



Australian Government

Director of National Parks

GOVERNANCE IN THE INDIAN OCEAN TERRITORIES

**SUBMISSION BY THE DIRECTOR OF NATIONAL PARKS
TO THE INQUIRY BY THE JOINT STANDING COMMITTEE ON THE NATIONAL
CAPITAL AND EXTERNAL TERRITORIES**

23 April 2015

1. INTRODUCTION

The Director of National Parks

The Director of National Parks is a corporation sole established under Division 5 of Part 19 of the *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act) and is the statutory agency responsible for the Australian Government's protected area estate, both terrestrial and marine, declared as Commonwealth reserves under the EPBC Act. The Director is assisted by Parks Australia, a division of the Australian Government Department of the Environment, in carrying out the Director's responsibilities. In this submission Parks Australia means the Director of National Parks and Parks Australia staff members.

Overview of Activities

Parks Australia provides a national leadership role in the understanding, management and appreciation of the natural and cultural values of Australia's conservation estate, through the management of Commonwealth reserves and through cooperative arrangements with state and territory agencies.

There are 66 Commonwealth reserves established under the EPBC Act. Terrestrial reserves include six national parks managed directly by staff of Parks Australia on behalf of the Director—Booderee, Kakadu and Uluru-Kata Tjuta national parks, each jointly managed with their Indigenous owners through statutory boards of management; and Christmas Island, Norfolk Island and Pulu Keeling national parks located in Australia's external territories. The Australian National Botanic Gardens is a major national scientific, educational and recreational resource located in Canberra.

The Director is also responsible for 59 marine reserves established in Australia's Commonwealth marine areas. Fifty-eight of these reserves are managed by staff of Parks Australia, including via cooperative arrangements with state government partners, with staff of the Australian Antarctic Division managing the Heard Island and McDonald Islands Marine Reserve, under delegation from the Director.

The majority of Parks Australia's approximately 300 staff is located at the seven terrestrial reserves. Parks Australia staff responsible for management of marine reserves (which are mainly remote from population centres) are located in Hobart and Canberra.

Detailed information on Parks Australia's activities is available in the Director's annual report: <http://www.environment.gov.au/resource/annual-report-2013-14-director-national-parks>.

Indian Ocean Territories Reserves

The establishment of a Commonwealth reserve in each of the Indian Ocean Territories means that Parks Australia plays an important role in the conservation management of both regions, as well as in their governance more broadly.

Christmas Island National Park: Christmas Island National Park was established in three stages from 1980 and now covers approximately 63 per cent of the island's land area plus a marine zone which incorporates much of the island's fringing coral reef system. Christmas Island is home to many endemic species and the park protects the bulk of their remaining natural habitat (although there are many areas of biodiversity significance outside of the park); the island is also

recognised internationally for its extensive seabird populations and the world's most diverse and abundant array of land crab species. Inadequate biosecurity management for much of its post-settlement history means the island is also home to many introduced plants and animals which pose a direct threat to the island's remaining native species, as well as any future potential horticultural/agricultural industries. Parks Australia has an active role (in cooperation with researchers and on-island partners) in the design and delivery of major conservation programs, particularly invasive species control, which operate both within and outside of park boundaries.

Christmas Island National Park is managed in accordance with a management plan (2014-2024) prepared under the EPBC Act. The management plan's vision is:

Christmas Island National Park is internationally recognised for its conservation, scientific and nature-based tourism values and as a place where:

- *natural environments and native species are protected, conserved and restored*
- *visitors have inspirational, unique and rewarding experiences*
- *stakeholders and the community are engaged in, and value, the park's conservation.*

The Christmas Island National Park Management Plan is available at:

<http://www.environment.gov.au/resource/christmas-island-national-park-management-plan-2014-2024>.

Pulu Keeling National Park: Pulu Keeling National Park was established in 1995 and covers the whole of North Keeling Island, together with waters extending out 1.5 kilometres from the island's high water mark, and the entire park is listed under the Ramsar Convention as a wetland of international importance. The park protects the last remaining example of the native vegetation of the Cocos (Keeling) Islands group and is one of the few Indian Ocean atolls free of rats and other introduced mammals; its intact vegetation and pest-free status means it is a major nesting site for frigatebirds, boobies and other seabirds. As well as managing the park, Cocos-based Parks Australia staff participate in conservation programs undertaken in the Territory's southern atoll, including the translocation of the endangered Cocos buff-banded rail to Horsburgh Island in 2013 and marine turtle surveys.

