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**UNITED NATIONS EDUCATIONAL,
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**ORGANISATION DES NATIONS UNIES
POUR L'EDUCATION, LA SCIENCE ET LA CULTURE**

**CONVENTION CONCERNING THE PROTECTION OF THE WORLD
CULTURAL AND NATURAL HERITAGE**

**CONVENTION CONCERNANT LA PROTECTION DU PATRIMOINE
MONDIAL, CULTUREL ET NATUREL**

WORLD HERITAGE COMMITTEE / COMITE DU PATRIMOINE MONDIAL

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Item 7 of the Provisional Agenda: State of conservation of properties inscribed on the World Heritage List and/or on the List of World Heritage in Danger.

Point 7 de l'Ordre du jour provisoire: Etat de conservation de biens inscrits sur la Liste du patrimoine mondial et/ou sur la Liste du patrimoine mondial en péril

MISSION REPORT / RAPPORT DE MISSION

**Belize Barrier Reef Reserve System (Belize) (764)
Réseau de réserves du récif de la barrière du Belize (Belize) (764)**

4 to 9 February 2013

This mission report should be read in conjunction with Document:
Ce rapport de mission doit être lu conjointement avec le document suivant:

WHC-13/37.COM/ 7A

IUCN

**REPORT ON THE MISSION TO BELIZE BARRIER REEF RESERVE SYSTEM, (BELIZE)
FROM 4TH TO 9TH February 2013**



Photo © Elena Osipova

Grahame Byron and Elena Osipova (IUCN)

March 2013

LIST OF ACRONYMS

| | |
|-------|---|
| APAMO | Association of Protected Areas Management Organizations |
| BBRRS | Belize Barrier Reef Reserve System |
| BTIA | Belize Tourism Industry Association |
| CEO | Chief Executive Officer |
| CZMP | Coastal Zone Management Plan |
| EIA | Environmental Impact Assessment |
| IUCN | International Union for Conservation of Nature |
| NEAC | National Environmental Appraisal Committee |
| NGO | Non-governmental organization |
| OUV | Outstanding Universal Value |
| SEA | Southern Environmental Association |
| WHC | World Heritage Centre |

ACKNOWLEDGEMENTS

The mission wishes to thank the Government of Belize for facilitating the IUCN reactive monitoring mission, enabling the site visits to Glover's Reef Marine Reserve and South Water Caye Marine Reserve of the property and the meetings with people that were conducted throughout the five days of the mission. The mission thanks in particular Ms. Beverly Wade and her colleagues from the Fisheries Department for their support on the logistical arrangements, the preparation of background information materials and provision of follow up documentation.

The mission is particularly thankful to Senator the Honourable Lisel Alamilla, Minister for Forestry, Fisheries and Sustainable Development for her extensive personal involvement in, and support for, the mission, and for providing open and unfettered access to staff of her Ministry.

The mission benefitted greatly from the expertise, information and support of the many individuals from non-government organisations (NGOs), industry and community representatives who took the time to meet with us and/or provide written statements relating to the management of the World Heritage Area. They truly enriched our understanding of the complexity of the issues and the nature of change in Belize.

Finally the mission expresses its gratitude to the people of Belize for their friendly acceptance of the mission and for caring about the Outstanding Universal Value of this important World Heritage Property.

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EXECUTIVE SUMMARY AND LIST OF RECOMMENDATIONS

The Belize Barrier Reef Reserve System was inscribed on the World Heritage List in 1996 under criteria (vii), (ix) and (x). In 2009 the Belize Barrier Reef Reserve System was inscribed on the List of World Heritage in Danger. The main concerns expressed by the World Heritage Committee in its Decision 33COM 7B.33 were on-going sale, lease and development on lands within the property, expiration of the moratorium on mangrove cutting, as well as weak institutional coordination mechanisms with regard to the management and protection of the Outstanding Universal Value of the property.

This report contains the results of a reactive monitoring mission requested by the World Heritage Committee at its 36th session (St Petersburg, 2012) and undertaken by IUCN. This mission was undertaken from 4-9 February 2013 with the objective to consider the state of conservation of the Belize Barrier Reef Reserve System as a whole, update the corrective measures and establish a timeframe for their implementation, and assist the State Party in developing the Desired state of conservation for the removal of the property from the list of World Heritage in Danger. The Mission was able to hold discussions with various stakeholders, including senior government representatives, NGOs, researchers, staff and members of advisory committees of some of the component sites of the property¹, industry and community representatives.

The mission considers that overall the property continues to retain the values for which it was inscribed in 1996. Since the time of inscription, however, a number of conservation issues have affected the property and there has been a clear decline in some values where corrective measures have not been effectively implemented. The declines noted above have to date been localised. In the not too distant future these localised threats are likely to become exacerbated by the expected major impacts of climate change.

a. Local threats

As identified in Section 3 there are a number of local threats to the BBRRS (coral dredging, mangrove cutting, fishing activity, etc.) and they have been the major focus of activity for management agencies, NGOs and community groups since inscription. This is appropriate as it is at this level where the State Party and these various groups have the greatest ability to make a difference, both spatially and temporally.

The mission considers that the State Party has made generally good progress across the issues since the last WHC/IUCN reactive monitoring mission in 2009. There is ample evidence that the State Party has undertaken a broad review of its various legislative and policy instruments to ensure that management can effectively preserve the OUV of this property. The realisation of this outcome can only be achieved however if the various instruments and policies are actively implemented, monitored and, where necessary, enforced.

b. Regional threats

¹ Throughout this report the wording “the property” is synonymous with the seven component sites that make up the Belize Barrier Reef Reserve System (BBRRS).

In the broader regional context of the meso-american reefs and the wider Caribbean there are three primary threats whose origins are external to the BBRRS.

- i. The invasion by the feral Indo-Pacific lionfish (*Pterois volitans*) and its impacts on the native fish populations
- ii. Declining water quality primarily from nutrient overloading and sediment, primarily from Honduran rivers
- iii. Potential spills from oil rigs, tankers or other large vessels.

Due to its size and locality Belize is vulnerable to ongoing impact from these threats. It is noted that the State Party has undertaken measures to manage these circumstances within their territorial sea and where appropriate their exclusive economic zone, and it is recommended that they continue their discussion with their neighbours and continue to be engaged in regional cooperative actions wherever they can. It is recognised that this may require significant resources.

c. Global threats

The most significant threat to the OUV of the property is climate change. Whilst climate change is recognised world-wide as the single biggest threat to coral reef systems, its impact on the BBRRS and the surrounding coastal and marine assets of Belize are expected to be substantial. It is difficult for the State Party to have a major role in resolving or managing this issue, however planning and adaptive management opportunities should be identified and realised wherever feasible.

Conclusion

The State of Conservation of the Belize Barrier Reef Reserve System site would have to be considered at significant risk of further decline. This conclusion has been reached taking into account the substantial clearing of mangroves and dredging in the past decades, continuing coastal development, extensive runoff from agricultural and urban areas, potential offshore oil exploitation, the impact of invasive species and all this will be exacerbated by the globally recognised impacts of climate change on these shallow inshore marine ecosystems. The completion and rigorous implementation of the identified corrective measures could however ensure an improvement in ecosystem health in the short term and afford this system the opportunity to develop greater integrity and resilience to cope with the evolution of climate change impacts.

The mission recognises that the State Party, NGOs and the people of Belize have made significant advances in management and conservation of the property. However, based on the available evidence the mission concludes that the Belize Barrier Reef Reserve System should remain on the List of World Heritage in Danger until such time as all corrective measures have been achieved and the recommendations of this report addressed.

The mission considers that the World Heritage Committee should consider that the following corrective measures have been implemented:

- Develop a co-management legal framework under which the respective responsibilities of the State Party and conservation NGOs can be effectively established, monitored and evaluated in relation to the conservation of the property;
- Systematically consider and address the threat of introduced species within the management plans of the property;

- Make publicly available the information on land ownership for all lands within the property, including mangrove islands, in easily accessible format, to ensure transparency in land use and allocations;
- Develop and implement a medium-term plan to increase the no take zones within marine reserves, establishing ecologically effective protection and replenishment areas for otherwise heavily exploited fin fish, conch and lobster.

