken during market transformation. All national, state and local government solicitations for new buildings should require implementation of the mandatory minimum building codes.

Procurement is not limited to government entities; any purchasing entity that specifies mandatory or voluntary standard performance levels during this stage sends a very powerful market signal.

4. Incentives

Once the standards have been adopted, participants in the standards and/or programme development process can work with implementers to determine the best mix of administrative/non-monetary and monetary incentives to promote programme participation and uptake of the standard. Incentive structures should incorporate both an 'Early Adopter' (for mandatory standards) and a 'Beyond Minimum' (for voluntary standards) set of incentives that are designed to minimise the extra first cost of meeting mandatory standards early or higher level standards. Negative 'incentives'



such as tariffs on non-compliant equipment or vehicles, for example, can also be implemented during this process.

5. Industry Development

The Pilot-Scale Implementation phase is one of the most fertile periods to grow industry knowledge and participation. Using industry and professional associations to disseminate training and as vehicles for Pilot-Scale Implementation projects will be key for overall market transformation. The marine, fishing and dive tour industry will be particularly important to engage in the review and enforcement of marine activity guidelines, especially in the context of greater enforcement of standards within MPAs. Professional societies (e.g., engineering and architecture) will be important to engage in the development and implementation of vehicle, building and equipment standards. In addition, there may be an important role for the telecommunications industry to play in providing online access for visitors to transportation, lodging and activities.

6. Public Education

As with all elements of the market transformation strategy, public education needs to be significantly ramped up during the Pilot-Scale Implementation stage. Earned media—articles, op-eds, feature pieces, public service announcements—are preferable to paid media, such as advertising. Such a campaign would emphasise both the high-level goals of market transformation, as well as concrete activities, especially specific projects, taking place during the ramp up phase.

Voluntary Best Practise Performance Standards: Pilot-Scale Ramp Up

The bar is much lower for the pilot-scale phase of a voluntary standard, since the ultimate volumes of projects and activities that need to be supported is significantly smaller than with a mandatory code. All of the basic elements needed to support a mandatory code need to be in place for a voluntary standard: trained professionals, product availability in the market, trained evaluators, technical and marketing materials, etc., but at a smaller scale. If the lowest performance target of the voluntary standard has not been set too high, then it should ultimately be able to reach 15%–25% of the market.

The ramp up phase would apply to the following voluntary programmes and standards:

- Expansion of enforcement programmes to New Caledonia's T/MPAs.
- Ecotourism certification for marine and land activity guides and expansion of the *Île des Pins* ecotourism development strategy.
- Advanced standards for vehicles, buildings, equipment and infrastructure.
- Expansion of the Complete Streets demonstration with pedestrian and cycling amenities.
- Development and expansion of high-speed boat access to New Caledonia's lagoon reef areas and through additional boats or expanded schedules.
- Expanded functionality of the New Caledonia NTA reservation gateway to greater numbers of travel, lodging and activities that can accommodate direct bookings via the website.

Supporting Elements

The key supporting elements are:



1. Indicators

In addition to the indicators developed for these programmes in the demonstration project phase, tracking the impact of access programmes will be important. It will also be important to track the impact of the NTA in terms of increased bookings, especially for smaller businesses that were previously difficult to find online.

2. Training Programmes; 5. Industry Development; and 6. Public Education

Our recommendations are the same for the voluntary standards as they are for mandatory codes, but focused on the particulars of the voluntary standards and projects.

3. Procurement

All institutions, government and private, should be encouraged to participate at some level in the implementation of voluntary standards, projects and programmes. The proper incentive structure will be key in promoting this activity. For large capital items, such as high-speed ferries, government support for private company acquisition may be needed.

4. Incentives

Typically, financial and administrative incentives originate from regulated or government entities, such as utilities or tax agencies. Incentives for voluntary standards tend to take longer to put into place because they tend to be sponsored by private sector organisations, but Beyond Minimum projects and programmes can be implemented by governments, as we recommend here.

Incentive programmes could be developed to upgrade ecotourism infrastructure, which could be paid back from operational savings. Alternately, New Caledonia could incentivise volunteer experts and labour to support facility ecoupgrades all through its T/MPA network, through discounts on travel, accommodation and activity fees. Access to protected areas for ecocertified guides would be a strong incentive for these professionals to undertake training and certification.

New Caledonia could dramatically accelerate its market transformation if incentives—both financial and administrative—were coordinated between the mandatory and voluntary standards and projects/programmes. As noted earlier, ideally the voluntary standard becomes the next tier of mandatory code. For vehicles, buildings, equipment and infrastructure, financial incentives would be based on the marginal cost of saved energy, water, etc.

Step 6: Full-Scale Implementation and Step 7: Continuous Improvement

Mandatory Minimum Performance Standards: Full-Scale Implementation

The launch date of the mandatory minimum performance standards should be set at the beginning of the pilot-scale/ramp up stage. It must allow enough time for the necessary buildup of expertise and compliant products in the market to hit a critical mass. Depending on the type of requirement being put into place, six months (for professional standards) to eighteen months (for building and equipment standards) should be sufficient lead-time for the market to adapt to new mandatory requirements. Adequate enforcement infrastructure must also be in place and prepared for the resulting volume of applicants. In the case of the recommended tour and



activity guide standards, strong participation of the industry will shorten the time needed for full implementation uptake.

For Continuous Improvement, the cycle time will vary from 12 months for professional standards changes to 3 years for changes to building codes to around 5 years for changes in vehicle or appliance standards. The only thing markets hate more than regulation is uncertainty. Cameron-Cole strongly recommends adopting 2 tiers of standards at a time so that industry can plan its investments and the market has some stability and predictability. This will put a greater burden on the rule-making/regulatory development bodies, but we believe it will also result in smoother and more successful implementation.

Supporting Elements

The key supporting elements are:

1. Indicators

Continue monitoring the indicators established during the previous steps. Also the use and impact of incentives, as well as procurement programmes, should be monitored and evaluated to ensure that the incentive programmes are being properly targeted and delivering the improvements in efficiency and increased market penetration that should be expected.

2. Training Programmes

Cameron-Cole recommends that credential maintenance programmes be implemented that require ongoing professional development. In the building sector, this would apply to architects, engineers, construction managers, building operators, etc. There is a wealth of training materials available online that could be adapted to the situation in New Caledonia.

3. Procurement

On average it is expected that about 15% of the market will not be at all in compliance with mandatory rules and another 5%–10% will be in partial compliance. It is absolutely vital that governmental and institutional entities are in full compliance with code requirements and demonstrate that vital leadership.

4. Incentives

During the first 2/3 of the full-scale adoption cycle, the primary incentive focus should be on Beyond Minimum incentives to prepare the market for the next set of standards. The final 1/3 of the cycle should be focused on Early Adopter incentives for the next tier of mandatory requirements. During the final 1/3 of the adoption cycle, Beyond Minimum incentives should continue to be offered, but the emphasis in marketing and promotion should be on Early Adopters. Essentially, the Beyond Minimum incentives will become Early Adopter incentives and a new tier of Beyond Minimum incentives developed to promote continuous improvement.

5. Industry Development

An effective market transformation plan will give a participatory role to professional and industry associations in the development of standards and the principal role in the delivery of training and professional development.



6. Public Education

Regular, periodic promotion of the importance of adhering to minimum performance standards is vital to maintaining a culture of compliance.

Voluntary Best Practise Performance Standards: Full-Scale Implementation

By contrast with mandatory minimum standards, which are implemented more like a series of steps, voluntary standards are in a state of continual ramping up either in performance requirements or in continuing to gain market share. As with mandatory measures, voluntary performance standards benefit from being on a regular time scale of revision and require the same supporting infrastructure. There is more leeway in allowing for smaller, ongoing continuous improvements, rather than the preparation for the periodic mass changes of a mandatory code. Generally, the principal challenge is not in the development or the stringency of the requirements, or even getting users to take up the standard. Rather, it is adequate support for projects in the pipeline that is the hardest aspect to maintain for voluntary standards. Thus, the training and industry development portions require special attention during the market transformation planning process.

Supporting Elements

The key supporting elements are:

1. Indicators

Key indicators for full-scale voluntary standards should include those established for the technical and pilot-scale demonstrations, as well as tracking the impact of incentives and the impact of procurement programmes. For more conventional standards such as for buildings, equipment and vehicles, both the mandatory and voluntary standards success indicators could include floor area, number of projects covered and the number of equipment/vehicles sold under the standards, as well as the percent of market penetration and the reductions in energy and water use and CO₂ emissions reductions.

2. Training Programmes, 5. Industry Development, and 6. Public Education

Our recommendations in these are the same for the voluntary standards as they are for mandatory codes, but focused on the particulars of the voluntary standard.

3. Procurement

We recommend that between 15% and 25% of institutional procurement be directed toward achieving the higher performance level of the voluntary standard. This suggestion need not be implemented evenly across all divisions or departments of an institution. Some portions of New Caledonia's government (e.g., the Ministry of Tourism as opposed to the Ministry of Finance) or certain types of private institutions (e.g., Sustainable or ecoresorts) may be better suited to do most or all of their procurement according to the higher performance requirements.

4. Incentives

We strongly recommend that incentives for voluntary standards be developed and implemented at the territory level. As noted above, coordinating these incentives with those of the mandatory standards will greatly accelerate market transformation.



COUNTRY 5 — VANUATU



Vanuatu's recent tourism development was severely impacted by Cyclone Pam and the sector is only now fully recovering. The country has developed a firm foundation for Sustainable Tourism development through the Vanuatu Strategic Tourism Action Plan and the Vanuatu Tourism Permit and Accreditation Programme. This latter activity forms the basis of the market transformation theme of this report: Standards Development. By creating minimum mandatory standards and advanced performance Sustainable Tourism industry requirements, Vanuatu is positioning itself to provide a reliable, quality and sustainable tourist experience to its visitors.

Country 5 — Vanuatu: Tourism Sector Analysis

Vanuatu¹ collects and analyses visitor data according to mode of transportation (i.e., air and cruise ship), as well as by purpose of visit (e.g., holiday, business, meetings/conferences).² Visitors arrive by air at Port Vila and Luganville airports and visit ports and attractions at Port Vila, Luganville, Ambrym Island, Mystery Island and others.