A draft management plan for Pulu Keeling National Park was released for public comment in 2015 and should be in force in mid to late 2015. The management plan's vision is:

Pulu Keeling National Park continues to be recognised for its natural, cultural and scientific values, as an isolated atoll with largely intact marine, terrestrial and wetland ecosystems, with minimal human impact upon its natural condition.

The draft Pulu Keeling National Park Management Plan is available at:

<http://www.environment.gov.au/resource/pulu-keeling-draft-management-plan>.

Governance and Administration: As a major land manager on Christmas Island, Parks Australia is an active participant in relevant committees that operate in both of the Indian Ocean Territories. Examples include the Christmas Island and Cocos (Keeling) Islands emergency management committees, the Interagency Coordination Committee and the Shire of Christmas Island's 2021 Plan Committee. Parks Australia is also a member of the management committee of the Christmas Island Tourism Association, reflecting the role played by the park in supporting the island's nature-based tourism industry. Cocos-based staff work also cooperatively with the community and stakeholders in relation to conservation issues across the Cocos (Keeling) Islands, including via participation in relevant consultative and advisory groups.

In terms of administrative arrangements, Christmas Island National Park and Pulu Keeling National Park are managed as a single management entity, with staff located in both territories and the manager of both parks based on Christmas Island and reporting to a Canberra-based SES officer. Parks Australia has established and maintained a number of consultative bodies to inform management of each park—examples are the Pulu Keeling National Park Community Management Committee, the Christmas Island Crazy Ant Scientific Advisory Panel, the Christmas Island Reptile Advisory Panel and the Cocos buff-banded rail recovery team. A Christmas Island feral cat eradication steering committee will commence operation in 2015.

2. SCOPE OF SUBMISSION

The terms of reference for this inquiry list four specific aspects of the interaction between formal institutions and the Indian Ocean communities for review.

As noted above, Parks Australia works cooperatively with stakeholders and the wider community in our management of the two parks and their associated conservation programs. As an agency of the Australian Government, we consider that the effectiveness (or otherwise) of consultative and governance arrangements is a matter best commented upon by the communities and stakeholders which we seek to involve in our activities. Parks Australia therefore has no specific comments to provide on the first three terms of reference items, other than wishing to put on the public record the high value we place on the contributions made by, and the positive and effective collaboration with, our government department colleagues, partners and stakeholders, as well as by the Indian Ocean communities themselves in addressing issues of mutual concern.

Noteworthy is the unrealised significance to the economy of both territories, but particularly in relation to Christmas Island due to its internationally significant biodiversity and ecology, of Parks Australia's role in protecting the natural environment, via the opportunities for nature-based tourism the park and other natural areas provide. Therefore, the remainder of this submission restricts itself to consideration of the final terms of reference item viz. *'opportunities to strengthen and diversify the economy, whilst maintaining and celebrating the unique cultural identity of the Indian Ocean Territories'*, with most reference to Christmas Island National Park. This is due to Christmas Island's wide range of natural attractions, accessibility and potential to support a nature-based tourism industry and expanded research and educational activities, as a means of diversifying the economy. However, many of the general comments related to tourism are also equally applicable to the Cocos (Keeling) Islands and should be read in that regard where relevant/applicable.

3. CONSERVATION AND PROTECTION OF ECOLOGICAL FEATURES AND ATTRACTIONS

Christmas Island

Christmas Island's natural environment, and in particular the national park, is ecologically significant for many reasons. There are 18 endemic terrestrial species listed as nationally endangered under the EPBC Act; the national park has two wetlands listed under the Ramsar Convention as wetlands of international importance; the island is a seabird rookery of international significance, and much of the island's seabird nesting habitat, including for the endemic and EPBC listed endangered Abbott's booby and Christmas Island frigatebird, is located within the national park. Christmas Island is listed as an 'Endemic Bird Area' by Birdlife

International, which are areas regarded as being of the highest priority for the global conservation of bird biodiversity.

Christmas Island has the greatest diversity and abundance of land crabs on earth, with the most notable species being the endemic red crab, internationally known for its annual breeding migration when tens of millions migrate from the forests to the sea to breed. Furthermore, *‘the ecological role of red crabs shaping the floor and lower strata of the forests is a unique feature of the island and is internationally significant’* (Expert Working Group 2010). Christmas Island’s marine environment is also significant, providing habitat for over 650 species of fish, including internationally endangered and EPBC listed whale sharks, which seasonally migrate to the island during the wet season.