The mission considers that the State Party should take urgent measures to implement the following remaining corrective measures to address the current threats to the property and to prevent any deterioration in the Outstanding Universal Values (OUV) of the property:

- a) Implement the necessary legal measures to guarantee the permanent cessation of the sale and lease of lands throughout the property;
- b) Conduct a study to analyze the current state of the lands previously disturbed by development activities with a view to identifying the best measures to address this issue;
- c) Finalize the legislative instruments and policy documents relevant to the management of the property, including the Coastal Zone Management Plan (CZMP), Land Use Policy Implementation Plan, National Protected Areas System Bill, Aquatic Living Resources Bill, Forest (Protection of Mangroves) Regulations and Petroleum Exploration Framework and ensure that the management of the World Heritage property is specifically addressed in those documents as well as in their implementation plans.
- d) Make a clear and unequivocal legislative commitment to eliminate all oil concessions granted within the outer boundaries of the property and adjacent waters and ensure that necessary legal and institutional instruments are in place to effectively control oil exploration and exploitation in areas outside the property which might have negative impact on the Outstanding Universal Value of the property.

Recommendations

It is recommended that the State Party:

1. Take immediate action to resolve the outstanding corrective measures as originally identified in Decision 35.COM/7A.15 and updated in this mission report, namely:
 - a. Implement the necessary legal measures to guarantee the permanent cessation of the sale and lease of lands throughout the property
 - b. Conduct a study to analyze the current state of lands previously disturbed by development activities with a view to identifying the best measures to address this issue
 - c. Finalize the legislative instruments and policy documents relevant to the management of the property, including the Coastal Zone Management Plan (CZMP), Land Use Policy Implementation Plan, National Protected Areas System Bill, Aquatic Living Resources Bill, Forest (Protection of Mangroves) Regulations and Petroleum Exploration Framework and ensure that the management of the World Heritage property is specifically addressed in those documents as well as in their implementation plans.

- d. Make a clear and unequivocal legislative commitment to eliminate all oil concessions granted within the outer boundaries of the property and adjacent waters and ensure that necessary legal and institutional instruments are in place to effectively control oil exploration and exploitation in areas outside the property which might have negative impact on the Outstanding Universal Value of the property.
2. Incorporate specific reference to the World Heritage property in the Land Use Policy with clearly indicated requirements to be met prior to any approval for any development within the property or in areas enclosed by or adjacent to the property and develop an implementation plan for the Land Use Policy with clear guidance on all matters related to the property.
3. Complete the Coastal Zone Management Plan as a matter of priority and specify what actions (e.g. works, developments) can and cannot be undertaken both within the boundaries of the property and in the adjacent or enclosed lands and water.
4. Develop spatial policies that will identify appropriate and limited locations and standards for coastal development, and identify areas that should not be subject to any further development.
5. Ensure that the Land Use Policy and the Coastal Zone Management Plan are compatible, consistent and interconnected in such a way as to provide a clear “line of sight” between these planning instruments and mainstream them across the State Party’s policy.
6. Explicitly incorporate all elements that make up the Outstanding Universal Value of the property into all assessment, management, planning and decision making processes ensuring that:
 - a. they are taken into account and suffer no detriment
 - b. the cumulative impacts of developments in the context of all other existing and proposed development and their impact on the OUV of the property are specifically considered
 - c. where development and/or use is permitted it will lead to net benefits to the property as a whole

Of particular importance are any determinations made under the Environmental Protection Act, Petroleum Act, National Parks System Act, Forestry Act and Fisheries Act and their subsequent successors.

7. Further improve coordination of the overall management planning and conservation of the property
8. Continue to provide ongoing support for community capacity building
9. Coordinate mapping of coastal and marine resources across government.
10. Maintain involvement in the regional cooperative approach to Lionfish management.
11. Develop and adopt at the highest level clearly defined and scientifically justified targets for improving the State of conservation of the elements of OUV to enhance the resilience of the property in the face of climate change.
12. Commence drafting a proposal for the Desired State of Conservation for the removal of the property from the List of World Heritage in Danger, in consultation with the World Heritage

Centre and IUCN, once the World Heritage Committee at its 37th Session has resolved an updated list of corrective measures and adopted the retrospective Statement of Outstanding Universal Value, and submit the proposal for examination by the World Heritage Committee at its 38th Session in 2014.

1. BACKGROUND TO THE MISSION

1.1. Inscription history

The Belize Barrier Reef Reserves System (BBRRS) was inscribed on the World Heritage List in 1996 under natural criteria (ii), (iii) and (iv) which correspond to the currently used criteria (ix), (vii) and (x), respectively.

The BBRRS was nominated as a serial property and the original nomination included 7 component sites:

- Bacalar Chico proposed National Park and Marine Reserve
- Hol Chan Marine Reserve
- Half Moon Caye Natural Monument
- South Water Caye proposed Marine Reserve
- Glovers Reef Marine Reserve
- Laughing Bird Caye National Park and extension
- Sapodilla Cayes proposed Marine Reserve

Following the recommendations of the IUCN Evaluation report Hol Chan Marine Reserve was omitted and the Blue Hole Natural Monument was added to the nominated property and the property was then inscribed with these amendments. It was considered by IUCN that Hol Chan did not add anything to the Outstanding Universal Value of the property. On the other hand, the Blue Hole along with several other areas (e.g. Turneffe Atoll) was considered an important natural feature that would significantly contribute to the OUV of the property.

The property as it was inscribed following the amendments includes the following component sites:

| | |
|----------------------------------|---------------------|
| Bacalar Chico | 107 km ² |
| Half Moon Caye Natural Monument | 39 km ² |
| South Water Caye Marine Reserve | 298 km ² |
| Glovers Reef Marine Reserve | 308 km ² |
| Laughing Bird Caye National Park | 43 km ² |
| Sapodilla Cayes | 127 km ² |
| Blue Hole Natural Monument | 4.1 km ² |

The Belize Barrier Reef Reserve System was inscribed on the List of World Heritage in Danger in 2009. The main concerns expressed by the World Heritage Committee in its Decision 33COM 7B.33 were on-going sale, lease and development on lands within the property, expiration of the moratorium on mangrove cutting, as well as weak institutional coordination mechanisms with regard to the management and protection of the Outstanding Universal Value of the property.

1.2. Inscription criteria and World Heritage Values

The Committee inscribed the Belize Barrier Reef Reserve System under natural *criteria (vii), (ix) and (x)* as the largest barrier reef in the Northern hemisphere. The Reef illustrates a classic example of reefs development through fringing, barrier and atoll reef types.

- *Criterion (vii)* – the Belize Barrier Reef Reserve System is the longest barrier reef in the Northern and Western Hemispheres and is unique in the world for its array of reef types contained in a relatively small area.
- *Criterion (ix)* – the BBRRS provides an array of examples of the evolutionary history of reef development with fringing, barrier and atoll reef sites.
- *Criterion (x)* - The property provides important habitat for a number of threatened marine species, including the West Indian manatee (*Trichechus manatus*), green turtle (*Chelonia mydas*), hawksbill turtle (*Eretmochelys imbricata*), loggerhead turtle (*Caretta caretta*), and the American crocodile (*Crocodylus acutus*) as well as endemic and migratory birds which reproduce in the littoral forests of cays, atolls and coastal areas. Approximately 247 taxa of marine flora have been described within the complex and over 500 fish, 65 scleractinian coral, 45 hydroid and 350 mollusc species have also been identified, in addition to a great diversity of sponges, marine worms and crustaceans.

1.3. Integrity issues raised in the IUCN evaluation report at the time of inscription

At the time of inscription the following threats affecting the integrity of the property were identified in the IUCN Evaluation report:

- Overharvesting of marine resources: Decline in commercial fish stocks due to over-exploitation and severe reduction of marine turtles and manatee numbers due to hunting were noted in the report.
- Coastal development and tourism: Effluents and sediments from urban settlement and agriculture as well as growing numbers of tourists in the coastal zone were mentioned.
- Industrial development: It was noted in the report that companies had revived interest in offshore oil exploitation and that the Government of Belize had issued licenses for drilling near Glover's Reef.

