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Preventing Coral Grief: A Comparison of Australian and French Coral Reef Protection Strategies in a Changing Climate

Anne Caillaud

Florence Damiens

Bernard Salvat

Clive Wilkinson

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*by Anne Caillaud, Florence Damiens, Prof. Bernard Salvat, and Dr. Clive Wilkinson**

Introduction

Australia, with its iconic Great Barrier Reef, and France, through its overseas territories, are two developed countries that collectively claim custody of a sizeable part of the world's coral reefs (seventeen percent for Australia[1] and ten percent for France[2]). These reefs are not only some of the world's richest sources of biodiversity and fisheries productivity, but also contain ecosystems particularly threatened by climate change.[3]

France possesses healthy coral reefs in some of its remote or uninhabited territories such as Clipperton, Iles Eparses, or the atolls of French Polynesia's Tuamotu Archipelago.[4] However, the nation's coral reefs around islands such as La Réunion in the Indian Ocean, or Martinique and Guadeloupe in the Caribbean, are severely threatened by direct, local overfishing, nutrient and sediment pollution, and unsustainable coastal development.[5] Additionally, both the French islands and Australia face a growing concern for the state of their reefs due to the indirect pressures brought about by climate change, including raised sea surface temperatures, increased cyclone intensity, freshwater runoff from extreme weather events such as floods, and ocean acidification.[6] The Great Barrier Reef Outlook Report 2009 confirms these concerns, stating that the outlook for the Great Barrier Reef is "poor."[7] These local and global threats, especially declining water quality from catchment runoff, set a dire scene for reefs.

In light of their relative wealth, both Australia and France have a moral obligation, as well as considerable direct economic interests, to preserve these valuable ecosystems. Currently, natural resource managers are seeking to control the direct stresses, but feel impotent to act against climate change.[8] Thus, both countries are now refining their management efforts to protect reefs, specifically through the establishment of Marine Protected Areas ("MPAs"), to ensure that the reefs have the greatest resilience in the face of increasing climate change.[9] This Article examines the interests at stake in preserving coral reefs (and other marine ecosystems) and the Australian and French marine management systems to pinpoint management strengths and weaknesses. The ultimate conclusion of this article is that Australia and France can gain considerably from sharing experiences and lessons to enhance coral reef resilience to the threat of global climate change.

Interests at Stake

Interest in Preserving Natural Beauty and Intrinsic Values

As the two developed countries with the most expansive area of coral reefs in the world, Australia and France have a national and international obligation to protect these awe-inspiring ecosystems and preserve their intrinsic natural values. Australian coral reefs, mainly located on the length of its tropical coastline (and hence continental reefs), host more than 1,600 species of bony fish and 500 species of coral.[10] France's coral reefs have added significance in that they include tropical marine biodiversity from three of the world's oceans, with reefs located around islands in the Pacific, Indian, and Atlantic oceans.[11] Coral reefs, which provide shelter to more than onethird of all known marine species,[12] have also earned both countries World Heritage listings: the Great Barrier Reef was the first marine landscape in the world to be declared a World Heritage Site in 1981[13] and France listed the New Caledonian Lagoon in July 2008.[14]

Economic Interests

Beyond the moral duty of preserving these rare and biodiverse ecosystems for the enjoyment of future generations, coral reefs also play a very important role in local societies and contribute largely to national economies and industries such as marine tourism, commercial fisheries, and shipping.[15] Moreover, they provide numerous direct ecosystem services, including coastal protection from natural disasters (such as tsunamis and cyclones), biotechnology, and energy.[16] Using the total economic value approach ("TEV"), which includes "use" and "non-use" values (e.g. how much people are willing to pay to preserve coral

*Anne Caillaud is an employee of the Great Barrier Reef Marine Park Authority and has been involved in marine governance issues since 2003. She holds a Master's degree in international affairs from the Paris Institute of Political Studies (Sciences-Po) and a degree in natural resources management from James Cook University.