In recognition of these important natural values, the natural areas of Christmas Island, including its marine waters extending to 500 metres from shore, are listed as Commonwealth Heritage under the EPBC Act.

Not surprisingly, the Christmas Island Tourism Association markets Christmas Island as:

‘one of nature’s most impressive feats, an island full of natural wonders: from the unique annual red crab migration to rare and unusual birds and glorious deserted beaches where the only footprints in the sand are those made by nesting turtles. With so many endemic species, the island is often referred to as the Galapagos of the Indian Ocean. Yet it also displays a curious amalgam of cultures, history and industry, emerging as a place where all these elements create a truly unusual travel experience’.

Tourism on Christmas Island is focused on nature-based activities and the island’s cultural heritage, with the major attractions being the annual migration of red crabs and other nature-based activities including, boating, diving and fishing tours, snorkeling, sightseeing and birdwatching tours (Parliament of Australia 2010). While the tourism industry is in early stages of development and does not yet make a major contribution to the economy, it has considerable potential to expand. Tourism was recognised by the 2010 Joint Standing Committee as a critical industry sector with the greatest growth potential (Parliament of Australia 2010). Thus, the link between Christmas Island’s natural environment and its potential to support the growth of the nature-based tourism industry, and therefore the island’s economy, is clearly recognised.

The key, however, to having a nature-based tourism product on Christmas Island is an environment that is sufficiently preserved (Christmas Island Phosphates 2010, Expert Working Group 2010) and deterioration of the natural environment would have negative impacts on tourism (Parliament of Australia 2010).

In 2010 a scientific Expert Working Group was formed by the then Minister for the Environment, to report on the decline of Christmas Island’s biodiversity, particularly the decline of the endangered Christmas Island pipistrelle, which is now likely to be extinct. The principal finding of the Expert Working Group was that:

‘The extremely high biodiversity values of Christmas Island are in a parlous state. The cause is the intrinsic vulnerability of Christmas Island, as an oceanic island, to the direct impact on its biodiversity by a succession of human-related changes to the landscape and by introductions of non-indigenous species’.

The Expert Working Group made 32 broad-ranging recommendations in its final report to the Minister, with high priority recommendations including improving biosecurity processes to

reduce the risk of new invasive species entering Christmas Island; addressing existing invasive species threats (particularly yellow crazy ants, cats, rats and invasive weeds); and expanded research and monitoring activities to more effectively identify the status of threatened species and the reasons for their decline.

The Shire of Christmas Island, through its 2018 Plan (recently updated to 2021), also recognises the importance of protecting Christmas Island's natural environment.

'By 2018 the economic diversity required for a sustainable economy has progressed on Christmas Island through the establishment of agreed industries. While the mainstay of the economy includes mining and government activities, other industries such as tourism, food production, education services and research industries are now prominent. All these industries respect support the unique natural environment of the Island'.

'The natural environment of Christmas Island is one of our greatest assets. We recognise its uniqueness in a global arena and the need to protect its biodiversity.'

Parks Australia funds, implements/coordinates and contributes to a wide variety of on and off park biodiversity conservation programs. This includes:

- Funding research into the indirect biological control of yellow crazy ants (with relevant approvals for the implementation phase currently being considered under Commonwealth legislation).
- Feral cat and rat control, with over 650 feral cats being removed since 2011 through a collaborative program, with a multi-year cat eradication program announced in 2014 and commencing in 2015.
- Captive breeding of two EPBC listed threatened reptile species.
- Forest rehabilitation under an MOU with the Department of Infrastructure and Regional Development and funded by a conservation levy paid by Christmas Island Phosphates.
- Protecting red crabs from vehicles during their annual breeding migration.

All of these programs are conducted in collaboration with on-island partners (particularly the Department of Infrastructure and Regional Development, the Shire of Christmas Island and Christmas Island Phosphates), and off-island partners (universities and conservation management agencies, particularly the Western Australia Department of Fisheries and Department of Parks and Wildlife).