The report also noted that considering the growing pressure from these threats the State Party had decided to establish a Coastal Zone Management Unit that would coordinate all activities in the coastal zone, prepare zoning and management plans and establish various regulatory mechanisms.

The IUCN Evaluation report also noted that effective conservation of marine reserves can only be achieved under the umbrella of a wider management regime which considered other surrounding uses. It was assumed that setting clear objectives for the Coastal Zone Management Authority and their implementation would do much to satisfy concerns over integrity.

1.4. Examination of the State of Conservation by the World Heritage Committee

In late 2007 the World Heritage Centre and IUCN received information on land sales and development near and within Bacalar Chico National Park. In early 2008 the World Heritage Centre

and the IUCN received information that another portion of the property (Pelican Cayes) had been negatively impacted by uncontrolled development activities. A State of Conservation Report for the property was prepared for the 32nd session of the Committee (Quebec City, 2008). Decision 32 COM 7B.33 adopted by the Committee at its 32nd Session included a request to the State Party to invite a joint World Heritage Centre / IUCN reactive monitoring mission to assess the extent of the reported damage, as well as a request to submit a report on the state of conservation of the property, including measures taken to stop the destruction of mangroves and coral reefs, for examination by the World Heritage Committee at its 33rd Session in 2009, with a view to considering, in the absence of substantial progress, the inscription of the property on the List of World Heritage in Danger. At its 33rd Session in 2009 The World Heritage Committee inscribed the property on the List of World Heritage in Danger and adopted a list of corrective measures.

1.5. Justification for the mission

In its Decision 36COM 7A.15 the World Heritage Committee expressed its concern over a range of issues, including existence of offshore oil concessions within the boundaries of the property, uncertainty about the impact of invasive species, increasing risk from climate change, as well as uncertainty about the progress that had been achieved towards the implementation of the previously identified corrective measures aimed at mitigating other threats affecting the property. The latter threats include land sale and lease within the property, lack of control over development activities and lack of institutional coordination framework for the management of the World Heritage site.

The World Heritage Committee requested the State Party to invite an IUCN reactive monitoring mission to consider the state of conservation of the property as a whole, update the corrective measures and establish a timeframe for their implementation, and assist the State Party in developing the Desired State of Conservation for the removal of the property from the List of World Heritage in Danger.

2. NATIONAL POLICY FOR THE PRESERVATION AND MANAGEMENT OF THE WORLD HERITAGE PROPERTY

2.1. Protected area legislation

The following provisions form a basis of protected areas legislation in Belize:

- Fisheries Act (CAP 210, revised edition 2000)
- Forest Act (CAP 213, revised edition 2000)
- Environmental Protection Act and Regulations (CAP 328 and CAP 328S)
- Coastal Zone Management Act (CAP 329)

The National Protected Area System Plan (2005) provides a framework for the implementation of the National Policy on Protected Areas in Belize.

Other statutory instruments relevant for the protection of the World Heritage property include:

- Environmental Impact Assessment Regulations and Amendment (2007)
- Fisheries (Nassau Grouper and Species Protection) Regulations (2009)
- Belize National Land Use Policy for Land Resource Development (2011)

A series of additional legislative instruments is being developed by the State Party:

- Living Aquatic Resources Bill
- Forest (Protection of Mangroves) Regulations
- National Protected Areas System Bill

2.2. Institutional framework and management structure

The recent formation of the Ministry of Fisheries, Forestry and Sustainable Development brought together Departments responsible for various aspects of protected areas management in Belize.

The Fisheries Department within the Ministry of Fisheries, Forestry and Sustainable Development is responsible for the management of marine reserves in Belize. The Forestry Department is responsible for the terrestrial parts of the reserves and other protected areas (e.g. Bacalar Chico National Park).

The Coastal Zone Management Authority is now finalizing the Integrated Coastal Zone Management Plan which should provide a coordination mechanism for the management of the coastal zone areas in Belize.

Several NGOs are involved in co-management of protected areas, including some of the component sites of the property. Belize Audubon Society is co-managing Half Moon Caye Marine Reserve and Blue Hole Natural Monument. Sapodilla Cayes Marine Reserve and Laughing Bird Caye are also co-managed. A legal framework for co-management has been recently developed and adopted by the Government of Belize.

3. IDENTIFICATION AND ASSESSMENT OF ISSUES/THREATS

3.1. Oil Exploration

Both onshore and offshore oil exploration has been ongoing in Belize since the 1950's. Much of the marine environments of Belize including most of the seven areas that comprise the property have been assessed.

The petroleum sector is governed by the Petroleum Act, Chapter 225 of the Substantive laws of Belize, Revised edition 2000-2003 and the Petroleum Regulations. The Geology and Petroleum Department (GPD) is the government agency responsible for the administration of the petroleum sector.

Petroleum contracts to explore for and produce petroleum are issued for a period of eight years and are divided into four renewable two year periods. At the end of each period the contractor must apply to the Minister for Energy, Science and Technology and Public Utilities for renewal. Renewal is automatically granted if the contractor fulfilled its work and expenditure commitments. If not, at the end of each period 25% of the original contract area is required to be relinquished.

There are currently six areas under contract for exploration in the marine environment of Belize (Annex IV, Map 2). Of these a few are due to be reviewed during the course of this year (2013). The mission was assured that once any further contracts were relinquished, a confirmation would be sent to IUCN and the World Heritage Centre.

IUCN has also learned that the Government of Belize made a decision to develop an offshore oil exploration and exploitation policy that would be in line with its commitment to protect the Outstanding Universal Value of the Belize Barrier Reef Reserve System. IUCN welcomes this decision and is open to provide necessary support to the State Party in the development of this policy.

3.2. Coastal Development, Urbanisation and Tourism

Coastal development has been an ongoing issue for this property, in particular the sale and lease of land within the property and a lack of control over development activities. This issue has been the subject of a number of NGO and public campaigns since inscription of this property. Aligned to this has been the gradual urbanisation of coastal areas and the islands and cays within and adjacent to the property.

The IUCN evaluation report at the time of inscription noted that considering the growing pressure from these threats the State Party had decided to establish a Coastal Zone Management Unit that would coordinate all activities in the coastal zone, prepare zoning and management plans and establish various regulatory mechanisms.

Since that time there has been an evolving effort to develop an Integrated Coastal Zone Management (ICZM) Plan. Whilst it has been a very slow process the mission was provided with a draft of the plan that is due to be released for public comment.

The ICZM Plan appears to be a very comprehensive approach to defining the issues for the Coastal Zone and incorporates some options for future consideration. What it does not appear to do is provide sufficient guidance or future direction for managers and decision-makers. It would therefore

be left to the political commitment of the time and does not really provide what stakeholders advised they were seeking, which was clear guidance and certainty in a spatial context.

The plan makes reference to the World Heritage property but does not provide clarity or certainty at what specific planning limitations and / or actions may relate to the property.

For it to reach its full potential therefore, it must be:

- more specific in providing detailed, spatially relevant planning and assessment guidance
- finalized following public comment
- endorsed by the government
- embedded in the Land Use Policy
- a part of the duty of care for all assessment and approval processes, and
- enforced

Tourism is still a significant component of the national economy contributing between 18-25% of the GDP and accounting for more than 28% of total employment. The latest figures (National Sustainable Tourism Master Plan for Belize, 2012) show a continued growth in this sector for Belize.

The State Party acknowledges that as a tourism destination Belize is characterised by having excellent natural and cultural heritage. Barrier Reef Reserve System is recognized as one of their four “unique tourism assets”.

Protection of these sites is recognised by the tourism industry as a key issue for its sustainability into the future. In October 2012 the Ministry of Tourism and Culture released a “National Sustainable Tourism Master Plan for Belize 2030”. This plan, which was developed with the input of key industry stakeholders, is considered by the State Party to be the blueprint for tourism guiding it towards its vision of “low impact, high value tourism”.

The master plan identifies that the key strategy for the Barrier Reef is “Contain Development and Consolidate”, and that the Belize Reefs are recognised as a “unique chain of reef islands that will be renowned internationally for its World Heritage status and will be regarded by visitors as a pristine and well-preserved destination”.