Florence Damiens holds a Master's degree in economics and public policy from Ecole Polytechnique, Paris Institute of Political Studies (Sciences-Po) and Paris Graduate School of Economics, Statistics and Finance.

Prof. Bernard Salvat is is an emeritus professor in marine biology. He has dedicated his life to coral reef science, management and conservation and presided over a number of international fora on coral reefs. He is presently co-leading a program on large MPAs.

Dr. Clive Wilkinson was the Coordinator of the Global Coral Reef Monitoring Network and a Senior Scientist at the Australian Institute of Marine Science following a doctorate in marine ecology.

reefs given their potential future use), coral reefs are estimated to be worth between US $100,000 and US $600,000 per square kilometre per year depending on their location.[17] In Australia, the TEV of the Great Barrier Reef was calculated in terms of present value to be a total of AU $51.4 billion (US $52.3 billion)[18] while a mere one percent improvement in its health would increase its value by up to $811.3 million.[19] In France, the amalgamated TEV of coral reefs, mangroves, and seagrasses has been calculated as being worth €245 (US $322 million per year), €100 million for coral reefs alone in Martinique.[20] The Moorea atolls in French Polynesia have been valued at US $85.5 million per year,[21] and the option value of the reefs in La Réunion were valued at €308,917 (US $412,002) per square kilometre.[22]

Longer-term Interests

But the value of reefs goes beyond moral obligations or dollar figures: long-term interests also come into play. While there is still much unknown about coral reef ecosystems, scientists agree that these reefs constitute vast reservoirs of genetic diversity with enormous potential for industries such as pharmaceutics, biochemistry, construction, and cosmetics.[23]

Reefs have also been identified as being large contributors to the oceans' ability to absorb carbon dioxide emissions, making them valuable "carbon sinks"[24] and thereby crucial in climate change mitigation.[25] Unfortunately, this capacity has a major downside for coral reefs: as more and more carbon is absorbed in oceanic systems, oceans become more acidic which in turn affects the ability of reefs to develop and grow.[26] This means that, as indicator ecosystems, reefs can provide valuable information on the progress of climate change: scientists are already closely monitoring the status of coral reefs to distinguish signs of increased vulnerability as an early warning mechanism on the sustaining ability of oceans to "absorb" carbon.[27]

The Governance context

Australia and France have each instituted several systems to ensure that coral reefs and associated ecosystems are protected against climate change. These systems, which focus on climate change threats and impacts to reefs rather than addressing climate change itself, vary in complexity and advancement, exhibiting significant differences due to existing governance and geopolitical contexts.

Australia: A Well Established But Sometimes Disjointed System

Australia has been a pioneer in formalizing the safeguarding of Marine Protected Areas, coral reefs and their habitats; the country established its first Great Barrier Reef marine park at Green Island in 1937.[28] Australia's iconic Great Barrier Reef has been formally managed by the Great Barrier Reef Marine Park Authority since 1975 to enforce the prohibition of a myriad of detrimental activities such as mining.[29] Consequently, Australia has a long history and experience of governmental MPA management both at the National and State levels, possibly because of the obvious economic and social benefits of a well-managed public resource used by industries with conflicting interests (e.g. tourism vs. fisheries).[30]