In 2014 the Department of the Environment released for public comment a draft multi-threatened species recovery plan, which will replace nine existing recovery plans for 10 threatened species and incorporate other EPBC listed threatened species without recovery plans. The plan is a recovery plan under the EPBC Act and provides a strategic threat-based approach to implementing relevant Expert Working Group recommendations. Public comments are being reviewed and changes are proposed to the plan in response to these comments. These proposed changes will be discussed with a working group of island-based stakeholders before the draft plan is submitted for Ministerial approval.

In summary, a collaborative approach to implement priority conservation actions is considered essential for addressing pervasive cross-tenure threats like invasive species, which are found within and outside of the national park, to recovery of Christmas Island's internationally significant natural environment and its EPBC listed threatened species. Failure to adopt such approaches to address threats—and to adequately resource their implementation—would reduce both the conservation effectiveness and long-term cost efficiency of such programs. This would also have negative impacts for nature-based tourism.

Cocos (Keeling) Islands–Pulu Keeling National Park

As noted previously, Pulu Keeling National Park has significant biodiversity values. However, when compared to Christmas Island/Christmas Island National Park, the park does not have a similar level of species diversity or endemic and endangered species, and the threats to the park's biodiversity are far less than those impacting Christmas Island's biodiversity.

A key aspect of the conservation of Pulu Keeling National Park's biodiversity is off-park conservation efforts, particularly related to EPBC listed threatened species the Cocos buff-banded rail and marine turtles. Parks Australia coordinates several management and monitoring activities for these species and, where applicable, does so in collaboration with relevant scientific experts and with the support of the Cocos (Keeling) Islands Shire Council (e.g. in relation to the translocation and monitoring of the Cocos buff-banded rail). The Cocos (Keeling) Islands provide one of the Indian Ocean's most significant green turtle habitats, however, the most critical habitat lies outside of Pulu Keeling National Park.

Similarly to the case on Christmas Island, enhanced coordination and support for off-park activities will improve biodiversity outcomes, which may also assist nature-based tourism activities, for instance, in relation to birdwatching tours to Horsburgh Island (i.e. to view the recently translocated endangered Cocos buff-banded rail).

4. SUSTAINABLE TOURISM DEVELOPMENT

As noted above, a previous inquiry by the Parliament into the changing economic environment in the Indian Ocean Territories identified that tourism has strong potential to be a new economic driver, and to move the Indian Ocean Territories economies towards greater sustainability.

The comments below are largely focused on Christmas Island, primarily because Christmas Island National Park has a greater capacity to contribute sustainably to Christmas Island's economy (through nature-based tourism) than Pulu Keeling National Park can for the Cocos (Keeling) Islands. This is largely because of access, safety and cost challenges related to tourist visitation to Pulu Keeling National Park. However, several comments, such as tourism target markets and access/flight issues, are equally applicable to Christmas Island and Cocos (Keeling) Islands, in relation to sustainable tourism development.

Due to the unique natural and cultural attractions of Christmas Island, an environmentally, culturally, socially and economically sustainable tourism industry will be best achieved by targeting high-yield tourism markets, rather than mass volume tourism markets, because of several factors. Firstly, as a destination, Christmas Island is unlikely to be able to compete with high-volume, low-cost tourism destinations in Asia, due to higher access/flight and on-island costs. Secondly, high-volume tourism (even though considered unlikely due to cost factors) could diminish the environmental and cultural values of the island, and may also have negative social impacts. And thirdly, mass tourism may reduce the unique attractiveness and environmental values of Christmas Island as an eco-tourism destination and, therefore, its marketing edge and value.

This is consistent with the marketing approach adopted by Tourism Australia, which targets the high-yield consumer segment, 'Experience Seekers'. Tourism Australia identifies that Experience Seekers are by definition, looking for unique, involving and personal experiences from their holidays and are long-haul travellers who are less affected by the traditional barriers to travel of distance, time and cost. They are more informed, interested and curious about potential travel destinations.

Experience Seekers have a key number of ‘wants’ to satisfy their travel experience (Tourism Australia 2015). Experience Seekers want:

- Authentic personal experiences;
- Social interactions;
- Meeting and interacting with the locals;
- Experiencing something different from their normal day-to-day life;
- Understanding and learning about different lifestyles and cultures;
- Participating in the lifestyle and experiencing it, rather than observing it;
- Challenging themselves—physically, emotionally and/or mentally;
- Visiting authentic destinations that are not necessarily part of the tourist route; and
- Exposure to unique and compelling experiences.