As recommended in Deliverable 4, 'Priority Recommendations for Promoting Sustainable Tourism', Vanuatu should work with SPTO and SPREP to develop consistent definitions for 'visitors' and their 'activities' that would be adopted regionally. A common visitor information form for the region, including common definitions for each type of visitation, would go a long way to ensuring proper data collection and will aid subsequent analysis in the future.

As shown in Table 1, Vanuatu's tourism activity grew steadily from 2011 to 2013 then declined quite precipitously in 2015 as a result of the devastating aftermath of Cyclone Pam, one of the worst natural disasters to ever hit the country.³ Because of the tremendous impact of Cyclone Pam, the 5-year trend period of 2011–2015 chosen for this report is not fully representative of the visitor arrival situation in Vanuatu. Overall, data from 2016 shows that the country's visitation numbers have nearly rebounded to 2013 levels.

During the 2011–2015 period, the greatest number of Vanuatu's visitors arrived by sea and the annual rate of growth of sea-borne visitors (8.1%) is also significantly higher than the numbers and Average Annual Rate of Growth Rate (AARG) of air arrivals (-0.4%). From a regional perspective, its overall visitor growth rate (4.9%) is comparable to that of other Pacific Island Country Territories (PICTs) in our study (5.3%), and might have been somewhat higher if Cyclone Pam had not occurred. For example, Cyclone Pam, led to a 20% drop in sea visitors compared with 2013, which results in a 5-year annual growth rate (8.1%) that is considerably lower than that of

¹ Cameron-Cole, in its role as the successful bidder in the SPREP RFP for the Regional Assessment of Sustainable Tourism in the Pacific, is utilising with permission the Market Transformation Protocol™ developed by Principal Investigator, Robert Watson.

² The source of all data in the Tourism Sector Analysis section: <http://www.vnso.gov.vu/index.php/economic-statistics/tourism-news#current-year-tourism-news>; <http://www.vnso.gov.vu/index.php/economic-statistics/tourism-news#prior-year-tourism-news>; <http://www.vnso.gov.vu/index.php/economic-statistics/tourism-news#latest-tourism-news>; <http://www.vnso.gov.vu/index.php/economic-statistics/tourism-news#2015-tourism-news>; <http://www.vnso.gov.vu/index.php/economic-statistics/tourism-news#2014-tourism-news>; Numbers and percentages on top of stacked columns in Figures represent total numbers in that year and range of percentages in those years, respectively.

³ <https://www.theguardian.com/world/2015/mar/15/cyclone-pam-death-toll-may-reach-50-in-port-vila-alone-as-full-impact-still-unknown>



the other PICTs (12.0%).⁴ The year 2016, however, resulted in a rebound to record sea visitation, nearly 30% above 2015 levels and about 3% above 2013 cruise ship visitation levels.⁵

Also during the 2011–2015 period, Vanuatu showed slightly negative growth in air visitors compared with other PICTs (-0.4% vs. 3.6%), principally due to the 2015 fall-off resulting from Cyclone Pam. In 2016, air visitation grew compared with 2015 and resulted in slightly higher arrivals than in 2011.⁶ However, overall arrivals are significantly below the 2013 peak, principally due to the temporary halt on Air New Zealand and Qantas landings and codeshares at Port Vila International Airport as a result of concerns over runway safety.⁷

Air & Sea Visitors	2011	2012	2013	2014	2015	AARG⁸	Total Visitors
Vanuatu	248,898	321,404	357,405	329,013	287,423	4.9%	1,544,143
Air Visitors							
Vanuatu	93,960	108,161	110,109	108,808	89,952	-0.4%	510,990
Sea Visitors							
Vanuatu	154,938	213,243	247,296	220,205	197,471	8.1%	1,033,153

Table 1: Annual Visitors by Mode of Arrival.

Figure 1 and Table 2 show the trend in visitor arrival types from 2006–2015. Over the 10-year period, there were 2,33,378 visitors. The mean number of visitors per year was 233,338 and the median number of visitors per year was 243,273. Overwhelmingly, the greatest percent of visitors are on holiday—either arriving by cruise ship or air—for a total of 91%. Note that almost twice as many holiday visitors (59%) arrive by cruise ship compared to those arriving by air (32%).

⁴ The PICTs Cameron-Cole visited for this study are French Polynesia, New Caledonia, Palau, Tonga and Vanuatu. However, our regional tourism sector analysis also includes data from Fiji, Guam and Samoa, which we use as the basis for an overall regional comparison with Vanuatu. Regional averages presented here exclude the subject country (Vanuatu) from those figures to create a true comparison.

⁵ 2016 visitation: 95,117 (air); 254,489 (cruise ship); 349,606 (total).

⁶ See Deliverable 1 'Sector Profile of Sustainable Tourism in the Pacific' for additional regional comparison details.

⁷ <http://asiapacificreport.nz/2017/04/03/upgrade-deadlock-over-port-vila-runway-ends-china-contract-ok/>

⁸ As noted in the text, 2011–2015 is not fully representative of the overall visitation profile of Vanuatu due to the impact of Cyclone Pam.

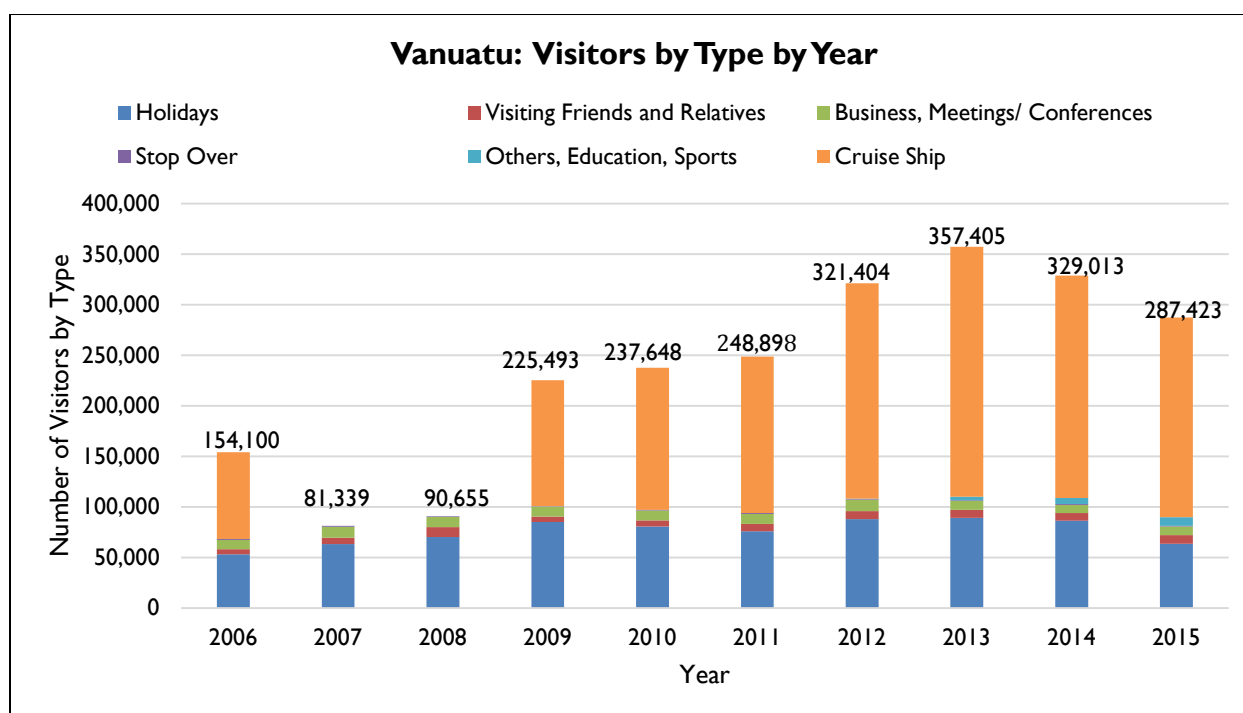


Figure 1: Visitors by Type by Year.⁹

Figure 2 shows Vanuatu's visitors by country of residence between 2006 and 2015. These include all visitors (e.g., business), not just holiday visitors. Data are for visitors arriving at Port Vila and Luganville airports. Cruise ship passenger data are not available by country of residence.

While useful, the data don't allow us to determine how the types of visitors (e.g., holiday, business) are distributed among the country residences shown—we were unable to locate visitor data analysed by country AND type of visit. (It's possible that such an analysis exists but is not made publicly available.) For example, most holiday visitors may be citizens of Australia, whereas business visitors may be New Caledonian citizens or visitor types may be uniformly distributed among the countries. We recommend analysing the data by country of residence and visitor type as the results may inform potential, targeted Sustainable Tourism marketing efforts.

Australia accounts for between one half and two thirds of all visitors arriving by air. Given the similar proximity of New Zealand to Vanuatu, it is rather surprising that visitation from that country is considerably lower than that from Australia.

⁹ We found no cruise ship data for 2007 and 2008. If we assume these two years are part of the growth in cruise ship visitors—for simplicity say 100,000 in each of 2007 and 2008—then, for example, the mean number of visitors would increase to about 253,000 visitors/year (approximately an 8% increase). Similarly, for 2007 and 2008, we found no data for 'Others, Education, Sport'. These numbers are typically small (< 3% of total visitor numbers annually) and will thus not have a meaningful effect on the overall statistics.