These two levels of governance, however, often fail to align their approaches, which can lead to incoherent, disjointed management and administrative regimes. Australia's federal history is relatively young (the Commonwealth of Australia was only formed in 1901)[31] and, unlike France, the Commonwealth has no power to interfere into States' affairs, except for those identified as being of national significance or concerning international engagements.[32] Australia has attempted to facilitate collaboration among its State governments by adopting the 1997 Heads of Agreement on Commonwealth and State Roles and Responsibilities for the Environment by the Council of Australian Governments ("COAG"), the leading intergovernmental forum in Australia.[33] Despite such efforts, countrywide environmental governance could be further streamlined. This is particularly true for marine management issues given that the States regulate a band of waters spreading from the high-water mark to three nautical miles (5.556 km) offshore (coastal waters as per the Coastal Waters Act 1980).[34] In contrast, the Commonwealth government has sovereignty over the territorial sea (twelve miles from the low-water mark), including the seabed beneath the coastal waters' three nautical miles and up to the exclusive economic zone ("EEZ") boundary (two hundred miles from the low-water mark) (Seas and Submerged Land Act 1973).[35] Following a series of legal disputes, the Offshore Constitutional Settlement of 1975 ("Settlement") settled the arrangements between States and Commonwealth.[36] These complex arrangements include special clauses for a range of activities, such as the extraction of oil, gas, and other seabed minerals, shipping, marine pollution, and fishing.[37] Importantly, the Settlement also lays out arrangements for the Great Barrier Reef Marine Park and reefs in "other marine parks."[38]

Despite complex marine jurisdictional issues, Australia has developed strong legislative tools for the establishment and management of MPAs. Combined with genuine, coordinated efforts between the National and State levels in recent years, these tools provide for a generally effective management of MPAs.[39] MPAs at the Commonwealth level are managed by the Department for the Environment (the Great Barrier Reef Marine Park has its own agency but reports to the Environment Minister).[40] The Commonwealth has a major legislative instrument under which MPAs located in Commonwealth waters are established: the *Environment Protection and Biodiversity Conservation Act 1999* ("EPBCA") constitutes the main national law for environmental protection in Australia.[41] The Act provides direction as to how a Commonwealth marine reserve is to be created and managed.[42] It also requires the Environment Minister to decide whether an environmental assessment of significant development projects (public or private) is required.[43] This requirement affords the Commonwealth final say in deciding whether to approve major developments in all States and Territories.[44] This not only prevents local interests from dominating the approval decision, but indirectly protects Commonwealth marine reserves that could be harmed by these

developments - for example, via pollution dumping or the loss of coastal habitats from clear-cutting.[45]

Another strength of Australian MPA management is its clear definition of MPAs. All MPAs fall under either the "Commonwealth reserve" or "conservation zone."[46] They are formally defined according to the 1994 International Union for Conservation of Nature ("IUCN") as "[a]n area of land and/or sea especially dedicated to the protection and maintenance of biological diversity, and of natural and associated cultural resources, and managed through legal or other effective means."[47] MPAs are further categorized using one or more of the seven IUCN protected area management categories under the *Environment Protection and Biodiversity Conservation Regulations.*[48] Under Australian law, however, States are responsible for the protection and daytoday management of environmentally-sensitive or significant areas within coastal waters, and each State has developed its own set of rules and regulations in that respect.[49] Some States have developed more expertise in MPA management than others: Queensland is advanced with its collaborative management of the Great Barrier Reef Marine Park, through which it has developed experience to manage other areas, such as the recently rezoned Moreton Bay offshore of Brisbane.[50] Western Australia, Victoria, and New South Wales also have strong MPA management regimes for their inshore marine parks.[51] States like South Australia, on the other hand, are just starting to investigate the possibility of establishing marine parks in their coastal waters.[52]

Cooperative management efforts between the Commonwealth and State governments have existed since 1991 in the context of the National Representative System of Marine Protected Areas ("NRSMPA"), established mainly to expand Australia's marine reserve system.[53] The Marine Protected Areas Working Group is specifically tasked with the coordination of Commonwealth, State, and Territory MPA-related policy and planning; however, this coordination remains high-level and lacks a true "on-ground" dimension.[54]