Other features of Experience Seekers are:

- Travel is an important part of their lifestyle;
- They stay longer and spend more;
- They travel beyond the major cities;
- They are less materialistic;
- They have a higher than average household income; and
- They are well educated and informed on a range of subjects.

While Christmas Island’s striking natural attractions such as birdwatching and scuba diving and the diverse cultural heritage are clear strengths upon which a sustainable tourism industry can be based, there are several challenges inhibiting its further development. These challenges are largely related to awareness promotion, access/flights, amenities/infrastructure, accommodation and activities. On the last point, it is noted that it is not the role of government to provide/develop activities for tourism as this is the realm of private industry. However, addressing key aspects of the other challenges identified below will help encourage private investment to develop new tourism activities and experiences.

Awareness/promotion

Christmas Island’s natural and cultural attractions and its exotic lifestyle place the island in a strong position to attract Tourism Australia’s Experience Seeker target market. The marketing strategies adopted by the Christmas Island Tourism Association are strongly supported, as are its key marketing/promotional messages (largely mirrored by Parks Australia) as they largely target this market segment in an environmentally and culturally sensitive and effective manner. Examples of the types of activities that current marketing attracts includes wildlife tours (e.g. the annual Bird and Nature Week); photography tours (two off-island tour operators have commenced tours over the last two years); and scuba diving, with Christmas Island promoted and recognised as one of the world’s top diving destinations.

There is potential to value add to existing tourism marketing by building closer links between Tourism Australia and other relevant government agencies, to help support tourism marketing of the Indian Ocean Territories. This is because there is no state-based tourism agency to support tourism marketing and promotion in the Indian Ocean Territories, as is the case on mainland Australia for regional tourism associations (such as the Christmas Island Tourism Association).

Establishment of more formal links with Tourism Australia may assist tourism marketing of the Indian Ocean Territories to international markets (as this is the responsibility of Tourism Australia). Similarly, stronger links could be explored with state-based tourism agencies to promote domestic tourism, with Western Australia being the logical choice. This may be able to

be achieved through service delivery arrangements between the Commonwealth and the Western Australian governments.

It should nevertheless be noted that, no matter the effectiveness of tourism marketing, it can only increase visitation and yield rates if other tourism industry enablers are addressed (some of which are identified below).

Access/flights

Reliable and secure flights are a critical foundation upon which the development of the Indian Ocean Territories tourism industry would be based. However, it is beyond Parks Australia's expertise to provide informed comment on flight issues, other than to say that Parks Australia encourages and supports the efforts of governments and individuals to secure long-term, reliable, regular and easy-to-access flights.

Amenities/infrastructure

Christmas Island has a relatively broad range of amenities/infrastructure (e.g. walking tracks, boardwalks, lookouts, interpretive signs) within and outside of the national park, to assist people to enjoy, appreciate and understand the island's natural and cultural attractions. In general, however, visitor amenities and infrastructure across the island are outdated and close to or beyond their safe and functional lifecycle. New visitor experience opportunities (e.g. through the upgrade of interpretive signs, new viewing areas/walking tracks etc) would also increase the attraction of the island for tourists. It should also be noted that many of these amenities/infrastructure assets are not only critical for tourism, but are also used by the local community for recreational purposes, and therefore also contribute to community well-being. Furthermore, if the other tourism industry enablers described here are addressed, many of the visitor current infrastructure and facilities would not effectively cope with larger numbers of tourists.

In 2014 Christmas Island National Park constructed a new visitor boardwalk at The Dales, which is a Ramsar listed wetland and one of the island's most iconic visitor destinations. The new boardwalk is a low impact and easy to construct and maintain design, made of long-lasting, functional and aesthetically suitable materials. Parks Australia aims to progressively replace its other visitor infrastructure (three viewing platforms and one boardwalk) with similar materials and designs to those used at The Dales, subject to resourcing.

Adopting a similar and standardised approach to such replacements and upgrades across the island (i.e. both within and outside of the park) would not only ensure cost effectiveness and efficiencies, but would also assist with providing Christmas Island with a consistent brand/design of world class tourism infrastructure. A similar approach could also be adopted for other visitor facilities, including on-site interpretive signs, such as through the preparation of an interpretive signs plan and manual. On-ground outcomes would be most effectively and efficiently achieved through further enhancing the existing collaborative approach between relevant land managers and agencies on other issues (i.e. Parks Australia, the Department of Infrastructure and Regional Development, the Shire of Christmas Island and the Christmas Island Tourism Association).