Visitor Type	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	TOTAL VISITORS
	Number	Number	Number	Number	Number	Number	Number	Number	Number	Number	Number
	Col %	Col %	Col %	Col %	Col %	Col %	Col %	Col %	Col %	Col %	Col %
	Row %	Row %	Row %	Row %	Row %	Row %	Row %	Row %	Row %	Row %	Row %
Holiday	53,030	63,322	70,312	84,957	80,681	75,821	88,085	89,253	86,239	63,625	755,325
	34%	78%	78%	38%	34%	30%	27%	25%	26%	22%	32%
	7%	8%	9%	11%	11%	10%	12%	12%	11%	8%	100%
Visiting Friends and Relatives	5,061	6,161	9,783	5,499	6,079	7,320	7,910	7,755	7,672	8,495	71,735
	3%	8%	11%	2%	3%	3%	2%	2%	2%	3%	3%
	7%	9%	14%	8%	8%	10%	11%	11%	11%	12%	100%
Business Meetings Conferences	9,312	10,836	9,965	9,420	9,615	9,933	11,294	9,079	8,007	8,687	96,148
	6%	13%	11%	4%	4%	4%	4%	3%	2%	3%	4%
	10%	11%	10%	10%	10%	10%	12%	9%	8%	9%	100%
Stop Over	775	1020	595	510	692	790	602	613	1022	336	6955
	1%	1%	1%	0%	0%	0%	0%	0%	0%	0%	0%
	11%	15%	9%	7%	10%	11%	9%	9%	15%	5%	100%
Others, Education Sports	1	--	--	289	113	96	270	3409	5868	8809	18855
	0.0%	--	--	0.1%	0.0%	0.0%	0.1%	1.0%	1.8%	3.1%	0.8%
	--	--	--	1.5%	0.6%	0.5%	1.4%	18.1%	31.1%	46.7%	100%
Cruise Ship	85,922	--	--	124,818	140,468	154,938	213,243	247,296	220,205	197,471	1,384,361
	56%	--	--	55%	59%	62%	66%	69%	67%	69%	59%
	6%	0%	0%	9%	10%	11%	15%	18%	16%	14%	100%
TOTAL VISITORS	154,101	81,339	90,655	225,493	237,648	248,898	321,404	357,405	329,013	287,423	2,333,379
	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
	7%	3%	4%	10%	10%	11%	14%	15%	14%	12%	100%

Table 2: Visitors by Type by Year.

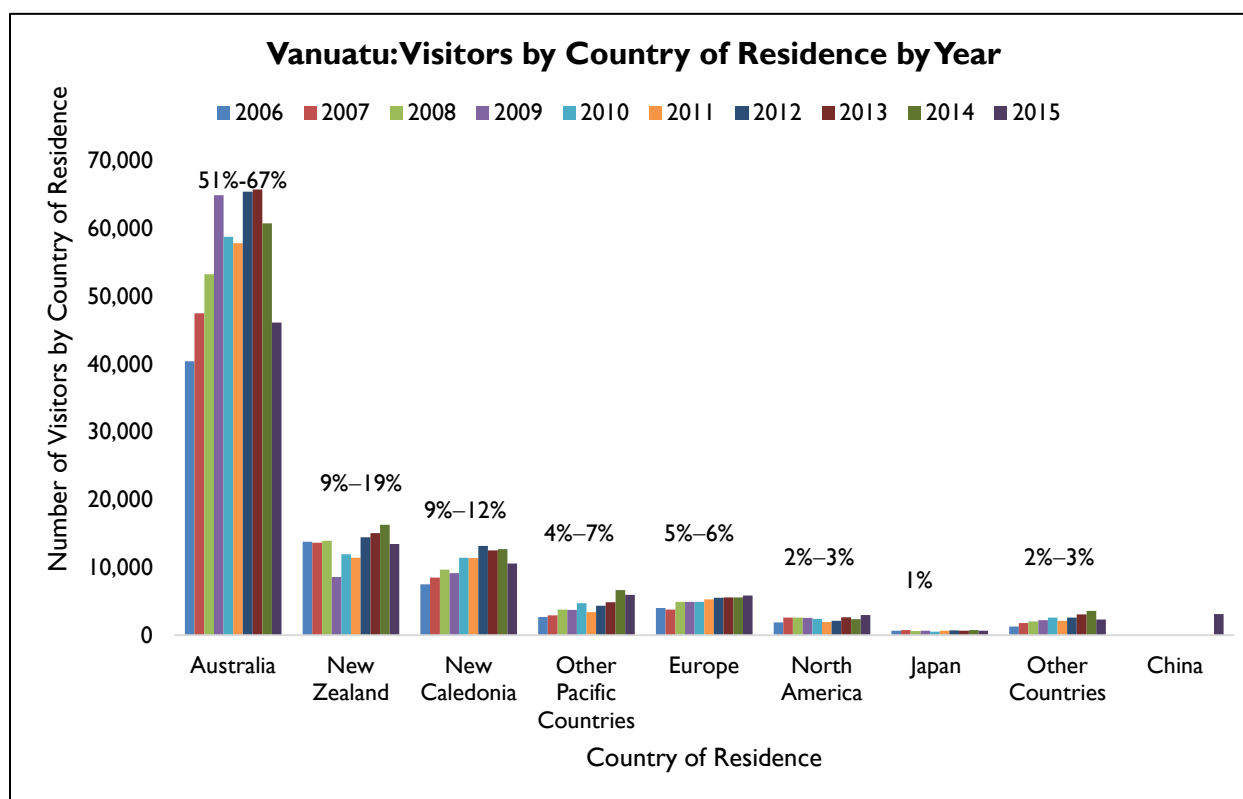


Figure 2: Visitors by Country of Residence by Year.

Vanuatu: Strategic Market Transformation Protocol

Cameron-Cole is basing its recommendations to achieve Sustainable Tourism on the Sustainable Tourism Market Transformation Protocol¹⁰ (Figure 3) developed by Principal Investigator Rob Watson, which has been demonstrated to be effective in transforming various sectors from utilities and energy conservation to green buildings. The Market Transformation Protocol (MTP) was introduced in Deliverable 1 and referenced extensively in Deliverables 3 and 4.

It is composed of seven fundamental elements (e.g., Strategic Market Transformation Plan, Enabling Legislation)—five of which are either Regulatory or Market Driven—and six supporting elements (e.g., Indicators, Training Programmes). Together, they form the necessary framework and process to build a viable and thriving Sustainable Tourism sector. Below, we apply the fundamental and supporting elements of the MTP to Vanuatu to demonstrate how they will collectively provide a path to Sustainable Tourism.

¹⁰ See Footnote 1.



Figure 3: Market Transformation Protocol for Sustainable Tourism.

Territory Market Transformation Theme: Standards Development

The heart of the market transformation effort is creation and enforcement of the rules and regulations, both mandatory and voluntary, that define the transformed market. Best practise standards development involves the extensive participation of all stakeholders. Although involving affected parties can extend the time required to develop standards, the rate of compliance and uptake in the market can be directly correlated to this involvement. Rapid development of standards involving only experts behind closed doors may get the rules written quickly, but the implementation will be very slow and poor and the rules will be much more open to legal challenge. By contrast, when standards are developed in an open and transparent way, the affected parties have a much greater stake in a successful outcome and will be more willing to embrace the new structure. Our research indicates that there is an inverse relationship between the intensity of standards development and the ease of implementation: a shorter, more restricted development process results in slow implementation; a longer, more inclusive standards development process results in more rapid and more effective implementation and far fewer enforcement difficulties.

Step 1: Strategic Market Transformation Plan (SMTP) for Vanuatu

Vanuatu has recently adopted the Vanuatu Strategic Tourism Action Plan (VSTAP) covering the years 2014 to 2018.¹¹ The VSTAP is complemented and supported by the Vanuatu Tourism Permit

¹¹ http://tourism.gov.vu/assets/docs/VSTAP_FINAL_Feb_2014.pdf



and Accreditation Programme (VTPAP)¹² that seeks to develop basic business permitting and performance accreditation for a range of Vanuatu tourism businesses. Together, these documents already have many elements of a SMTP for Vanuatu that can be supplemented as described below.

VSTAP was directed by a Project Steering Committee (PSC) that included national government officials and tourism industry leaders. The PSC could form an important core representative group for the development of a SMTP for the country. In addition to representation of these core constituencies, Cameron-Cole also recommends adding Outer Island representatives, particularly from a community-managed tourism site perspective to this group to round out the representation for the entire country. Additional recommendations for Vanuatu's SMTP include:

- **Enabling Legislation.** VSTAP and VTPAP both include some discussion of needed legislative underpinning to move tourism to a more professional and sustainable foundation. Cameron-Cole recommends that the legislative basis of some of the adjunct elements of Sustainable Tourism, such as efficient buildings and transportation, be incorporated into the SMTP.
- **Demonstration Projects.** In addition, while there is some provision for demonstration projects in the VTPAP, this discussion should be expanded more broadly in the next iteration of the VSTAP, as per the suggestions in this report.
- **Standards Development.** Both VSTAP and VTPAP address standards development and continuous improvement in a comprehensive manner, which is why this element, accompanied by Enforcement, was chosen as the focus of this Country Report. Cameron-Cole recommends continuous monitoring of progress of these documents and modification of the approach should elements fall short of the stated goals.
- **Pilot-Scale Demonstration.** The VSTAP does address 'pilot' projects, but these are more in line with what we would characterise as 'demonstration' projects. More thought and structure should be given as to how to scale the standards from the demonstration scale up to one quarter or one third of the market before full-scale launch. The VTPAP has pilot-scale projects at the provincial level of two of Vanuatu's five provinces (Sanma and Tafea). However, this approach will require similar scaling and testing of capacity in the remaining provinces, which means that there could be a 1–2 year lag before all provinces are on a level playing field. If not too late, we suggest that capacity be built at the pilot-scale in all provinces.
- **Full-Scale Launch and Continuous Improvement.** These elements are incorporated into the VTPAP and should be noted in the VSTAP. In addition, the VSTAP should also address developing and scaling the broader infrastructure issues noted in our various reports.

Regional Strategic Project: National Travel Agency and Sustainable Tourism App for Vanuatu

Most travel arrangements today are made via the Internet, in particular through search and review aggregation sites such as Booking.com and TripAdvisor.com.¹³ As a region-wide recommendation, we suggest establishing a National Travel Agency (NTA) for each of the Pacific countries, and we believe that Sustainable Tourism in Vanuatu would benefit tremendously from such an approach. With its new upgraded website, vanuatutrusttravel.info, the nation is moving in this direction. To truly

¹² <https://tourism.gov.vu/assets/docs/accreditation/News/VTPAPNotice.pdf>

¹³ <http://www.statisticbrain.com/internet-travel-hotel-booking-statistics/>



be the practical and strategic tool envisioned in this report, the Vanuatu NTA website would include better navigation regarding property and dining locations, as well as the absolutely vital (from a traveller perspective) customer review element.