The Great Barrier Reef Marine Park ("Park") represents Australia's most successful collaboration between State and Commonwealth governments to protect coral reefs.[55] The vastness of the Great Barrier Reef Marine Park (encompassing 344,400 km^2 area, 2,900 individual reefs, 900 islands, and 70 different habitat types)[56] required both level of government to join forces in 1979, under the Emerald Agreement ("Agreement") between Queensland and Australia.[57] The Agreement dictated that the Commonwealth would take the lead in park management, while Queensland would take lead daytoday management and both levels would closely collaborate in the permitting and enforcement side of management.[58] The Agreement also created the Great Barrier Reef Ministerial Council, which facilitates ongoing discussions between Federal and State ministers who set high-level directions for the management of the Great Barrier Reef Marine Park.[59] In 2009 the Great Barrier Reef Marine Park Intergovernmental Agreement updated and reaffirmed the Emerald Agreement, solidifying continued collaboration for the coming years.[60]

One of the most effective collaborative management tools established by the Great Barrier Reef Marine Park is the zoning of the Park, which increased no-take areas in the Park from 4.5% to 33% in 2004 following a thorough review and extensive stakeholder consultation.[61] This initiative has already proven successful with research showing increases in coral trout (a key target for fishers), shark numbers in newly protected zones,[62] and larval connections between protected zones and areas open to fisheries.[63] This zoning tool is now being replicated in Queensland and other States, and will inspire the management of new marine parks currently considered by the Commonwealth's Marine Bioregional Planning Program.[64] Zoning is being further complemented by other management measures such as special area designations, specific and detailed management plans, no-anchoring areas, as well as partnership programs and policies.[65]

Another key aspect of marine park management is the evaluation of management effectiveness. This evaluation was championed by IUCN's World Commission on Protected Areas and was formally conducted following the 2005 review of the Great Barrier Reef Marine Park Authority, leading to the release of the first Great Barrier Reef Outlook Report in September 2009.[66] In general, this report has set innovative strategic directions for management of the Great Barrier Reef Marine Park, and is a useful reference point future management processes in Australia and other areas in the world.[67]

France: A Developing, Complex System

Although France began protecting patches of reef as early as 1972 (when Taiaro Atoll in French Polynesia was declared a scientific reserve and later in 1975 a Biosphere Reserve of the Man and Biosphere Programme),[68] it only recently started to formalize and centralize arrangements to protect marine areas with the creation of the Marine Protected Areas Agency ("AAMP") in 2006.[69] However, even with this advancement, France's MPA management regime encompasses many tools, institutions, and regulations that lack clarity and coherence, demonstrating that France has not yet achieved an efficient system of marine park management.

One of the noteworthy aspects of the regime, as it pertains to coral reefs, is France's overseas territories ("Outre-Mer") policy.[70] In mainland France (the "Metropole"), the national government is responsible for developing environmental law; however the 'Outre-Mer' territories all have various degrees of autonomy from France's national government and law.[71] The overseas island Departments ("Départements d'Outre-Mer" or "DOMs") of Martinique, Guadeloupe, Mayotte, and Reunion are almost under the exact same regime as other Metropole regions, except for some minor differences.[72] The territorial collectivities ("COMs") of Saint Barthelemy and Saint Martin in the French West Indies, and Wallis, Futuna, and French Polynesia in the Pacific are more autonomous.[73] For instance, the onus of natural resource protection and park management in Saint Martin lies with France[74] whereas New Caledonia has a unique status with independent environmental legislation, management, and

protection. There, the three "provinces," Nord, Sud and Iles Loyauté, can each legislate its own environmental issues.[75] In 2009 Province Sud adopted an Environment Code that strengthens ecosystem protection by requiring government authorization for a number of development initiatives, including projects that may decrease World Heritage values of its coral reef lagoon.[76] It is interesting to note, however, that this independence is not recognized under international law, such as in the United Nations Convention on the Law of the Sea ("UNCLOS") which recognizes France as the sovereign state.[77]

Clipperton, an uninhabited coral atoll in the Pacific, follows yet another unique structure. Clipperton is a part of France's public land and directly administered by the French Department in charge of overseas territories via French Polynesia's High Commissioner.[78] In the Pacific, the onus of France's MPA management now lies with local government, which creates extra challenges as coral protection measures can conflict with subsistence activities within coastal communities.[79] In addition, local governments are ill-equipped to deal with the management of large MPAs which are progressively being declared in that region.[80]