The strength of the master plan lies not only in its grand statements of vision but also in its program logic as it presents a clear line of sight from the vision to the objectives and actions and by identifying the lead stakeholder responsible for the actions. This provides a clear and unambiguous statement of intent and direction for all participants. The only real issue with this plan is that it doesn’t contain any real timeframes for commitments to be achieved. Besides the 2030 target there is no sequencing or timing of actions and activities. This could lead to significant delays in really achieving any on-ground improvement in management of this sector.

3.3. Mangrove Clearing

At the time of inscription it was noted that most of the cays in the property are mangrove dominated and as such provide a significant and critical habitat throughout the area. This has been well recognized through State Party documentation, popular press (e.g. dive magazines) and tourism promotional materials.

The World Heritage Committee at its 32nd session (Quebec City, 2008) requested the State Party to submit to the World Heritage Centre, a report on the state of conservation of the property, including measures taken to stop the destruction of mangroves and coral reefs and a description of progress in rehabilitating the reported damage to the property, for examination by the World Heritage Committee at its 33rd session in 2009, with a view to considering, in the absence of substantial progress, the inscription of the property on the List of World Heritage in Danger (Decision 32 COM 7B 33).

The report of the WHC/IUCN Reactive Monitoring Mission undertaken to this property in March 2009 further reinforced this position with a recommendation which stated, "The moratorium on mangrove cutting, declared in May 17, 2008 should be made permanent throughout the whole extent of the World Heritage property".

The World Heritage Committee at its 33rd session (Seville, 2009) noted that the moratorium on mangrove cutting had expired and that the State Party had been facilitating the on-going sale, lease and development of lands within the property, resulting in ascertained danger to its Outstanding Universal Value and consequently decided to include the property on the List of World Heritage in Danger (33COM 7B.33).

At its 35th session (UNESCO, 2011), the World Heritage Committee upheld its decision to retain the property on the List of World Heritage in Danger and raised its concern about the proposed Yum Balisi resort. The mangrove clearance and coral dredging activities at this site have been well documented in news reports and other popular media.

The State Party report of January 2012 noted the Committee's decision on *inter alia*, "the cessation of mangrove cutting and coral dredging", yet remained silent in its response to this matter.

The mission visited the site of the proposed Yum Balisi Resort, which has an active approval from the National Environmental Appraisal Committee to go ahead. Whilst it appeared that there had been no activity on the site for some time, as evidenced by the regrowth (Annex V, Photo 2), it was evident that there had been significant mangrove clearance undertaken. This reportedly occurred in 2006 (Annex V, Photo 1). Immediately adjacent to this clearing were the unique mangrove, tunicate and coral habitats which reportedly have the highest marine biodiversity in the region. It is obvious that this clearing of mangroves combined with the development and ongoing maintenance dredging for operation of a resort at this location was likely to have a negative impact on the Outstanding Universal Value of the property.

During the course of this mission there was positive discussion about new legislative mechanisms being enacted to regulate mangrove clearing. The draft Forests (Protection of Mangroves) Regulations were provided and it appears that, when they become enacted in legislation and implemented, these Regulations will provide adequate protection to mangroves throughout the property. Within the draft Regulations most component sites are rated as either "Top" or "High" Priority Mangrove Areas.

3.4. Fisheries Practices

In 1996, at the time of inscription of the property the IUCN evaluation reported that, “Commercial fish stocks are declining as stocks of many species have been over-exploited. Catches of conch and lobster have significantly dropped over the past decade.”

The World Heritage Committee at its 33rd session (Seville, 2009) urged the State Party to “develop and implement a medium-term plan to increase the no take zones within marine reserves, establishing ecologically effective protection and replenishment areas for heavily exploited fin fish, conch and lobster” (Decision 33COM 7B.33).

The report of the WHC/IUCN Reactive Monitoring Mission undertaken to this property in March 2009 noted that:

“Illegal fishing both of fin fish as well as conch and lobster both by nationals and also illegal fishermen from Guatemala and Honduras was mentioned in most places.”

During the course of the present mission however there was little mention of illegal fishing activity. There was however substantial support for the new management measures that the State Party had recently introduced. In particular the Managed Access program, the seasonal closures for conch, the protection for spawning aggregation sites and the development of the following legislative instruments were discussed and supported by many of the people the mission met with:

- Fisheries (Nassau Grouper and Species Protection) Regulations 2009 – which protects the Nassau Grouper which is a threatened species and prohibits the taking of any grazing fish species
- Fisheries (Amendment) Regulations 2011 - which prohibits trawling in all waters of Belize; internal waters, the territorial sea and the exclusive economic zone
- Fisheries (Turneffe Atoll Marine Reserve) Order 2012 – which declares Turneffe Atoll as a marine reserve thereby extending the system of marine protected areas.

Information contained in the Report Card for the Mesoamerican Reef 2012 developed by the Healthy Reef Initiative reports that, “In Belize, herbivorous fish biomass decreased from 2006 to 2009 but then increased in 2011 after the implementation of the parrotfish protection regulation that helped lower the take of these key herbivores”.

During the course of this mission there was discussion about the draft Living Aquatic Resources Bill, which will replace the current Fisheries Act. The draft legislation was provided to the mission and it appears that, when it becomes enacted in legislation and implemented it will provide adequate management and protection measures to manage fisheries throughout the property.

3.5. Co-management

The State Party approach to protected area management, including components of the property, is one wherein the State Party formally agrees to share management of public protected areas with non-government and community-based organisations.

The WHC/IUCN Reactive monitoring mission in 2009 noted the following:

- Co-management in Belize is widespread throughout the country
- Several NGOs are involved in co-management within the World Heritage property, some of which have been in place for several decades
- There are concerns over the degree of freedom allowed to NGOs in their efforts to use the World Heritage property to raise funds.

This led to the recommendation that a co-management framework/law should be put in place for the property.

One of the corrective measures adopted by the World Heritage Committee at its 35th session (UNESCO, 2011) was for the State Party to develop a co-management legal framework under which the respective responsibilities of the State Party and conservation NGOs can be effectively established, monitored and evaluated in relation to the conservation of the property.

The State Party undertook a process to revise the structure and content of the co-management agreements and this was completed with all parties generally in agreement with the draft proposal. By all accounts this was a very thorough consultative process. The proposal was forwarded to government for review and approval and the final document was approved in early 2013. There is however significant dissent amongst a number of the NGO managers as some believe that the amendments made to the document by the government, without consultation, have made the management arrangements unworkable.

The State Party has indicated that there is no opportunity for the NGOs to change what has already been agreed to by government and therefore it is likely to be an ongoing dispute between some of the parties.

Whilst the specifics of what was changed were not provided to the mission it was clear that there needs to be a process to resolve the differences between the respective parties to ensure that appropriate management of the property is maintained.

The mission determined that the spirit of the corrective measure had been achieved and therefore could be considered to be completed however it will be an imperative of the State Party to resolve these issues in order to maintain the OUV of the property.

3.6. Coordination of Environmental Assessments and Approvals

According to the Environmental Impact Assessment Regulations (Amendment, 2007) “any proposed development project, undertaking or activity within any protected area” is subject to environmental impact assessment. The decisions on the approval of proposed projects are made by the National Environmental Appraisal Committee (NEAC) which comprises the following members: the Chief Environmental Officer or his nominee; the Commissioner of Lands and Surveys or his nominee; the Director of Health Services or his nominee; the Chief Forest Officer or his nominee; the Fisheries Administrator or his nominee; the Chief Meteorologist or his nominee; the Director of Geology and Petroleum or his nominee; the Chief Engineer or his nominee; a suitably qualified person trained in

Coastal Zone or Marine Resources Management or related field, on the recommendation of the Department; a suitably qualified person trained in Human Development or Social Services, on the recommendation of the Department; a suitably qualified person representing a Tertiary Level Institution in Belize, on the recommendation of the Department; and two registered non-governmental or private sector representatives appointed by the Minister on the recommendation of the Department, who shall serve for a period not exceeding two years.