Our concept of an NTA would support a national strategic approach to tourism in the country. In addition, to give consumers confidence in the travel packages put together by the NTA, Vanuatu can adopt—and aggressively promote—the EU Package Travel Directive (2015/2302/EU), or similar consumer protection/transparency rules.¹⁴

Our principal suggestion in launching the Vanuatu NTA is to allow travel option comparisons and direct booking from a single Vanuatu-focused travel site. At present, in addition to [vanuatu.travel.info](http://vanuatu.travel/info) visitors must visit at least two to three different websites and/or make an international phone call before they can book or confirm their itinerary. Moreover, at present, online information about access to Vanuatu's less developed areas and many of its smaller establishments—especially its ecotourism-oriented facilities—is partial at best.

An NTA portal, set up like TripAdvisor.com or other Web-based information and booking sites, would allow guests to get information, compare options and then reserve lodging, events, etc. through a single portal, creating a 'one stop shopping' experience. These additional features will create a strategic tool that Vanuatu can use to make its tourism sector more economically and environmentally sustainable.

Moreover, as we described in Deliverable 4, having an NTA would allow strategic allocation of visitation to areas that are underutilised and away from areas that are overexploited. This could be done by limiting reservations to certain islands or bookings to certain activities, as well as providing incentives in the form of higher or lower tariffs to accommodations on islands that are being promoted or restricted. It would not be difficult to develop a revenue sharing formula that would compensate area businesses if their area is chosen for a 'sabbatical'.

SPTO should take the lead in concert with Vanuatu and other PICTs in negotiating with key travel aggregation websites to develop both a regional and country-focused overlay to their search engines.

In addition to the NTA, Vanuatu could work with SPTO to develop a country-specific Sustainable Tourism app. The app could be developed by local Vanuatuan IT professionals, possibly using an Application Programming Interface (API) developed by or provided by SPTO with support from SPREP. The Vanuatu Sustainable Tourism app could have a specific ecotourism section and give different levels of information and access to preferred bookings depending on the level of package procured through the NTA.¹⁵

The issue of Internet access will need to be assessed as part of this effort.¹⁶ The Outer Island travel call centres could be an initial part of a 'hub-and-spoke' roll-out of the NTA. Putting resources online would not only facilitate the work of the call centres, but also visitors organising their own travel.

¹⁴ http://ec.europa.eu/consumers/consumer_rights/travel/package/index_en.htm

¹⁵ For more discussion about the Sustainable Tourism app, please see Deliverable 4: Priority Recommendations for Promoting Sustainable Tourism.

¹⁶ Similar to enabling legislation, enabling technology infrastructure may also need to be grown.



Standards Development as a Highlighted Market Transformation Element

The theme of our recommendations for Vanuatu revolves around the market transformation issue of standards development. Properly developing and coordinating mandatory and voluntary standards is essential to the success of any market transformation effort. The SMTP must evaluate the existing underpinning for standards in existing Enabling Legislation and identify necessary modifications to these existing laws or what new legal authority must be developed in order for the Sustainable Tourism industry to thrive. As noted in the report for New Caledonia, for the effective implementation of standards—whether they are mandatory or voluntary—good enforcement is absolutely essential if the objectives of the standards are to be met. By officially deputising members of the tourism industry, standards enforcement can be much more widely implemented.

As discussed in Cameron-Cole's Deliverable 3 'Key Actions to Support Development of an Ecotourism Sector', mandatory standards act as the cab of an elevator, while voluntary standards with incentives act as the motor drive. Together, they can progress markets much more effectively than separately.

Vanuatu already has a well-developed and successful standards development process in partnership with Ecotourism Australia. Our purpose of focusing on this effort is to highlight its success for other countries and point out opportunities for further progress in the context of market transformation to sustainability.

Step 2: Market-Specific Enabling Legislation¹⁷

Many elements of the necessary legislative underpinning to support a transformation toward Sustainable Tourism in Vanuatu is in place, but significant additions or modifications will be necessary to support a viable market transformation toward sustainability for the tourism sector.

Sustainable Tourism Standards

A review of the Pacific Legal Information Institute (PacLII) database indicates that Vanuatu has specific standards and regulations governing the conduct of the Tourism Industry.¹⁸ Tourism is hugely important to Vanuatu's economy, directly contributing to over 17% of GDP and nearly 45% in total.¹⁹ The nearly 10% decline in GDP after Cyclone Pam and the reduction in air visitors due to the runway problems at the Port Vila International Airport demonstrate how vital the tourism sector is to the country.²⁰

The Tourism Councils Act of 2012 (Tourism Act) is the central piece of industry legislation. One of the key objectives of the established Tourism Council is 'to optimise the contribution of tourism to the sustainable development of the country', an objective that is also that of the Local Government Councils established by the legislation.²¹ This legislation should be modified to cover the development and maintenance of a SMTP at both the national and local government

¹⁷ A comprehensive, in-depth legal review of Vanuatu law in this area is beyond the scope of this project, however, we have attempted to identify a few key areas in core pieces of legislation that would support and further market transformation.

¹⁸ A search for the term 'Tourism' in the PacLII database brings up over 120 results for relevant legislation and/or regulations in Vanuatu. http://www.pacii.org/cgi-bin/sinorsh.cgi?method=auto&meta=%2Fpacii&mask_path=vu%2Flegis&mask_world=&query=tourism&results=50&submit=Search&rank=on&callback=off&legisopt=&view=relevance&max

¹⁹ World Travel & Tourism Council, *Travel & Tourism Economic Impact 2016 Vanuatu*. <https://www.wttc.org/-/media/files/reports/economic-impact-research/countries-2017/vanuatu2017.pdf>

²⁰ <https://tradingeconomics.com/vanuatu/gdp>

²¹ Tourism Act, Section 6 and Section 15.



levels. In addition, a clear enforcement regime and associated penalties for non-compliance should be established in all of the legislative recommendations below.

Distinguish Ecotourism From Conventional Tourism

Although the Tourism Act mentions sustainability, Cameron-Cole recommends that the legislation specifically describe and distinguish ecotourism from conventional tourism and establish special designations for trained and certified ecotourism guides and companies engaged in marine activities, including snorkeling, diving and interacting with marine mammals, such as dugongs, that go beyond existing guidelines. These definitions and designations should be consistent with Australia's ECO Certification Program that is currently being adapted and adopted.

Activity and Destination Standards

Vanuatu is leading the region in its development of Activity and Destination standards through the VTPAP that is being developed by the Tourism Councils and implemented by the Department of Tourism as empowered by the Tourism Act. The Vanuatuan standards and accreditation programme began with mandatory minimum standards for activities and destinations and is subsequently developing and adopting advanced sustainability requirements. Both the mandatory minimum and Sustainable Tourism standards being developed comprehensively address the breadth of the Vanuatu tourism industry, as shown in Table 3.

Tourism Activities Covered by the Vanuatu Tourism Accreditation Plan	
Accommodation Accreditation	
•	Camp Site Operator
•	Guest House Operator
•	Home Stay Operator
•	Island Bungalow Operator
•	Tourism Accommodation Operator
•	Unique Accommodation Operator
Transportation & Access Operator Accreditation	
•	Air Tourism Transport Operator
•	Marine and Motorised Water Operator
•	Tourism Transportation Operator
•	Yacht and Boat Charter Operator
Tour Operator Accreditation	
•	Educational & Interest Tour Operator
•	Fishing Tour Operator
•	Land Adventure Tour Operator
•	Scuba Diving Tour Operator
•	Tour & Transfer Operator
•	Traditional Activity Operator
Tour Industry & Services Accreditation	
•	Handicraft & Arts Shop Operator
•	Inbound Operator
•	Rental Service Operator
•	Travel Agency Operator
•	Tourism Association Requirements

Table 3: Tourism Activities.



Designation and Protection of Places and Species

In spite of fairly extensive community/village-based management of protected areas and a social tradition of *tabu*, the World Database on Protected Areas shows that Vanuatu has one of the smallest percentages (~0.1%) of internationally recognised Marine Protected Areas (MPAs) within its exclusive economic zone (EEZ). In addition, only 4% of Vanuatu's land area has internationally-recognised protected designation.²²

Gaining international recognition of protected areas will be very important to developing and reinforcing Vanuatu's reputation as a Sustainable Tourism destination. SPREP is supporting the mapping of Vanuatu's protected areas as an important initial step.²³

To highlight the importance of developing standards and enforcing them, when we visited a village-managed MPA on Pele Island, we were offered to go out to the reef's edge and feed the fish. While this activity is clearly popular with tourists, and a source of desperately needed revenues for a community that was devastated by Cyclone Pam and that was still recovering nearly one year later, these types of practises are antithetical to the purposes of protected areas. This experience leads us to our next recommendation.

Develop a Sustainable Disaster Recovery Fund and Plan

Given the likelihood of future climate change-driven weather disasters, Vanuatu should consider creating a 'Cyclone Recovery Fund' and a 'Disaster Recovery Sustainability Plan'. In addition to funds to repair homes, businesses and infrastructure, the Fund could help make up lost tourism revenues after a national disaster. There are many potential sources of revenue to make up such a Recovery Fund.

The Recovery Plan would put into place sustainability guidelines that will allow the replacement of conventional infrastructure and buildings with sustainable alternatives. This kind of rebuilding avoids 'lost opportunities' where the opportunity to rebuild sustainably and efficiently is lost if not done properly post-disaster. Planning for a sustainable recovery will add very little to nothing to the total recovery bill, make the country more efficient and competitive and then more resilient when the next disaster hits.

These alternatives, and the necessary materials and equipment to implement them, must be pre-identified and sourced. After a disaster, any delay in the return to 'normal' is unacceptable. With a funded plan in place, the return can be to 'better' instead of just 'normal'.

Given the environmental fragility of Vanuatuan waters and land that is home to nearly 30 endemic species,²⁴ enforcement is all the more important to ensure its preservation.

Public Participation Rules

Vanuatu's 2016 Right to Information Act²⁵ established the fundamental importance of public participation and access to information. The Information Act states that within 6 months, the responsible Minister identify the key government agencies to which the Act applies.

²² <https://www.protectedplanet.net/country/VU>

²³ <https://www.sprep.org/biodiversity-ecosystems-management/vanuatus-protected-areas-let-the-mapping-begin>

²⁴ Vanuatu has nearly 30 endemic species, concentrated in bird species (9) and reptile species (9).