Table 1. Characteristics of French Outre-Mer Territories

Main Pressure	Location	Status	Land size (km^2)	Pop. size	Reef morphology	Human threats	Status of coral reefs	Reef area (km^2)
COASTAL DEVLPT, WATER QUALITY	Guadeloupe	Department	1,806	447,000 (2006)	Fringing reefs	coastal development agriculture population growth	Degrading	200
	Martinique	Department	1,100	399,000 (2006)	Fringing reefs	agriculture chemical industry water quality, catchment runoff	Degrading	150
	Reunion	Department	2,512	784,000 (2006)	Fringing reefs	coastal development agriculture Industry runoff recreational fishing	Degrading	12
	Mayotte	Department	375	187,000 (2007)	Barrier reef	coastal development agriculture domestic and industrial waste tourism	Good health	1,500
MINING, FISHING	New Caledonia	Sui-generis collectivity	18,585	231,000 (2004)	Barrier reef	nickel mines catchment runoff recreational and commercial fishing coastal development (Noumea)	Good health (for 83% of the stations)	40,000
	French Polynesia	Collectivity	3,430	295,000 (2011)	Barrier reef (Society islands), atolls (Tuamotu)	dredging fishing unsustainable harvesting catchment runoff tourism	Good health (Very good health for Tuamotu atolls)	12,800
CLIMATE CHANGE	Wallis and Futuna	Collectivity	142	15 000 (2003)	Barrier reef (Wallis)	catchment runoff agriculture fishing	Relatively good health	65
	Clipperton	Natural public domain of France	2	0	Fringing reefs	none	Good health	4
	Eparses Islands	5th district of the French Austral lands	23	0	Fringing reefs	degassing oil traffic	Good health	21

This diversity of regimes adds to the complexity of marine park management and may jeopardize the efficiency of a nationally-led policy on coral reef protection. Until recently, France lacked a national law on sea protection, resulting in a myriad of overlapping and uncoordinated local decrees on specific sectors or species, both in the Metropole and Outre-Mer.[81] Existing MPAs fall under a range of different categories which often fail to line up with IUCN categories, such as those for World Heritage, "prefectoral" decree, "national natural reserves," special marine reserves, or "maritime area plan of management."[82] However, some of these laws, including the new European Integrated Maritime Policy (2007), its Marine Strategy Framework Directive (2008), and the 2000 Water Framework Directive (which applies to marine coastal waters in all French DOMs) have each influenced creation of the Grenelle de la Mer in 2009 ("Grenelle").[83]

The Grenelle is a nation-wide initiative, based on the model of the 2007 "Grenelle de l'environnement" (environmental roundtables), which facilitated open, multi-party discussions, reflections, and negotiations between all stakeholders—national and local government, fishermen, ports, nongovernmental organizations, private sector, parliamentary unions, scientific institutions, etc.—on sea-related aspects to find consensus on a range of sea-related themes.[84] Led by the French Ministry for the Environment in 2009, this initiative, although mostly focused on development activities, reaffirmed France's commitment to develop a network of MPAs in ten percent of France's EEZ by 2012 (to reach twenty percent in 2020).[85] It also compiled the main proposals and commitments for the following five years in a single "blue paper" to create a national strategy for the sea and oceans and provide strategic outlooks for its coastal and marine areas.[86] Some of the proposals that have already been implemented are several new marine parks, including a vast park in Mayotte and another in the Eparses Islands.[87] Other concrete and ambitious targets, including a government buy-out of one-third of France's coastal land by 2020, a forty percent reduction in nutrients (nitrate and phosphate) entering the sea, and a strategy to reduce marine debris both in rivers, ports, and the sea.[88]