The Mission team considers that the existing regulatory mechanisms provide effective framework to properly evaluate any future development projects within the property and disapprove any development that would negatively impact the Outstanding Universal Value of the property. However, several projects within the property (such as Yum Balisi Sustainable Luxury Resort) had been approved by the National Environmental Appraisal Committee, and if undertaken might have a negative impact on the values of the property. It is understandable that a balance between sustainable development and nature conservation is sought; however, it is recommended that the State Party considers strengthening its position on strict regulations for development projects within the BBRRS World Heritage Site and considers declaring it a special zone for the purposes of Environmental Impact Assessment.

It would appear that the property has been given greater protection through the significant changes legislated in the 2009 Environment Protection Amendment Act 2009, which introduced:

“Section 29 (3) Every person who causes or permits any damage to the Belize Barrier Reef System or any significant coral formation commits an offence and shall be liable on summary conviction to a fine of not less than five thousand dollars and not exceeding twenty five thousand dollars per square metre of damage.”

This amendment also defined the Belize Barrier Reef System as

“all that area between(geographic coordinates).... comprising of corals, coral reefs, atolls, islands, seagrass beds, mangroves and other associated critical habitats and their inhabitants”.

In effect this should provide adequate protection against damage to the property, including any land/water within the boundaries, enclosed by the boundaries and in most cases in areas immediately adjacent to the specific components of the property.

However, it was highlighted to the mission the high cost of assessment, review, monitoring and enforcement of permissions and conditions related to any development proposals and that resources are limited for this purpose. Consideration should therefore be given to the introduction of permit application fees for proponents of developments or works which are within the boundaries of the property or in waters/lands adjacent to or enclosed by the property. The level of fee should be commensurate with the real cost to government for a comprehensive assessment of all the impacts of the proposal and the ongoing monitoring of the construction and operation of the development. This may possibly be achieved by amending Part XI of the Environment Protection Act, specifically s62 that relates to the objects of the Environmental Management Fund.

3.7. Invasive Species

The Indo-Pacific Lionfish (*Pterois volitans*) is a venomous predatory fish native to the Indian and Pacific oceans and first observed in South Florida in the 1980s. Since that time there has been a rapid expansion of the lionfish throughout the south-eastern Atlantic seaboard, the Caribbean and parts of the Gulf of Mexico. Lionfish are voracious predators of fish and invertebrates capable of removing tremendous amounts of prey and causing ecological impacts to coral reefs and other habitats, which are already stressed by coral bleaching, fishing pressure, pollution and other impacts.

The invasion of Indo-Pacific Lionfish would appear to be the most exigent threat posed by an invasive species to the OUV of the property. As this is such a widespread issue, across a number of jurisdictions the State Party's only real option to managing this issue is to be a part of a collective effort tackling this issue.

The State Party appears to have been active in addressing this issue through a number of initiatives. They have partnered with a number of public and private sector organisations to tackle this issue on a range of fronts. There was a bounty put on the species in the early days of management, which was offered by the private sector. Initially this didn't appear to have much take-up but as the species became more prominent it became clear that the bounty would be an expensive option for management. Since then the state party has been actively involved in regional cooperative efforts as well as promoting consumption of the species as a fine table fish, culling of the species, as well as research, monitoring and public awareness of the threat. Amendments to the fisheries regulations were also required. In 2009 the National Lionfish Management Plan was adopted.

The Lionfish Project aimed to prepare and implement an Effective National Lionfish Response Plan utilizing the Assistance of Government Organizations, Civil Society, Private Sector, Artisanal Fishermen and Tour Guides. A major achievement was the removal of over 15,000 lionfishes from the BBRRS World Heritage Site to date. Twelve workshops have been conducted in coastal communities throughout Belize and a Lionfish Management Plan has been finalized with partners, under the project. Of special note is the innovative Lionfish hunter cards issued to some 62 tour guides and fishermen on the island by the Government of Belize as part of the Lionfish Project. Although the lionfish contain venom, they are not poisonous when eaten, so the fish are processed and sold at restaurants as a tasty meal. Markets are currently being developed for export, and prices for lionfish are comparable to grouper.

In 1996 when the Belize Barrier Reef Reserve System was founded, lionfish were not a threat to this unique marine ecosystem. However, 15 years later they now rank among the top of the list of threats to our reef. Project activities have garnered renewed enthusiasm and interest in protecting the Belize Barrier Reef Reserve System World Heritage Site and associated marine areas. In presentations to the 12 coastal communities the history of the Belize Barrier Reef Reserve System World Heritage Site was presented and details on which protected areas made up the park were included. Information on the Belize Barrier Reef World Heritage Site has also included in the educational materials prepared and distributed (ECOMAR Belize website).

The issue of Lionfish management is also addressed within the management plans of some the component sites of the property, e.g. Laughing Bird National management Plan 2011-2016.

The management plans for Glover's Reef Marine Reserve (2008-2013) and Half Moon Caye address the threat of rats and introduced coconut trees. However, it is noted that on Half Moon Caye the coconuts had been planted since 1720 and therefore predated the property's inscription.

3.8. Climate Change

It is clear that due to the low-lying nature of most of the cayes, and the Belize coastline more generally, the rising sea levels and the potential increase in significant hurricane events associated with the expected change in climate will severely impact the future of Belize. It is likely that all seven component sites that comprise the property are facing a significant threat in the medium term. The expected impacts are most likely beyond the capability of the State Party to remedy as this clearly requires broader discussion and action for the maintenance of World Heritage properties across the planet.

The actions undertaken by the State Party to date to deal with this issue have been paper solutions. The issue is mentioned and in some cases discussed in planning documents but there is no evident practical solution able to be implemented at this stage.

3.9. Implementation of corrective measures

Based on its assessment of the current situation the mission team recommends that the list of corrective measures is updated as follows:

| Table 1. Corrective measures | | |
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| Corrective measure identified in the Decision 35.COM/7A.15 | Progress made, evidence | Recommendation |
| b) Implement the necessary legal measures to guarantee the permanent cessation of the sale and lease of lands throughout the property, and the cessation of mangrove cutting, coral dredging and other associated real estate development activities | No clear evidence has been provided on whether the permanent cessation of the sale and lease of lands within the property's boundaries had been legally guaranteed. | Since real estate development activities are addressed by corrective measure (b), it is recommended that corrective measure (a) is amended as following: "Implement the necessary legal measures to guarantee the permanent cessation of the sale and lease of lands throughout the property" |
| c) Ensure that development rights on existing private or leased lands within the property are clearly defined and strictly controlled with a view to conserving the Outstanding Universal Value and integrity of the | According to the Environmental Impact Assessment Regulations (Amendment, 2007) "any proposed development project, undertaking or activity within any protected area" is subject to environmental impact assessment. The decisions on | The Mission team considers that the existing regulatory mechanisms provide effective framework to properly evaluate any future development projects within the property and disapprove any development that would negatively impact the Outstanding Universal |

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| property | <p>the approval of proposed projects are made by the National Environmental Appraisal Committee (NEAC) which comprises the following members: the Chief Environmental Officer or his nominee; the Commissioner of Lands and Surveys or his nominee; the Director of Health Services or his nominee; the Chief Forest Officer or his nominee; the Fisheries Administrator or his nominee; the Chief Meteorologist or his nominee; the Director of Geology and Petroleum or his nominee; the Chief Engineer or his nominee; a suitably qualified person trained in Coastal Zone or Marine Resources Management or related field, on the recommendation of the Department; a suitably qualified person trained in Human Development or Social Services, on the recommendation of the Department; a suitably qualified person representing a Tertiary Level Institution in Belize, on the recommendation of the Department; and two registered non-governmental or private sector representatives appointed by the Minister on the recommendation of the Department, who shall serve for a period not exceeding two years.</p> | <p>Value of the property. However, several projects within the property (such as Yum Balisi Sustainable Luxury Resort) had been approved by the National Environmental Appraisal Committee, and if undertaken might have a negative impact on the values of the property. It is understandable that a balance between sustainable development and nature conservation is sought; however, it is recommended that the State Party considers strengthening its position on strict regulations for development projects within the BBRRS World Heritage Site and considers declaring it a special zone for the purposes of Environmental Impact Assessment.</p> |
| d) Develop and implement a restoration policy for lands having been disturbed by unauthorized activities | <p>No information could have been obtained during the mission on whether there is a restoration policy in place. Since most of the unauthorized activities took</p> | <p>It is recommended that this corrective measure is amended as follows:</p> <p>“Conduct a study to analyze the</p> |