To support this process and the ongoing maintenance of visitor facilities, greater clarity is also needed in relation to management responsibilities (i.e. maintenance and replacement) for visitor amenities/assets located outside of the national park (i.e. to distinguish between assets managed by the Shire of Christmas Island and those management by the Department of Infrastructure and Regional Development).

To help facilitate the strategic, progressive, effective and efficient upgrade and replacement of visitor infrastructure and facilities, the preparation of a tourism visitor experience master plan for Christmas Island could be considered. This should also include a cultural heritage

component/plan for the island that will properly plan for the protection and promotion of the island's significant cultural infrastructure and sites, as well as natural sites. Effective planning will become more significant as tourism expands, to ensure establishment of orderly and well-planned tourism infrastructure that helps provides visitors with high quality experiences, and to protect the natural and cultural assets upon which tourism will rely.

Accommodation

There is currently a good range of accommodation on Christmas Island in and near the Settlement area, which is more readily available since the recent decline of detention-related activity. Nevertheless there is considerable potential for commercial investors to develop new eco-accommodation experiences such as 'glamping' accommodation (i.e. high-yield safari camps, wellness retreats) within and outside of the national park. Parks Australia intends to commence an expression of interest (EoI) process in late 2015 to seek interest in establishing eco-accommodation in the national park. These types of eco-accommodation developments would not be seen as being in competition with existing accommodation providers, as they would provide new experiences and target new tourism markets (e.g. Experience Seekers) and their establishment would create more tourism interest in visiting Christmas Island.

However, the costs and logistics of establishing and managing larger scale eco-accommodation developments in the national park may be prohibitive to investors, due to the additional costs associated with establishing essential services (e.g. power, water, roads) and the on-going management of facilities. Establishing eco-accommodation on Christmas Island has been problematic in the past. An example is the case of the failed dive resort proposal in the Settlement area, where land for the proposed site could not be secured due to land zoning and release issues.

The development or approval of plans, policies and procedures for the zoning and release of land for tourism developments/eco-accommodation proposals (for Shire zoned land, unallocated Crown land) would be 'enablers' that would provide greater certainty for private tourism investment. If land release policies are adopted, conditions on the release of such land should also include time bound development requirements, as there are several blocks of land within Settlement that have remained undeveloped for many years.

5. RESEARCH AND EDUCATION

Due to Christmas Island's internationally significant ecological and biodiversity values (which includes a high number/proportion of endemic species), Christmas Island attracts a wide number of Australian and international researchers who conduct ecological research, where relevant, in accordance with research permits issued under the EPBC Act by Parks Australia and/or the Department of the Environment. Furthermore, the substantial potential for Christmas Island to develop educational partnership opportunities was among the conclusions of the previous inquiry by the Parliament into the changing economic environment in the Indian Ocean Territories (Parliament of Australia 2010).

Ecological studies conducted over recent years include research on land crab diversity and ecology; seabird foraging and nesting success; invasive species impacts and management (including the biological control of yellow crazy ants funded by Parks Australia, giant African land snails, threats affecting native reptiles and cats and rats); and marine species diversity and abundance (by the WA Department of Fisheries and universities). Some of these, as well as other studies (e.g. marine turtle surveys) are also conducted on the Cocos (Keeling) Islands. Parks Australia provides and/or supports a wide range of research activities, including through information and equipment sharing and by providing logistical support, including accommodation on Christmas Island at the park's 'Pink House' research station, which has basic

bunk style accommodation and research facilities (including a small laboratory). Parks Australia also actively supports research not directly related to its core business, including the Christmas Island Phosphates Mine to Plant Enterprises (MINTOPE) project by providing technical expertise. There is also considerable potential to explore ‘voluntourism’ opportunities for supporting natural and cultural heritage conservation projects (e.g. endangered species monitoring, weed control, historic site restoration). This could be mutually beneficial in terms of implementing priority conservation programs and attracting the Experience Seeker tourist target market.

The significance of Christmas Island’s biodiversity not only attracts a wide range of respected Australian research bodies (e.g. La Trobe University, James Cook University, Australian National University), but also attracts highly respected international research institutions, including the National University of Singapore and the Max Planck Institute, with the latter holding an international scientific conference in 2010 on Christmas Island.