This Grenelle initiative is a major step toward a clear and comprehensive law on marine protection and management. Regulations promulgated under this initiative are gradually building on France's existing legislation and instruments, such as its national biodiversity Sea Plan strategy, which encourages overseas territories to protect species and spaces by creating new protected areas.[89] The Sea Plan was recently reinforced by France's adherence to the Convention of Biological Diversity's Nagoya Protocol that was adopted in 2010.[90] The Marine Protected Areas Agency is taking the lead in implementing most of the proposals set out during the Grenelle exercise, such as the one to establish a "navy blue belt" of MPAs, complementing the "green belt" of terrestrial parks that cover 12.4% of the French territory.[91]

The devil lies in the details of Outre-Mer implementation, where tools and institutions available to implement such an ambitious policy vary greatly in size, capacity, and orientation. Any policy stemming from France's new strategy should include a system that can adapt to each island's individual situation. Although all of the islands have their own geomorphologic and social particularities (as illustrated in Table 1), the most important aspect at stake in evaluating coral reef protection is identifying the types of threats that are predominant in each island and addressing them as a priority. Analyzing threats will allow the relevant governing agency to determine which policy should be developed as priority, taking into account cultural aspects and coral reef resource use in each overseas territory.

Room For Improvement: How France and Australia Can Learn From Each Other

Shortfalls in Governance Systems

The above short analysis of French and Australian coral reef governance systems allows us to pinpoint their shortfalls. In France, although the national maritime strategy adopted through the Grenelle de la Mer and the 2009 "Blue Book" is promising, profound cultural change and a clear reorganization of agencies' portfolios is needed to ensure the success of its implementation. Ultimately, two main challenges remain: 1) better coordination between agencies and industries involved directly or indirectly in the protection of the sea (local governments, marine tourism industries, ports, fisheries sector, etc.); and 2) clear definition of roles and functions between France and Outre-Mer to avoid the difficulties in the past, including the duplication or even "competition" between institutions and agencies.[92] This is perhaps the biggest challenge for France, especially given the need to take fast unilateral climate change action, as can be adopted in Metropole, and the march toward greater autonomy that has been taking place in the last twenty years.[93] To complicate matters further, the movement toward autonomy is especially prominent among the Pacific Islands where greater powers in environmental management have been locally-allocated.[94] This situation puts France in a challenging situation where it could be accused of "neo-colonialism" if forces environmental reforms upon Outre-Mer institution. At the same time, as one of the largest maritime nations in the world, France could be blamed with inaction if it does not fulfill its marine protection targets.

In addition, resources need to be allocated to ensure successful administration and enforcement of new MPAs constituting the "marine blue belt." The example of the Great Barrier Reef Marine Park reveals the benefits of investing in MPA management: a recent paper published by twentyone renowned marine scientists has shown that the investment in management of the Great Barrier Reef Marine Park represents less than one percent of its return to the Australian economy.[95] In France, such investment would prevent debacles like La Reunion where the marine reserve created in 2007 was "not fully operational due to delays in implementation caused by conflicts between traditional fishermen and the authorities, inadequate planning and poor integrated coastal zone management."[96] Investment in enforcement and compliance is particularly crucial to prevent MPAs from remaining mere "paper parks." However, the French system is complex on that matter due to its unusual historical marine compliance system, with so-called "maritime prefects" (who are

State representatives) exerting authority over the sea (including illegal fishing) in defined regions.[97] In Outre-Mer, these functions are fulfilled by the "standard" prefect in the Departments, and by High Commissioners in Polynesia and New Caledonia.[98]

Australia's system, although more lucid than France's, also suffers from a lack of coordination in State waters, leading to great disparity in State management regimes.[99] Despite efforts to coordinate initiatives between State and Commonwealth authorities, duplications, misunderstandings, and confusion remain.[100] Thankfully, efforts are underway to coordinate management regimes and exchange best practices nationwide at a practitioner level.[101] This was demonstrated by the first National Moorings Forum held in Melbourne in October 2009 which gathered park managers from all States to progress a national mooring standard.[102]