<http://inttreasures.com/vanuatu.html>

²⁵ http://www.paclii.org/cgi-bin/sinodisp/vu/legis/num_act/rtia2016234/rtia2016234.html?stem=&synonyms=&query=public%20participation



Cameron-Cole believes that the Tourism Act and the Tourism Department are appropriate places to implement the requirements of the Information Act. Tourism will be a key driver of economic and social development for Vanuatu and an area where widespread public participation will lead to improved results. Specifically, Cameron-Cole recommends establishing public participation rules and guidelines around the roll-out of the mandatory and voluntary tourism standards, as well as their ongoing development and improvement.

Infrastructure Standards

Wastewater and solid waste are growing problems in Vanuatu that strongly impact fragile coastal zones. Vanuatu is completing a 4-year urban renewal project with the Asian Development Bank (ADB) in Port Vila that includes upgrading the storm sewer system, as well as improved processing of residential and commercial septic tanks. Cameron-Cole recommends taking the lessons learned from this demonstration project's experience with septic tanks and modifying the Public Health Act and Building Act accordingly.

Building Standards

The 2013 Building Act represents an important step forward regarding the safe and healthy construction of buildings in Vanuatu. At present, the Building Act does not cover energy efficiency. Cameron-Cole recommends that the Building Act be amended to include energy-saving measures. Initially, required energy-saving measures should be simple, easy and prescriptive, for example: a requirement that exit lighting in public buildings be energy-efficient LED lighting. More in-depth energy efficiency and sustainability elements can be integrated in the next iteration through integration of appliance and equipment standards. Please see the Palau Country Report for more details on building codes and standards adoption.

On the voluntary side, the legislation could require adaptation of an existing green building standard such as the Australian Green Star system, or LEED²⁶ for larger resort complexes developed and managed by international firms.

Equipment Standards

Applying efficiency standards to equipment is an easy measure to save significant amounts of energy in both new and existing buildings. Equipment markets are largely global, so finding high-efficiency equipment for importation is not difficult. Given the very high cost of imported fuels for Vanuatu, standards governing equipment importation should be restricted to products earning four stars and above under Australia and New Zealand's energy-efficient appliance standards; ENERGY STAR®-certified equipment could be an acceptable alternative. Key equipment types applicable to the tourism industry are: air conditioning; refrigeration; water heating (solar hot water should be highly, if not exclusively, promoted. Electric hot water heaters, including demand hot water equipment, should be banned.); computer equipment; and plumbing and sanitary fixtures should also be restricted in their flow and flush rates.

These standards would apply to equipment installed in new construction, as well as replacements. While higher efficiency equipment costs slightly more, the investment is paid back in energy savings very quickly and can be offset by incentives, such as the elimination of import tariffs for equipment that exceeds minimum requirements by at least 25%.

Vehicle Standards

Although adopting vehicle standards will raise the cost of vehicles, particularly used vehicles, improving Vanuatu's mass transit and vehicle sharing options, as described below, will help offset

²⁶ Green Star: <http://new.gbca.org.au/green-star/rating-system/>, LEED: www.usgbc.org/leed



the overall financial burden of providing transportation services that these regulations might impose. Recommended vehicle standards for all new and used cars imported into Vanuatu are as follows:

Fuel economy: New cars: current mandatory fuel economy requirements by class for China, Japan or the United States. Used cars should be no more than 5–8 years old and demonstrate that they adhere to the previous tier of fuel economy requirements.

Emissions: New Zealand standards for new or used vehicles imported on or after January 2008.²⁷

As with energy-efficient appliances/equipment, import tariffs could be reduced or eliminated for both used and new vehicles that exceed minimum standards by at least 25%.

Step 3: Demonstration Projects: Code Minimum and Beyond Minimum

Demonstration Projects: Required Practise

For Vanuatu, we are recommending a core demonstration project that combines required practise standards with best practise standards and also that showcases enforcement. The focus would be the application of the range of tourism standards to one or more Community Managed Terrestrial (CMT) and MPAs.

- Nguna-Pele T/MPA Demonstration: Integrated Standards and Enforcement Demonstration. Cameron-Cole suggests that the Nguna-Pele Marine and Land Protected Area (MLPA) network be one of the demonstration sites of how the mandatory and voluntary standards work together from the performance, administrative and enforcement perspectives. The Nguna-Pele network is relatively well established and would be a capable partner in a demonstration.

Vanuatu should consider holding demonstrations in each province with a variety of community managed areas.²⁸ This would allow testing of different approaches to building capacity and integrating each province into the national network. The demonstration would include training of all local and Efate-based operators of accommodations and activities in the mandatory standards and any of those who wish to get advanced certification. In addition, as part of building the NTA, information about accommodations and activities in the Nguna-Pele MLPA could be consolidated and made available online. For example, the availability of bungalows on the islands could be put online so that people can make reservations directly without having to worry about making an international phone call. The local reservation agency could verify availability daily and inform the bungalow operators of reservations if they do not have Internet access.

Other Required Minimum Practise Demonstration Projects:

- Fuel economy and emissions standards for fleet and tour land vehicles. Demonstrate recommended performance standards on a target fleet of a large enterprise or government agency. Early Adopters could be supported by additional training in maintenance and purchase incentives.

²⁷ <http://vehicleinspection.nzta.govt.nz/virms/entry-certification/i-and-c/exhaust/exhaust-emissions#up> Table 11-2-3 and Table 11-2-4 (On or after 1 January 2011 and before 1 January 2012).

²⁸ There are many such entities in Vanuatu, but outside of the Nguna-Pele group, we have no experience or recommendations.



- Demonstration of minimum building standards. Although the actual standards likely to be adopted have minimal emphasis on energy efficiency, this demonstration project should identify a few key building efficiency measures to implement, perhaps solar hot water, window shading, and ceiling fans, in addition to installation of mandatory minimum efficiency equipment (see below). This demonstration would focus on residential and/or commercial buildings in excess of two stories. The demonstration programme would undertake a detailed cost and feasibility assessment of adapting and implementing the chosen measures in Vanuatu. This cost information can be used to inform future incentive programmes. Demonstrations should include one or more government and one or more private buildings.
- Demonstration of energy performance standards for commercial and residential appliances and equipment. Energy-efficient air conditioning, refrigeration, water heating (especially solar), motors, lighting can be demonstrated in new and existing government projects and new construction or renovation projects for other leading institutions. We would encourage the joint demonstration of building and equipment measures together in at least one project.

Supporting Elements

The key supporting elements are:

1. Indicators

The development of key indicators associated with the integrated standards and enforcement demonstrations at a CMT/MPA should be done during the demonstration phase through consultations with local Vanuatuan stakeholders. An inventory of marine life in the proposed CMT/MPA should be undertaken by marine and terrestrial scientists, supported by local guides and include a qualified assessment of the environmental carrying capacity of the site.²⁹ In addition, baseline surveys of visitor experience should also be taken.³⁰ These baselines would enable tracking of the impact of establishing and enforcing rules in a protected area. Based on these assessments, Vanuatu could develop a tiered system of sites that would limit access according to value and vulnerability. Another source of indicators that might be useful can be found in a study on the efficacy of community managed protected areas performed by CRIIBE in 2009.³¹ These indicators include: Number of Accommodation and Activity Operators trained; Fishery Productivity³² and other indicators of reef and marine environmental health; Village Gross Domestic Income and Profit; Number of Visitors to Standard Accredited Operators (Accommodations and Activities); Number of Visitors to Eco-Accredited Operators

²⁹ See Deliverable 4: Priority Recommendations for more discussion of developing Indicators. Research in Palau shows significantly greater fish biomass in protected areas compared with open fishing areas.

<http://journals.plos.org/plosone/article?id=10.1371/journal.pone.0174787>

³⁰ An overcrowded visitor experience can be almost as harmful to the tourist experience as a relatively uncrowded visit to a degraded site.

³¹ https://spccfpstore1.blob.core.windows.net/digitallibrary-docs/files/77/774a013676c7114870831e1ef4886e8d.pdf?sv=2015-12-11&sr=b&sig=IcW05fMSB9VdBH012UPEeXg04NvsWNPeLj4yTiPU26l%3D&se=2017-12-12T22%3A17%3A39Z&sp=r&rscc=public%2C%20max-age%3D864000%2C%20max-stale%3D86400&rsct=application%2Fpdf&rscd=inline%3B%20filename%3D%22ENG_2011_Cost-Benefit_analysis_Vanuatu.pdf%22

³² Measured in Catch Productivity per Unit of Effort (CPUE).



(Accommodations and Activities); Reported level of effort to maintain ecosystem services (qualitative), etc.

Indicators for efficiency demonstrations in buildings, vehicles and equipment would include tracking the scope of the demonstration (numbers of vehicles or equipment, building floor area) and the estimated and actual energy/emissions savings that result.

2. Training Programmes

Ideally, tourist access to CMT/MPA would be restricted—depending on the level of protection assigned—to visitors accompanied by trained and certified local guides, or to areas staffed by qualified Rangers or Deputies. Providing specialised access would emphasise quality over quantity and provide strong incentive to undertake training to become certified as an ecoguide. The Vanuatu Island Bungalows & Tourism Association (VIBTA) is a logical vehicle to demonstrate the development and implementation of training programmes for Accommodation Operators. Similarly, the Vanuatu Tour Operators Association (VTOA) can be supported to develop training in the mandatory and voluntary standards. Other relevant associations for training stakeholders in the infrastructure demonstration projects should be chosen (e.g., Vanuatu Hotels & Resorts Association (VHRA) for building and equipment standards and the relevant transportation agency for vehicles).

On the infrastructure side, local engineers and architects will need to be trained in the energy portions of the Vanuatuan building standards, particularly in how to upgrade existing large facilities to these standards. Mechanics could receive training in how to maintain low-emitting, fuel-efficient vehicles. Funding and delivering professional training through industry and professional associations (Supporting Element 5, below) is a good way to help build and support such associations.