Parks Australia also supports a wide range of environmental educational activities including school-based activities and eco-tourism activities (e.g. Bird and Nature Week) as well as providing, in previous years, environmental educational activities for visiting school students from Singapore.

There is considerable potential to expand the range of environmental research and educational activities that are conducted in the Indian Ocean Territories to address local and broader environmental and sustainability issues (e.g. island biodiversity conservation, sustainable tropical food production, sustainable use of fisheries and other resources) and to also contribute to the economy. In addition, the island’s unique cultural heritage and history (i.e. human habitation, migration, religious and Asian influences) also provide educational/study tour opportunities.

Environmental research and environmental/cultural educational activities could broaden and diversify the economic base of the island, by developing value-adding, knowledge-based industries to help reduce economic vulnerability (i.e. by reducing reliance only on traditional ‘blue collar’ employment opportunities). The arrival of the National Broadband Network in the Indian Ocean Territories in 2016 will provide an essential piece of ‘enabling’ technological infrastructure, which will support the further development of such industries, like research and education. The establishment of a multi-functional (Indian Ocean Territories) research and educational facility on Christmas Island, in conjunction with relevant research and educational partners, would help achieve these aims and has been previously proposed on several occasions. However, the feasibility of establishing and managing such a facility is not known. Consequently, there may be value in the conduct of a feasibility study and cost-benefit analysis to establish and maintain such a facility in the Indian Ocean Territories.

6. CONCLUSIONS

(i) Christmas Island’s natural environment is ecologically significant for many reasons, particularly as it provides habitat for 18 EPBC listed threatened terrestrial species, 17 of which are endemic. In recognition of the island’s important natural values, the natural areas of Christmas Island, including its marine waters extending to 500 metres from shore, are listed as Commonwealth Heritage under the EPBC Act.

(ii) There is a clear link between Christmas Island’s natural environment and its potential to support the growth of a sustainable nature-based tourism industry and therefore to contribute to the island’s economy. The key, however, to having a nature-based tourism product on Christmas Island is an environment that is sufficiently preserved and protected.

(iii) Christmas Island's natural environment and its biodiversity are under threat, largely from the impacts of invasive species. A collaborative approach to the implementation of priority conservation actions is considered essential for addressing pervasive cross-tenure threats like invasive species. Failure to adopt such approaches—and to adequately resource their implementation—would reduce both the conservation effectiveness and long-term cost efficiency of such programs. This would also have negative impacts for nature-based tourism.

(iv) A previous Parliament inquiry into the changing economic environment in the Indian Ocean Territories identified that tourism has strong potential to be a new economic driver and to make the economies of the Indian Ocean Territories more sustainable. Targeting high-yield tourism markets rather than mass-volume tourism markets is likely to provide the best return on investment, as Christmas Island is unlikely to be able to compete with high-volume, low-cost tourism markets and destinations in Asia.

(v) There are several factors critical for developing a sustainable tourism industry:

- Awareness: There is potential to build on current tourism marketing activities by developing stronger and formal links with Tourism Australia and state-based tourism marketing agencies.
- Access/flights: Reliable and secure flights are the foundation for the development of a tourism industry (and indeed other industries). The continued efforts of governments and individuals to secure long-term, reliable, regular and easy-to-access flights are critical.
- Amenities/infrastructure: Preparation of a tourism visitor experience master plan for Christmas Island, which includes a cultural heritage component, would provide an orderly, effective and efficient approach to enhancing and developing visitor experiences and associated infrastructure/facilities. This would also help ensure protection of the island's natural and cultural values and attractions, that tourism will reply upon.
- Accommodation: Establishing new eco-accommodation has been problematic in the past, due at least in part to land zoning and release issues. The development or approval of plans, policies and procedures for the zoning and release of land for tourism developments/eco-accommodation proposals, are critical 'enablers' for developing new tourism eco-accommodation experiences.

(vi) Christmas Island and the Cocos (Keeling) Islands have significant potential to attract nature-based researchers and educational/study groups interested in these islands' natural and cultural heritage. The establishment of a multi-functional (Indian Ocean Territories) research and educational facility on Christmas Island, in conjunction with relevant research and educational partners, would help achieve these aims and has been previously proposed on several occasions. However, the feasibility of establishing and managing such a facility is not known. Consequently, there may be value in conducting a feasibility study and cost-benefit analysis to establish and maintain such a facility in the Indian Ocean Territories.

7. REFERENCES

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