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| | place some years ago, it can be recommended to first undertake a study to analyze the current state of the disturbed lands with a view to identifying the best measures to address this issue. | current state of the lands previously disturbed by development activities with a view to identifying the best measures to address this issue”. |
| e) Establish a clear institutional coordination mechanism ensuring that the conservation of the property receives priority consideration within relevant governmental decision-making processes | <p>The State Party has made a significant progress in establishing coordination mechanisms for the management of the property. The Department of Fisheries responsible for the marine parts of the World Heritage Site and the Department of Forest responsible for its terrestrial portions are now under one Ministry – the Ministry of Fisheries, Forestry and Sustainable Development.</p> <p>The Coastal Zone Management Authority is in the process of finalizing the Coastal Zone Management Plan (CZMP) of which a draft has been provided to the mission experts.</p> | The mission experts recommend that the corrective measure is amended as: “Finalize the legislative instruments and policy documents relevant to the management of the property, including the Coastal Zone Management Plan (CZMP), Land Use Policy Implementation Plan, Rationalization of Protected Areas, Aquatic Living Resources Bill, Forests (Protection of Mangroves) Regulations and Petroleum Exploration Framework and ensure that the management of the World Heritage property is specifically addressed in those documents as well as in their implementation plans.” |
| f) Develop a co-management legal framework under which the respective responsibilities of the State Party and conservation NGOs can be effectively established, monitored and evaluated in relation to the conservation of the property | <p>A new co-management agreement has been recently drafted in order to provide legal framework for the co-management of protected areas. It outlines the respective responsibilities of the Regulatory Agency and the Manager and lists their specific duties, as well as reporting requirements and monitoring and evaluation procedures.</p> <p>The progress made by the State Party to address this issue should be recognized as a</p> | The mission experts suggest that this corrective measure is considered achieved. However, it is recommended that the State Party reconciles with the NGOs affected by the new Co-management agreement. |

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| | <p>positive step. However, during the mission the Mission Team learnt that several NGOs were not satisfied with the proposed draft Co-management agreement. It is therefore recommended that the State Party reconciles with the NGOs and finds a solution that would provide effective co-management framework.</p> | |
| <p>g) Systematically consider and address the threat of introduced species within the management plans of the property</p> | <p>The threat from Lionfish which is the main threat to the property is addressed in the National Lionfish Management Plan adopted in 2009.</p> <p>The issue of Lionfish is also addressed within the management plans of some the component sites of the property, e.g. Laughing Bird National management Plan 2011-2016.</p> <p>The management plans for Glover's Reef Marine Reserve (2008-2013) and Half Moon Caye address the threat of rats and introduced coconut trees. However, it is noted that on Half Moon Caye the coconuts had been planted since 1720 and therefore predated the property's inscription.</p> | <p>It is recommended that this corrective measure is considered achieved.</p> |
| <p>h) Make publicly available the information on land ownership for all lands within the property, including mangrove islands, in easily accessible format, to ensure transparency in land use and allocations</p> | <p>The public can obtain certain information regarding land tenure from the Land Information Centre and the Mapping and Survey Section under the Lands Department. The Government of Belize also provided information regarding land tenure within the property</p> | <p>It is recommended that this corrective measure is considered achieved.</p> |

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| | <p>in its previous State Party Report (2011).</p> <p>Information on land tenure within the Glover's Reef marine Reserve and the Bacalar Chico National Park and Marine Reserve is also available in their management plans.</p> | |
| <p>i) Develop and implement a medium-term plan to increase the no take zones within marine reserves, establishing ecologically effective protection and replenishment areas for otherwise heavily exploited fin fish, conch and lobster</p> | <p>In November 2012 the Ministry of Forestry, Fisheries and Sustainable Development established the Turneffe Atoll Marine Reserve. According to the State Party report this increased the acreage of marine reserves by 79%.</p> <p>There are also plans to expand the Hol Chan Marine Reserve by 370 km² of which 31.3% is designated as non-extractive zones.</p> | <p>It is recommended that this measure is considered achieved.</p> <p>However, it is advisable that the State Party monitors the effect that these measures have had on commercial fin fish, conch and lobster and submits a report on the effectiveness of these measures whenever conclusions can be made.</p> |

Updated list of corrective measures:

- a) Implement the necessary legal measures to guarantee the permanent cessation of the sale and lease of lands throughout the property;
- b) Conduct a study to analyze the current state of the lands previously disturbed by development activities with a view to identifying the best measures to address this issue;
- c) Finalize the legislative instruments and policy documents relevant to the management of the property, including the Coastal Zone Management Plan (CZMP), Land Use Policy Implementation Plan, National Protected Areas System Bill, Aquatic Living Resources Bill, Forest (Protection of Mangroves) Regulations and Petroleum Exploration Framework and ensure that the management of the World Heritage property is specifically addressed in those documents as well as in their implementation plans.
- d) Make a clear and unequivocal legislative commitment to eliminate all oil concessions granted within the outer boundaries of the property and adjacent waters and ensure that necessary legal and institutional instruments are in place to effectively control oil exploration and exploitation in areas outside the property which might have negative impact on the Outstanding Universal Value of the property.

4. ASSESSMENT OF THE STATE OF CONSERVATION OF THE PROPERTY

This section of the report provides an assessment of the state of conservation of the Belize Barrier Reef Reserve System (BBRRS) and is based on publicly available information such as scientific articles and official documents from the State Party and information gathered throughout the mission (see Annex III for an overview of people met) and visits made to the various parts of the property (see Annex II for the itinerary of the mission), government agencies, NGOs and individuals in Belize.

The State of Conservation reports, which have been prepared by the State Party and reviewed by IUCN, together with the previous 2009 mission evaluation, and the past Committee decisions both at and since inscription have also been informative in this assessment.

The property was inscribed on the World Heritage List in 1996 as it was considered to meet the following criteria:

(vii) Contains examples of on-going ecological and biological processes – the Belize Barrier Reef Reserve System is the longest barrier reef in the Northern and Western Hemispheres and is unique in the world for its array of reef types contained in a relatively small area

(ix) Contains superlative natural phenomena and areas of exceptional natural beauty and aesthetic importance, and

(x) Contains the most important and significant natural habitats for threatened species. – The property provides important habitat for a number of threatened marine species, including the West Indian manatee (*Trichechus manatus*), green turtle (*Chelonia mydas*), hawksbill turtle (*Eretmochelys imbricata*), loggerhead turtle (*Caretta caretta*), and the American crocodile (*Crocodylus acutus*) as well as endemic and migratory birds which reproduce in the littoral forests of cayes, atolls and coastal areas. Approximately 247 taxa of marine flora have been described within the complex and over 500 fish, 65 scleractinian coral, 45 hydroid and 350 mollusc species have also been identified, in addition to a great diversity of sponges, marine worms and crustaceans.

In 2009 it was inscribed on the List of World Heritage in Danger due to recognised threats to the property from “sale and lease of public lands for the purposes of development within the property leading to the destruction of mangrove and marine ecosystems” (**Decision 33COM 7B.33**). At that time a list of corrective measures was identified and provided to the State Party for their action (refer Column A in Table 1).

4.1. Status and trend in relation to criterion (vii)

The mission considers the values for which the property was inscribed on the World Heritage List under this criterion are still clearly demonstrated in the property. The BBRRS remains a display of superlative natural phenomena and areas of exceptional natural beauty and aesthetic importance. The BBRRS remains the longest barrier reef in the Northern and Western Hemispheres and is still considered unique in the world for its array of reef types contained in a relatively small area. There are however a number of threats which may alter this, the most significant being climate change. Globally and regionally there has been a decline in coral cover and overall reef health, however in

this regional setting over the past six years the Healthy Reefs initiative has shown that reefs in Belize have had a relatively equal number of sites increasing and decreasing in health. The localised threats within the property appear to have adequate management in place but it is the external influences, (e.g. water quality, land management, urbanisation) that pose the significant threats in relation to this criterion.