3. Procurement

The CMT/MPA standards and enforcement demonstration project does not have a significant procurement component. However, other demonstration project options do, particularly demonstrations involving buildings, equipment and vehicles. Demonstrations involving buildings, equipment and vehicles should be designed to include procurement elements that promote market development. Demonstrations designed to build market availability and demand, rather than simply showing the performance or feasibility of an integrated approach, would pick a technology that has widespread applicability (e.g., LED lighting) and secure a larger number of sites to demonstrate this particular technology in sufficient quantity to attract the interest of distributors and retailers. It will be important for the government of Vanuatu to ensure that there are fewer restrictions on the availability of materials or equipment needed to fulfil the requirements of building and vehicle standards by purchasing these items as part of demonstration projects.

4. Incentives

For the equipment and technology demonstration projects, there are opportunities to test different types of incentives. The incentives for the suggested CMT/MPA demonstrations could involve monetary and non-monetary incentives. Access to restricted areas being tied to having secured accreditation as an ecoguide or eco-operator is an example of a non-monetary incentive. Monetary incentives might involve reduced or eliminated fees for training and certification for the organisations and operators participating in the demonstration project.



Typically, financial incentives succeed when two key factors are in place: 1) the recipient of the incentive is expending additional funds to meet the new standards and 2) the cost of the incentive to the sponsoring agency is lower than the expenditure that would be made otherwise. For example, energy-efficient equipment is generally more expensive than inefficient equipment. However, it costs less to incentivise efficient buildings and equipment than it does to build new, or fuel existing, power plants to provide enough electricity to power the inefficient equipment, or even to purchase expensive fossil fuels to operate existing power generators.

In the case of building efficiency demonstrations, often the most effective incentives can be administrative, rather than financial. For example, expedited siting and environmental review and approval for projects agreeing to adopt the new code early can be powerful incentives to developers in these situations. Complementary incentives for design and engineering professionals can also be adopted.

5. Industry Development

Growing and promoting professional societies—whether they are in the realm of terrestrial or marine guides, or hospitality, or architecture and engineering—will be important for the coordination and growth of Sustainable Tourism in Vanuatu. As noted above, providing the training programmes described in Supporting Element 2, above, is a good way to help grow these organisations.

6. Public Education

Cameron-Cole supports the recommendations in the VSTAP and associated VTPAP Operational Plan 2017–2020³³ that a national programme be developed to inform the general public about the importance of promoting Sustainable Tourism and ecotourism areas and businesses. This would allow Vanuatuans to see the tourism industry as a potential future career and a source of national pride.

Demonstration Projects: Voluntary Best Practise

As noted above, multiple demonstration projects that combine mandatory and voluntary standards development, implementation and enforcement are possible and even desirable in Vanuatu. Cameron-Cole suggests some additional Voluntary Best Practise Demonstrations below.

Protect and Restore Fragile Ecosystems by Distributing Visitors

As described in Cameron-Cole's report for Deliverable 2: *Analysis of the Current Pacific Marine Ecotourism Industry and Key Supply Side Constraints for the Pacific*, existing or proposed CMT/MPA can be considered 'scarce resources'. One of the best ways to sustainably protect these scarce resources is to provide a balance between access and protection.

The Nguna-Pele CMT/MPA demonstration provides an excellent opportunity to study the impact of visitor distribution on ecosystem health and the visitor experience. This demonstration has implications for infrastructure requirements on the island, but it could be an interesting opportunity to explore innovative options for access to different locations using scaled up, modernised versions of traditional outrigger boats. Other options for determining or regulating access to different sites include:

³³ See Footnote 10, above, and <https://tourism.gov.vu/assets/docs/accreditation/News/VTPAPNotice.pdf>.



- Increase access to Nguna-Pele Islands (and other Efate Islands) via high-speed catamaran boats.
 - Currently, it requires approximately 2–3 hours roundtrip to reach Nguna-Pele from the Port Vila Cruise Ship Port. This travel time limits the opportunities to undertake different activities on the islands and therefore the number of people travelling to the island.
 - One interesting option to explore would be a cooperative purchase of a high-speed catamaran boat—in our Deliverable 2 report, we described the *Okeanos* traditional vaka-style boat—that could be used to increase access to numerous activity points around Efate Island, including Nguna-Pele. When cruise ships visit Port Vila, the high-speed boat could take visitors to those islands, as well as make stops at Lelepa, Moso and Emao Islands. Passengers could also remain on board for a sailing and traditional navigation experience.
 - Co-op owner-members would include residents of the various islands, as well as current owners of banana boats could be part of the co-op and share in revenues, as well as take visitors from an off-shore docking buoy to various points on the destination islands. Cruise ship companies could also participate and provide maintenance and management support and training.
- A mutually agreed-upon cruise ship visitation schedule that allows recovery periods. For example, based on the wishes of the islands' Chiefs and villages, total annual visitors could be split evenly between different marine sites that are selected for visitation. Currently, approximately 100 cruise ships visit Port Vila each year, or roughly 2 visits per week and this is forecast to nearly double over the next decade. At these levels of travel, proper management of fragile marine resources will be especially important.
- Lottery access to permits for the most sensitive areas, as another example, can be introduced with early participation in the lottery given to qualified vendors that are either individuals, or companies that have achieved the proper certification or accreditation per established standards.
- License fees are another way of ensuring proper professionalisation of guides and companies accessing protected areas. As with the lottery, license fees can vary depending on whether an individual or company has been ecotourism- or Sustainable Tourism-certified/accredited.

Reading visitor descriptions of tours in online travel sites, many suboptimal practises, such as fish feeding and turtle harnessing are practised by current tour guides. Training and enforcement of best practises will be very important to protect marine environments in the face of large forecast growth in visitation. For this reason, it is very important that this demonstration is coordinated with an enforcement element—deputising local guides and community members. License and lottery fees can be used to support environmental and visitor experience assessments, as well as be used to support the Rangers or their Deputies educating visitors and overseeing adherence to the rules.



Promoting Volunteer Tourism

‘Voluntourism’ is a growing trend, principally in the Caribbean and Central America where people include one or more days of service into their itineraries.³⁴ Taking advantage of this trend would be an excellent opportunity for Vanuatu to engage visitors to help restore degraded or storm-damaged environments and eradicate invasive species.

Arrangements could be made with airlines and cruise lines—some of which already support volunteer activities—to offer a limited number of discounted seats or berths for volunteers that come through an organised programme. Similarly, hotels and restaurants might support these activities by offering discounted rooms and meals for registered volunteers. Voluntourism might be a good way to supplement visitation during the off-season in many countries. Additional ‘perks’ for volunteers might include access to environmentally-restricted areas or reservation preference for limited access to some of the more popular marine areas. Projects that might be supported through volunteer tourism include coral or giant clam planting, reef monitoring, marine life census, removing invasive crown-of-thorns starfish, removing invasive vines, planting or seeding eroded areas, eradicating rats from bird sanctuaries or any other kinds of volunteer activities desired by Vanuatu.

Other Voluntary Demonstration Projects:

- ‘Complete Streets’ demonstration in Port Vila. Complete Streets is a comprehensive plan for making streetscapes more pedestrian and bicycle-friendly that would improve the central downtown and waterfront areas to make them more pedestrian-friendly with good landscaping and sidewalks.³⁵ Additional Complete Streets measures include establishing alternatives to personal automobiles, such as electric trams/shuttle buses and bicycle-friendly streets and a bike-sharing system. A free electric demonstration shuttle bus initially could run in a loop or a two-way route from the Cruise Ship Port along the Kumul Highway waterfront to the start of the Lini Highway. Battery charging stations³⁶ could be located at both ends of the route, as well as adjacent to the National Convention Center.
- Green building demonstration projects: The territory should try to demonstrate a green building renovation certification for an existing resort complex and a new building affiliated with the tourism sector. Any recognised international green certification programme such as LEED, Australia’s Green Star, or Earthcheck could be demonstrated.

Supporting Elements

The key supporting elements are:

I. Indicators

The CMT/MPA demonstration indicators are outlined above. Indicators for the demonstration of increased access via motorised *vaka*-style catamaran might include number of current visitors to Nguna-Pele and other islands; time from Cruise Ship Port to access the islands; number of activities undertaken before and after improved access; business and village income.

³⁴ <http://abcnews.go.com/Travel/giving-back-volunteer-vacation-trends/story?id=42398847>

³⁵ https://en.wikipedia.org/wiki/Complete_streets

³⁶ Mobile charging stations, such as those by Envision Solar (<http://www.envisionsolar.com/>) could be located at Le Parking du Banian or similar location.



For the Complete Streets demonstration it might be number of passengers on the shuttle bus or the number of pedestrian visitors, as well as changes in commercial activity (e.g., store revenues) at different points along the route.

The building demonstration(s) might look at energy and water savings.

2. Training Programmes; 3. Procurement; 4. Incentives; 5. Industry Development; and 6. Public Education

These supporting elements are essentially the same between Required Practise and Voluntary Best Practise demonstration projects.

Step 4: Developing Standards: Mandatory and Voluntary

Developing a comprehensive and complementary suite of minimum (or maximum) voluntary standards and higher-performance voluntary standards is a key component of transforming the tourism industry toward sustainability. Table 4 shows how these standards might work together.

Mandatory Standards	Voluntary Standards
Tier 1: Basic life/safety requirements to establish enforcement.	Tier 1: Initial environmental/efficiency performance requirements, to be used as Tier 2 mandatory standards. Ideally it would be based on well-established regional or international standards.
Tier 2: Use the Tier 1 Voluntary Standards performance level as the mandatory requirement.	Tier 2: Next generation of environmental/efficiency performance; will become Tier 3 mandatory standards. We suggest no more than 20%-25% improvement in stringency.
Tier 3: Use the Tier 2 Voluntary Standards performance level as the mandatory requirement.	Tier 3: Next generation of environmental/efficiency performance; will become Tier 4 mandatory standards. We suggest no more than 20%-25% improvement in stringency.

Table 4: Coordination Between Mandatory and Voluntary Standards.

Mandatory Minimum Performance Standards

Protected Area Standards

As noted above, Vanuatu has one of the lowest percentages of land and marine areas with international designation as ‘protected’. In addition, many of the ‘tourist-friendly’ activities—such as fish feeding—run counter to environmental best practise. The adoption of the VTPAP will enable the definition and enforcement of recognised practises in these areas that can significantly grow the amount of marine and land area that is recognised as protected. Given plans to more than double the amount of cruise visitors to Vanuatu over the next 5–10 years, a reassessment of the existing area management plans will be very important.