Protecting the pristine: scientific collaboration and on-ground cooperation

As climate change becomes a clearer and sharper threat, increasing efforts to effectively protect some of the healthiest coral reefs in the world is more important than ever.[103] Australia and France share a moral and economic responsibility to protect their reefs and enhanced cooperation in this field would be mutually beneficial. Cooperation at the research level seems an obvious and relatively easy way to start this collaboration effort. Initiatives have already been taken with both countries having created "Centres of Excellence" for coral reef research: the Centre of Excellence on Coral Reef Studies, created in 2005 in Australia, hosts Australia's leading coral reef scientists under eight programs;[104] while the "Laboratoire d'Excellence Corail," established in 2011 in France, gathers almost all French coral reef scientists under a ten-year program themed "Coral Reefs Facing Climate Change."[105]

Still, existing efforts need to be intensified to reach international marine protection targets, and capitalize on the opportunity to protect vast areas of high ecological significance with relatively low use. Protecting reefs that remain undisturbed is all the more important because many other coral reefs systems are located near densely populated areas with high human impacts, such as the so-called "coral triangle," deemed the epicentre of coral reef biodiversity,[106] which includes Indonesia and the Philippines.[107] France can formalize the protection of vast areas of uninhabited islands or islands with low population density, such as the Eparses Islands, Clipperton, Wallis, and Futuna.[108] In Australia, the Coral Sea (which ranges from the eastern side of the Great Barrier Reef Marine Park to the outer limit of the EEZ) is an ideal candidate for formal protection with its pristine reefs, vast range of habitats, and high biodiversity.[109] The Australian government declared the Coral Sea a "conservation zone" in 2009 and, more recently, on November 25, 2011, released a draft proposal for public comment as part of the bioregional planning process.[110] If Australia formalizes protection of this region it would likely include a no-take area of 507,487 km^2, which is more than half of its total area.[111] France could also provide protected area status to its part of the Coral Sea between the Lagoons of the New Caledonia World Heritage Site and the international boundary with the Australian EEZ (which would represent more than thirteen percent of France's overall EEZ (11,035,000 km^2).[112] An agreement between Australia and New Caledonia/France to protect and manage the whole area of the Coral Sea would establish the first transboundary marine park in the world, protecting marine resources far offshore and sending a signal of political will to reinforce the protection of international waters in the world.[113]

Conclusion

France and Australia have each increased their efforts to meet the 2012 international target of protecting ten percent of their waters, as well as adapting management to the imminent threats of climate change.[114] If they want to be strategic about achieving this goal, both countries could build upon each other's experience and cooperate with managing these threats with. For example, they could establish a process to manage transboundary MPAs. Whether or not transboundary marine parks are established, however, France could benefit from Australia's expertise in marine park management, both in terms of policy-making and enforcement.[115] In turn, Australia still needs to strengthen some aspects of its marine park management regimes, such as its fisheries and compliance systems; it could also benefit from France's governance experience with its historically centralized regime that clearly delineates functions and powers at various government levels.

A myriad of international organizations and forums exist to facilitate cooperation efforts. The International Coral Reef Initiative ("ICRI") seems the most appropriate international forum for France and Australia to cooperate, and also to share experience, expertise, and knowledge on coral reef management with other countries. France invested considerable effort into reviving the ICRI concept when it hosted the management secretariat from 2009 to 2011.[116] As Australia is now the new host of the ICRI, the opportunity for collaboration between France and Australia could be enhanced.[117] A rich exchange of experiences, views, and information between the countries responsible for these coral reefs will provide the opportunity to protect them from the threats of climate change and preserve some of the most astounding and valuable ecosystems in the world.

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[1] Endnotes: Recognition of Property Rights in Carbon Credits Under California's New Greenhouse Gas Cap-and-Trade Program
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