4.2. Status and trend in relation to criterion (ix)

The mission considers the values for which the property was inscribed on the World heritage List under this criterion are still clearly demonstrated in the property. The property still provides an array of examples of the evolutionary history of reef development with fringing, barrier and atoll reef sites. As indicated in the paragraph above however there are trends which indicate that an increased level of development both within and adjacent to the property on the coastal fringe has taken place and if not properly managed could lead to the decline of these reef sites. Of particular concern in the immediate term the coastal fringing reefs could be considered the most vulnerable. With regard to the evolutionary history of reef development it is worth noting that there was one reef site where a significant section of reef had broken away during a recent earthquake event. This site provides a fairly unique and interesting opportunity to study reef structure over time as well as re-colonization and recovery from a significant natural phenomenon.

4.3. Status and trend in relation to criterion (x)

The mission was unable to verify the status and trend of this criterion as data on species and habitat mapping was limited. There do not appear to be any identified total losses of habitats or species since inscription and recent management measures have attempted to address significant threats in this regard. There remains however significant concern for some unique habitats, notably in the highly diverse Pelican Cayes area where existing proposals remain legally viable, even though financial circumstances are currently limiting their potential.

With regard to specific species there appear to be adequate management mechanisms available to manage for their protection and no significant threats were identified throughout the mission.

Whilst it is recognised that data is collected for some sites, some species and some habitats consideration must be given to developing and implementing an appropriate monitoring system for these species and habitats with public interface to ensure that the community can view the status and trends of these threatened species. If this already exists then the mission were not made aware of it.

4.4. Summary: Status and Trends of Values

The mission considers that overall the property continues to retain the values for which it was inscribed in 1996. Since the time of inscription however it is clear that some ongoing actions continue to threaten the property and that there is a clear decline in some values where corrective measures have not been effectively implemented. The declines noted above have to date been related to specific and localised actions. In the not too distant future these localised threats are likely to become exacerbated by the expected major impacts of climate change.

5. CONCLUSIONS AND RECOMMENDATIONS

The Belize Barrier Reef Reserve System clearly retains the values for which it was inscribed as a World Heritage property in 1996. It does need to be stated however, that this property has a multitude of processes and actions that are threatening its Outstanding Universal Value. A number of these threats are long-term threats however there are a number in the immediate to medium term and they must be considered with this in mind.

These threats should also be considered in a spatially appropriate context related to the potential of the State Party and other management partners to identify, assess, manage and minimise or remove these threats.

a. Local

As identified in Section 3 there are a number of local threats to the BBRRS (coral dredging, mangrove cutting, fishing activity, etc.) and they have been the major focus of activity for management agencies, NGOs and community groups since inscription. This is appropriate as it is at this level where the State Party and these various groups have the greatest ability to make a difference, both spatially and temporally.

The mission considers that the State Party has made generally good progress across the issues since the last WHC/IUCN reactive monitoring mission in 2009. There is ample evidence that the State Party has undertaken a broad review of its various legislative and policy instruments to ensure that management can effectively preserve the OUV of this property. The realisation of this outcome can only be achieved however if the various instruments and policies are actively implemented, monitored and, where necessary, enforced.

b. Regional

In the broader regional context of the meso-american reefs and the wider Caribbean there are three primary threats whose origins are external to the BBRRS.

- iv. The invasion by the feral Indo-Pacific lionfish (*Pterois volitans*) and its impacts on the native fish populations
- v. Declining water quality primarily from nutrient overloading and sediment, primarily from Honduran rivers
- vi. Potential spills from oil rigs, tankers or other large vessels.

Due to its size and locality Belize is vulnerable to ongoing impact from these threats. It is noted that the State Party has undertaken measures to manage these circumstances within their territorial sea and where appropriate their exclusive economic zone, however they must continue their discussion with their neighbours and continue to be engaged in regional cooperative actions wherever they can. It is recognised that this may require significant resources which are not always at a premium.

c. Global

The most significant threat to the OUV of this property is climate change. Whilst climate change is recognised world-wide as the single biggest threat to coral reef systems, its impact on the BBRRS and the surrounding coastal and marine assets of Belize are expected to be substantial. It is difficult for the State Party to have a major role in resolving or managing this issue, however planning and adaptive management opportunities must be identified and realised wherever feasible.

Overall the mission recognises the actions that have been undertaken by the State Party, NGOs and the people of Belize in response to the WHC recommendations and previous reactive monitoring mission report. The mission was made aware of significant advances in management and conservation of the property and these are to be commended. There are however a number of corrective measures that have not yet been fully addressed (refer Point 1 below) and some key policy commitments that need to be implemented, monitored and reported on, before the property could be considered to be out of danger.

Currently the State of Conservation of the Belize Barrier Reef Reserve System site would have to be considered at significant risk of further decline. This conclusion has been reached taking into account the substantial clearing of mangroves and dredging in the past decades, continuing coastal development, extensive runoff from agricultural and urban areas, potential offshore oil exploitation, the impact of invasive species and all this will be exacerbated by the globally recognised impacts of climate change on these shallow inshore marine ecosystems. The completion and rigorous implementation of the identified corrective measures could however ensure an improvement in ecosystem health in the short term and afford this system the opportunity to develop greater integrity and resilience to cope with the evolution of climate change impacts.

It is therefore the conclusion of this mission that the Belize Barrier Reef Reserve System should remain on the List of World Heritage in Danger until such time as the corrective measures have been achieved and the following recommendations are fully addressed.

Recommendations

It is recommended that the State Party:

1. Take immediate action to resolve the outstanding corrective measures as originally identified in Decision 35.COM/7A.15 and updated in this mission report, namely:
 - a. Implement the necessary legal measures to guarantee the permanent cessation of the sale and lease of lands throughout the property
 - b. Conduct a study to analyze the current state of lands previously disturbed by unauthorized activities with a view to identifying the best measures to address this issue
 - c. Finalize the legislative instruments and policy documents relevant to the management of the property, including the Coastal Zone Management Plan (CZMP), Land Use Policy Implementation Plan, National Protected Areas System Bill, Aquatic Living Resources Bill, Forest (Protection of Mangroves) Regulations and Petroleum Exploration Framework and ensure that the management of the World Heritage property is specifically addressed in those documents as well as in their implementation plans.
 - d. Make a clear and unequivocal legislative commitment to eliminate all oil concessions granted within the outer boundaries of the property and adjacent waters and ensure that necessary legal and institutional instruments are in place to effectively control oil exploration and exploitation in areas outside the property which might have negative impact on the Outstanding Universal Value of the property.
2. Incorporate specific reference to the World Heritage property in the Land Use Policy with clearly indicated requirements to be met prior to any approval for any development within

the property and develop an implementation plan for the Land Use Policy with clear guidance on all matters related to the property.

3. Complete the Coastal Zone Management Plan as a matter of priority and specify what actions (e.g. works, developments) can and cannot be undertaken both within the boundaries of the property and in the adjacent or enclosed lands and water.
4. Develop spatial policies that will identify appropriate and limited locations and standards for coastal development, and identify areas that should not be subject to any further development.
5. Ensure that the Land Use Policy and the Coastal Zone Management Plan are compatible, consistent and interconnected in such a way as to provide a clear “line of sight” between these planning instruments and mainstream them across the State Party’s policy.
6. Explicitly incorporate all elements that make up the Outstanding Universal Value of the property into all assessment, management, planning and decision making processes ensuring that:
 - a) they are taken into account and suffer no detriment
 - b) the cumulative impacts of developments in the context of all other existing and proposed developments and their impact on the OUV of the property are specifically considered
 - c) where development and/or use is permitted it will lead to net benefits to the property as a whole

Of particular importance are any determinations made under the Environmental Protection Act, Petroleum Act, National Parks System Act, Forestry Act and Fisheries Act and their subsequent successors.