Particularly important will be an evaluation of current allowances governing the amount and degree of access to these areas and what activities are permitted. Depending on the protected area and the history of traditional utilisation, each area’s access and utilisation plan³⁷ should seek to balance the need for protection with historic usage and access by surrounding peoples. Vanuatu

³⁷ As provided for in the Environmental Management and Conservation Act, Chapter 283, Section 4, Division 2.



should look to the example of Palau and the Palau Conservation Society, which has some excellent protected area planning and management models that would be quite applicable to this process.³⁸

Updated Tourism Standards

Based on lessons learned from the principal demonstration projects described above, any appropriate modifications to the comprehensive mandatory and voluntary standards for Sustainable Tourism should be incorporated into the second draft of the standards. The Department of Tourism, along with other industry and community participants should also evaluate the areas where Sustainable Tourism standards might be applied to the larger-scale tourism businesses in the country. The Australia ECO Certification Program standards are designed to cover these types of businesses, so establishing a more advanced sustainability framework makes sense.

Standards for Vehicles, Buildings and Equipment

- Fuel economy and emissions mandatory standards for vehicles. We recommend the initial standards require 2nd-tier energy and emissions requirements for Australia and New Zealand. Pilot-scale demonstration of these standards would be effective on government and other fleet vehicles.
- Building energy and water efficiency standards. Based on the results of the demonstration projects, EU mandatory energy efficiency standards should be adapted to Vanuatu's climate and adopted by the local building authorities.
- Equipment standards for commercial and residential appliances and equipment. Efficiency and labelling requirements for equipment used to supply air conditioning, refrigeration, water heating, motors, and lighting should be consistent with Australia's or New Zealand's, as noted above.

Supporting Elements

The key supporting elements are:

1. Indicators; 2. Training Programmes; 3. Procurement; and 4. Incentives

These supporting elements are geared to activities based on these standards after adoption, rather than implemented during the codes and standards³⁹ setting and adoption process.

5. Industry Development

It will be vital to involve professional and industry associations in the development of the protected area standards in adapting models to the Vanuatuan situation. Ideally, this process would comprise experts from government, as well as from the Vanuatuan private sector. There needs to be a levelling of the playing field between local companies and international companies before sharing decision-making responsibilities.⁴⁰

³⁸ <http://www.palauconservation.org/cms/index.php>

³⁹ We distinguish between Codes and Standards the following way: Standards are voluntary and comprised of performance targets, calculation methods and supporting materials. Codes are mandatory and include all of the content of Standards, plus a legal and procedural framework for enforcement.

⁴⁰ A 'local' company is one that is capitalised and owned by residents of Vanuatu. Decisions will need to be made regarding companies owned by Vanuatuns who reside overseas.



6. Public Education

Because of significant ‘do it yourself’ activity in Vanuatu, early and continuous education through the media and information provided to/through public service media, Chiefs and tribes, schools and churches will be key to a smooth adoption of minimum standards.

Voluntary Best Practise Performance Standards

Protected Area Standards

Based on the assessments of existing management, access and utilisation standards, Vanuatu should evaluate the extent to which Ridge to Reef principles are being supported and implemented in their existing terrestrial protected areas and changes made to existing standards if appropriate.⁴¹ Similarly, for MPAs, an assessment of current ecosystem health should be undertaken for the most heavily utilised sites. For example, when we visited the Hideaway Island Resort MPA we witnessed the staff engaging in fish feeding for a group of school children. While the children were delighted by the activity, environmental education programmes—especially those in protected areas—should not engage in environmentally detrimental practises.⁴² In addition, basic precautions for coral health, such as warnings not to wear sunscreen in the water, were not provided to arriving guests, nor did we observe any monitoring of guest/visitor behaviour. Based on an evaluation of ecosystem health and observations of enforcement of protected area standards, any necessary modification of the site’s status or governing standards should be made as needed.



Figure 4: Educational and Warning Signs at Hideaway Island Marine Protected Area.

Particularly important will be standards governing the amount and degree of access to these areas and what activities are permitted. Depending on the protected area and the history of traditional utilisation, each area’s access and utilisation plan should seek to balance the need for protection with historic usage and access by surrounding peoples.

Updated Sustainable Tourism Standards

The VSTAP notes that Australia ECO standards will be adapted for voluntary implementation. While this will advance Sustainable Tourism overall, it may fall short of a full ecotourism opportunity. Thus, in addition to the Australia ECO Certification Program standards being

⁴¹ <http://www.sids2014.org/index.php?page=view&type=1006&nr=2373&menu=1507>

⁴² <http://myfwc.com/research/saltwater/fish/other/marine-fish-feeding/>



demonstrated as a second phase, the Advanced Ecotourism standard should be put forward as a stronger alternative.

Updated Efficiency Standards for Vehicles, Buildings and Equipment

On the voluntary front, we recommend the development of a set of voluntary best practise standards for building and transportation infrastructure. These best practise standards can double as the next set of mandatory standards for energy, vehicles, etc. As recommended in Deliverables 1–4, the minimum achievement requirement of the best practise standards in most cases should be within 25%–30% of the performance requirements of mandatory standards. However, the higher performance requirements of voluntary standards can be as much as 75% better than required practise.

- Fuel economy and emissions best practise standards for vehicles. We recommend that the voluntary standards match the efficiency level Tier 1 standards from New Zealand.
- Voluntary green building standards. Based on the results of the demonstration projects, the green building standard most appropriate to Vanuatu could be adapted to the territory's requirements and adopted by local professional societies.
- Equipment standards for commercial and residential appliances and equipment. Air conditioning, refrigeration, water heating, motors, lighting could be consistent with top-tier New Zealand standards or ENERGY STAR requirements.

Supporting Elements

The key supporting elements are:

1. Indicators; 2. Training Programmes; 3. Procurement; 4. Incentives; 5. Industry Development; and 6. Public Education

The supporting element guidance provided under the mandatory standards section also applies to voluntary standards.

Step 5: Pilot-Scale Implementation

Pilot-Scale Implementation—which could alternately be called a ‘ramp up phase’—is an administrative exercise that is designed to build up and test the ability of the market and the professional community to implement mandatory and voluntary standards and programmes at an increasing scale. Developing and refining supporting materials, training programmes and enforcement infrastructure are key aspects of this phase. It is for this reason that we are concerned that the VTPAP strategy of piloting standards at the full provincial level in two provinces will not allow national scaling of the standards as rapidly as doing partial pilot-scale projects across all provinces.

Generally-speaking, Pilot-Scale Implementation should penetrate at least 15%–25% of the mandatory market and at least enough of the voluntary market to adequately test the ability to administer the growing scale of a voluntary programme. In addition, the size of the programme must be large enough to interest suppliers of products and services to respond to the opportunity. As noted above, while piloting two provinces might hit the 15%–25% national market threshold, it would likely be more instructive and result in more even implementation if the pilot-scale projects were developed to hit 15%–25% of each province's market.



Mandatory Minimum Performance Standards: Pilot-Scale Ramp Up

The stakes are much higher for Pilot-Scale Implementation of a mandatory programme than they are for a voluntary programme, therefore the resources dedicated must be correspondingly greater. The good news is that all of the market infrastructure that supports a mandatory standard also supports a voluntary standard, even though the implementation framework may be different.

The ramp up phase would apply to the following mandatory minimum programmes and standards:

- Creation and expansion of enforcement activities of minimum required practise in Vanuatu's terrestrial and MPAs, building on the lessons learned from the demonstration-scale projects.
 - Projects covering 15%–25% of the CMT/MPAs in each province should be developed and monitored.
- Required practise tourism standards—ECO Nature Tourism standards adapted to Vanuatu's local conditions applied to at least 25%–30%⁴³ of the covered operator categories.
- Mandatory minimum standards for vehicles, buildings and equipment and infrastructure would be expanded beyond the demonstration projects to encompass agencies or companies in each province at the recommended thresholds.

Supporting Elements

The key supporting elements are:

1. Indicators

At this level of implementation, Vanuatu will want to track similar indicators to those developed for the demonstration project stage, with particular attention given to visitation impacts on wildlife-related indicators (number and counts of different species, etc.). In addition to visitation indicators, indicators of violations of the T/MPA regulations should be tracked for both marine and land-based activities. Hopefully, even as greater access brings greater numbers of visitors to protected areas, the number of violations would decrease in both relative and absolute terms.

2. Training Programmes

The training programme developed for the Nguna-Pele demonstration project can be adopted for ramping up the programme in other CMT/MPA regions, as well as provide a model that can be adapted to community-based enforcement programmes. The experience of the Australia ECO Certification Program that has developed materials to train a wide variety of professionals across the tourism industry can benefit the development of tourism industry training programmes. Operations and maintenance training will be needed for energy-efficient buildings, equipment and vehicles, which would be undertaken by the organisations listed in the demonstration project stage.

3. Procurement

The procurement of goods and services that conform to imminent mandatory or voluntary standards is one of the most high-leverage activities that can be undertaken

⁴³ Because this is an operational/activity standard, as opposed to an infrastructure performance standard, Cameron-Cole believes that a higher implementation threshold can apply.



during market transformation. All national, state and local government solicitations for new buildings should require implementation of the mandatory minimum building codes.

Government procurement for meetings and conferences should give preference to hotels and resorts that have implemented certified green practises and support ecotourism or advanced ecotourism-certified activity operators.

Procurement is not limited to government entities; any purchasing entity that specifies mandatory or voluntary standard performance levels during this stage sends a very powerful market signal.

4. Incentives

Once standards have been adopted, participants in the standards and/or programme development process can work with implementers to determine the best mix of administrative/non-monetary and monetary incentives to promote programme participation and uptake of the standard. Incentive structures should incorporate both an 'Early Adopter' (for mandatory standards) and a 'Beyond Minimum' (for voluntary standards) set of incentives that are designed to minimise the extra first cost of meeting mandatory standards early or higher level standards.⁴⁴ Negative 'incentives' such as tariffs on non-compliant equipment or vehicles, for example, can also be implemented during this process.

5. Industry Development

The Pilot-Scale Implementation phase is one of the most fertile periods to grow industry knowledge and participation. Using industry and professional associations to disseminate training and as vehicles for Pilot-Scale Implementation projects will be key for overall market transformation. The marine, fishing and dive tour industry will be particularly important to engage in scaling the enforcement of marine activity guidelines, especially in the context of greater enforcement requirements within MPAs. Professional societies (e.g., engineering and architecture) will be important to engage in the development and implementation of vehicle, building and equipment standards. In addition, there may be an important role for the telecommunications industry to play in providing online access for visitors to transportation, lodging and activities.

6. Public Education

As with all elements of the market transformation strategy, public education needs to be significantly ramped up during the Pilot-Scale Implementation stage. Earned media—articles, op-eds, feature pieces, public service announcements—are preferable to paid media, such as advertising. Such a campaign would emphasise both the high-level goals of market transformation, as well as concrete activities, especially specific projects, taking place during the ramp up phase.

Voluntary Best Practise Performance Standards: Pilot-Scale Ramp Up

The bar is much lower for the pilot-scale phase of a voluntary standard, since the ultimate volumes of projects and activities that need to be supported is significantly smaller than with a mandatory code. All of the basic elements needed to support a mandatory code need to be in place for a voluntary standard: trained professionals, product availability in the market, trained

⁴⁴ See Deliverable 3: Key Actions to Support Development of an Ecotourism Sector, Figure 10.



evaluators, technical and marketing materials, etc., but at a smaller scale. If the lowest performance target of the voluntary standard has not been set too high, then it should ultimately be able to reach the top 15%–25% of the market.

The ramp up phase would apply to the following voluntary programmes and standards:

- Expansion of enforcement programmes to 15%–25% of Vanuatu’s terrestrial and MPAs, managed at both the community level and the national and/or provincial level.
- Advanced standards for vehicles, buildings, equipment and infrastructure to be piloted through government and some larger commercial fleets and real estate portfolios.
- Expansion of the Complete Streets demonstration in Port Vila, possibly including additional pedestrian and cycling amenities.
- Development and expansion of high-speed boat—both *vaka*-style and conventional diesel catamaran—access within and between Vanuatu’s provinces and through additional boats or expanded schedules. This service can integrate both freight and passenger service.
- Expanded functionality of the Vanuatu NTA reservation gateway to greater numbers of travel, lodging and activities that can accommodate direct bookings via the website.

Supporting Elements

The key supporting elements are:

1. Indicators

In addition to the indicators developed for these programmes in the demonstration project phase, tracking the business and visitor experience impact of access programmes will be important. It will also be key to track the impact of the NTA in terms of increased bookings, especially for smaller businesses that were previously difficult to find online.

2. Training Programmes; 5. Industry Development; and 6. Public Education

Our recommendations are the same for the voluntary standards as they are for mandatory codes, but focused on the particulars of the voluntary standards and projects.

3. Procurement

All institutions, government and private, should be encouraged to participate at some level in the implementation of voluntary standards, projects and programmes. The proper incentive structure will be key in promoting this activity. A ‘proper’ incentive structure would absorb much of the incremental first cost for green products and services. For large capital items, such as high-speed ferries, government or international financial institution support for acquiring this equipment may be needed.

4. Incentives

Typically, financial and administrative incentives originate from regulated or government entities, such as utilities or tax agencies. Incentives for voluntary standards tend to take longer to put into place because they tend to be sponsored by private sector organisations, but Beyond Minimum projects and programmes can be implemented by governments, as we recommend here.

Incentive programmes could be developed to upgrade ecotourism infrastructure, which could be paid back from operational savings. Alternately, Vanuatu could incentivise volunteer experts and labour to support facility ecoupgrades all through its CMT/MPA



network, through discounts on travel, accommodation and activity fees. Access to protected areas for ecocertified guides would be a strong incentive for these professionals to undertake training and certification.

Vanuatu could dramatically accelerate its market transformation if incentives—both financial and administrative—were coordinated between the mandatory and voluntary standards and projects/programmes. As noted earlier, ideally the voluntary standard becomes the next tier of mandatory code. For vehicles, buildings, equipment and infrastructure, financial incentives would be based on the marginal cost of saved energy, water, etc.

Step 6: Full-Scale Implementation and Step 7: Continuous Improvement

Mandatory Minimum Performance Standards: Full-Scale Implementation

The launch date of the mandatory minimum performance standards should be set at the beginning of the pilot-scale/ramp up stage. It must allow enough time for the necessary buildup of expertise and compliant products in the market to hit a critical mass. Depending on the type of requirement being put into place, six months (for professional standards) to eighteen months (for building and equipment standards) should be sufficient lead-time for the market to adapt to new mandatory requirements. Adequate enforcement infrastructure must also be in place and prepared for the resulting volume of applicants. In the case of the recommended tour and activity guide standards, strong participation of the industry will shorten the time needed for full implementation uptake.

For Continuous Improvement, the cycle time will vary from 12 months for professional standards changes to 3 years for changes to building codes to around 5 years for changes in vehicle or appliance standards. The only thing markets hate more than regulation is uncertainty. Cameron-Cole strongly recommends adopting 2 tiers of standards at a time (see Table 4, above) so that industry can plan its investments and the market has some stability and predictability. Although this will put a greater burden on the rule-making/regulatory development bodies, we believe it will also result in smoother and more successful implementation.

Supporting Elements

The key supporting elements are:

1. Indicators

Continue monitoring the indicators established during the previous steps. Also the use and impact of incentives, as well as procurement programmes, should be monitored and evaluated to ensure that the incentive programmes are being properly targeted and delivering the improvements in efficiency and increased market penetration that should be expected.

2. Training Programmes

Cameron-Cole recommends that credential maintenance programmes be implemented that require ongoing professional development for Accommodation and Activity Operators. In the building sector, this would apply to architects, engineers, construction managers, building operators, etc. During the demonstration and pilot-scale ramp up phases, a wealth of training materials could be made available online that could be accessed from anywhere within Vanuatu.



3. Procurement

On average it is expected that about 15% of the market will not be at all in compliance with mandatory rules and another 5%–10% will be in partial compliance. It is absolutely vital that governmental and institutional entities are in full compliance with code requirements and demonstrate that vital leadership.

4. Incentives

During the first 2/3 of the full-scale adoption cycle, the primary incentive focus should be on Beyond Minimum incentives to prepare the market for the next set of standards. The final 1/3 of the cycle should be focused on Early Adopter incentives for the next tier of mandatory requirements. During the final 1/3 of the adoption cycle, Beyond Minimum incentives should continue to be offered, but the emphasis in marketing and promotion should be on Early Adopters. Essentially, the Beyond Minimum incentives will become Early Adopter incentives and a new tier of Beyond Minimum incentives developed to promote continuous improvement.

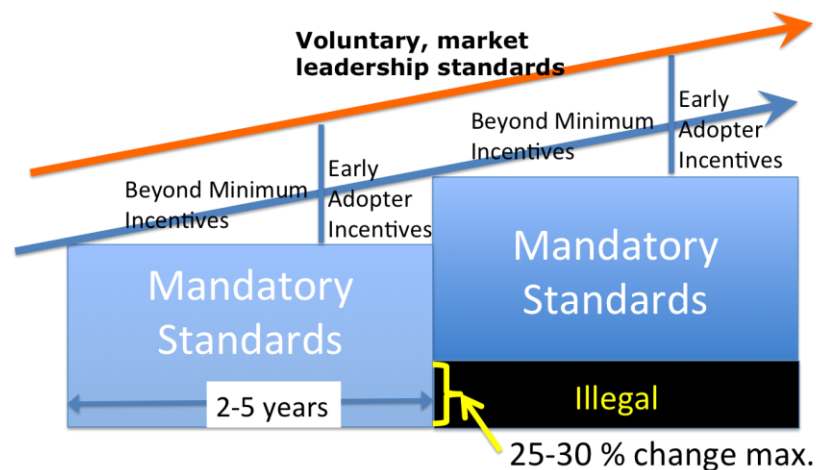


Figure 5: Dynamic Interplay Between Standards and Incentives.

5. Industry Development

An effective market transformation plan will give a participatory role to professional and industry associations in the development of standards and the principal role in the delivery of training and professional development. Vanuatu is already following this best practise.

6. Public Education

Regular, periodic promotion of the importance of adhering to minimum performance standards is vital to maintaining a culture of compliance. For this reason it is vital that government agencies also demonstrate that they are in compliance with the requirements they have established.

Voluntary Best Practise Performance Standards: Pilot-Scale Ramp Up

By contrast with mandatory minimum standards, which are implemented more like a series of steps, voluntary standards are in a state of continual ramping up either in performance requirements or in continuing to gain market share. As with mandatory measures, voluntary



performance standards benefit from being on a regular time scale of revision and require the same supporting infrastructure. There is more leeway in allowing for smaller, ongoing continuous improvements, rather than the preparation for the periodic mass changes of a mandatory code. Generally, the principal challenge is not in the development or the stringency of the requirements, or even getting users to take up the standard. Rather, it is adequate support for projects in the pipeline that is the hardest aspect to maintain for voluntary standards. Thus, the training and industry development portions require special attention during the market transformation planning process.

Supporting Elements

The key supporting elements are:

1. Indicators

Key indicators for full-scale voluntary standards should include those established for the technical and pilot-scale demonstrations, as well as tracking the impact of incentives and the impact of procurement programmes. For more conventional standards such as for buildings, equipment and vehicles, both the mandatory and voluntary standards success indicators could include floor area, number of projects covered and the number of equipment/vehicles sold under the standards, as well as the percent of market penetration and the reductions in energy and water use and CO₂ emissions reductions.

2. Training Programmes; 5. Industry Development; and 6. Public Education

Our recommendations in these are the same for the voluntary standards as they are for mandatory codes, but focused on the particulars of the voluntary standard.

3. Procurement

We recommend that between 15% and 25% of institutional procurement be directed toward achieving the higher performance level of the voluntary standard. This suggestion need not be implemented evenly across all divisions or departments of an institution. Some portions of Vanuatu's government (e.g., the Department of Tourism as opposed to the Ministry of Finance) or certain types of private institutions (e.g. sustainable or ecoresorts) may be better suited to do most or all of their procurement according to the higher performance requirements.

4. Incentives

We strongly recommend that incentives for voluntary standards be developed and implemented at the national level. As noted above, coordinating these incentives with those of the mandatory standards will greatly accelerate market transformation.



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