7. Further improve coordination of the overall management planning and conservation of the property
8. Continue to provide ongoing support for community capacity building
9. Coordinate mapping of coastal and marine resources across government.
10. Maintain its involvement in the regional cooperative approach to Lionfish management.
11. Develop and adopt at the highest level clearly defined and scientifically justified targets for improving the State of conservation of the elements of OUV to enhance the resilience of the property in the face of climate change.
12. In consultation with the World Heritage Centre and IUCN, commence drafting a proposal for the Desired State of Conservation for the removal of the property from the List of World Heritage in Danger as soon as the World Heritage Committee at its 37th Session has resolved an updated list of corrective measures and adopted the retrospective Statement of Outstanding Universal Value and submit the proposal for examination by the World Heritage Committee at its 38th Session in 2014.

The mission recognises that the State Party, NGOs and the people of Belize have made significant advances in management and conservation of the property, however based on the available evidence it is the conclusion of this mission that the Belize Barrier Reef Reserve System should remain on the List of World Heritage in Danger until such time as the corrective measures have been achieved and the recommendations of this report addressed.

ANNEXES

Annex I – Terms of Reference

TERMS OF REFERENCE

IUCN Reactive Monitoring Mission Belize Barrier Reef Reserve System - Belize

4 – 9 February 2012

At its 36th session, the World Heritage Committee requested the State Party of Belize to invite a reactive monitoring mission to Belize Barrier Reef Reserve System World Heritage Site, to be conducted by IUCN (Decision **36 COM 7A.15**). The objective of the monitoring mission is to make a comprehensive assessment of the overall state of conservation of the property, and to assist the State Party with the development of a proposal for the Desired state of conservation for the removal of the property from the list of World Heritage in Danger. The mission will be led by Grahame Byron representing IUCN, and Elena Osipova from the IUCN secretariat.

In particular, the mission should address the following key issues:

1. Assess the state of conservation of the property as a whole, including a rigorous assessment of the extent to which the Outstanding Universal Value is currently affected by the existing threats of which the source is located both inside the sites' boundaries as well as its surrounding environment, and including invasive species, climate change and the combined and cumulative effects of all threats affecting the property;
2. Assess the current situation with the offshore oil exploration and the status of the oil concessions within the property. This should also include assessment of the progress made by the State Party towards development of a petroleum exploration planning framework and of the possible implications of its implementation on the property;
3. Assess the current state of the review process of the Environmental Impact Assessments for the Yum Balisi Resort and Chrysalis Resort;
4. Review the progress made towards implementation of the corrective measures, including development of a restoration policy for lands degraded by unauthorized activities, establishment of a clear institutional coordination mechanism for the conservation of the property, and the progress in the implementation of the Land Use Policy with a view to clearly defining and controlling the development rights on existing privately owned lands within the property. This should also include an assessment of how the existing regulatory framework and the implementation of corrective measures ensures the permanent cessation of land sales, mangrove cutting and other development activities. The progress made in the implementation of the medium-term plan to increase the no take zones within marine reserves should also be assessed;

5. In line with paragraph 173 of the *Operational Guidelines*, assess any other relevant conservation issues that may negatively impact on the Outstanding Universal Value of the property, including the conditions of integrity and protection and management;
6. Based on the results of the above assessments update the corrective measures and establish a timeframe for their implementation, and assist the State Party with the development of a proposal for the Desired state of conservation for the removal of the property from the List of World Heritage in Danger.

The mission should be assisted to conduct the necessary field visits to key locations, including the proposed locations of the Yum Balisi Resort on Fisherman's Caye, and of the Chrysalis Resort on Big and Little Channel Cayes, all in the Pelican Range of the Southwater Marine Reserve. In order to enable preparation for the mission, it would be appreciated if the following items could be provided to the World Heritage Centre (copied to IUCN) as soon as possible, and preferably no later than end October:

- a) The most recent version of the management plan of the property;
- b) Any available data on the impact of the invasive species on the Outstanding Universal Value of the property, as well as a progress report on the measures that have been taken to address the threat;
- c) Documentation associated with the recently developed petroleum exploration planning framework;
- d) Detailed documentation clarifying the progress made by the State Party towards implementation of the corrective measures, including relevant laws, policies, agreements and management plans;
- e) Reviewed Environmental Impact Assessment of the Yum Balisi and Chrysalis Resorts or their current draft versions;

The mission should hold consultations with the Belizian authorities at national and provincial levels, in particular senior representatives of the Ministry of Forestry, Fisheries and Sustainable Development, the Ministry of Energy, Science & Technology and Public Utilities (including the Geology and Petroleum Department), the Ministry of Natural Resources and Agriculture (including the department in charge of the development of private lands), the Ministry of Tourism and Culture, and the Natural Science Technical Committee (NSTC). In addition, the mission should hold consultation with a range of relevant stakeholders, including i) researchers; ii) NGOs; iii) representatives of the National Environmental and Appraisal Committee (NEAC); iv) tourism sector representatives; v) representatives of petroleum companies; and vi) the developers of the Yum Balisi and Chrysalis Resorts.

Based on the results of the above-mentioned assessments and discussions with the State Party representatives and stakeholders, the mission will develop recommendations to the Government of Belize and the World Heritage Committee to conserve the Outstanding Universal Value of the property and improve its conservation and management. It should be noted that recommendations are made within the mission report (see below), and not while

the mission is still on-going. The mission will also develop recommendations for the development of the Desired state of conservation for the removal of the property from the World Heritage List in Danger.

The mission will prepare a concise mission report on the findings and recommendations of this reactive monitoring mission no later than 6 weeks after the end of the field visit, following the standard format.

Annex II – Mission itinerary and programme

Itinerary for IUCN Reactive Monitoring Mission

February 3 – 8, 2013

Sunday February 3rd, 2013

Arrival of the mission team to Belize City

Monday February 4th, 2013

- | | |
|-------------|---|
| 8:00-8:45 | Meeting with Isaias Majil and James Azueta (Fisheries Department), introduction |
| 9:00-9:30 | Meeting with CEO Tracy Panton (Ministry of Tourism and Culture) |
| 9:30-10:30 | Travel to Belmopan for visit with Ministers and CEOs |
| 10:30-11:30 | Meeting with Hon. Patrick Faber and CEO David Leacock (Ministry of Education, Youth and Sports) |
| 11:30-12:00 | Meeting with Wilber Sabido (Chief Forest Officer) and Martin Alegria (Chief Environmental Officer) |
| 13:00-14:00 | Meeting with CEO Beverly Castillo (Ministry of Natural Resources and Agriculture) |
| 14:30-15:00 | Meeting with Andre Cho, Director and Inspector of Petroleum (Geology and Petroleum Department) |
| 15:00-15:30 | Meeting with Hon. Lisel Alamilla and CEO Dr. Wendel Parham (Ministry of Fisheries, Forestry and Sustainable Development), Beverly Wade (Fisheries Administrator and World Heritage Focal Point), Wilber Sabido and Martin Alegria |

Tuesday February 5th, 2013

- | | |
|-------------|--|
| 7:00-9:00 | Boat Voyage from Belize City to Glover's Reef Marine Reserve |
| 9:30-11:45 | Visit to the reserve; meeting with the staff members of the reserve |
| 12:00-13:00 | Lunch |
| 13:00-15:30 | Continue visit to the reserve |
| 15:30-16:30 | Boat Voyage to South Water Caye Marine Reserve |
| 17:30-18:30 | Meeting with South Water Caye Marine Reserve Advisory Committee and other stakeholders |

Wednesday February 6th, 2013

- | | |
|-------------|---|
| 6:30-7:30 | Breakfast and Hotel Check-Out |
| 7:30-8:15 | Boat Voyage to the Channel Cayes within the South Water Caye Marine Reserve |
| 8:15-9:15 | Assessment of the site of the proposed Chrysalis Resort |
| 9:15-9:45 | Boat Voyage to the Fisherman Caye within the South Water Caye Marine Reserve |
| 9:45-10:45 | Assessment of the site of the proposed Yum Balisi Resort |
| 10:45-11:15 | Boat Voyage to the Ranger Station of the South Water Caye Marine Reserve |
| 11:15-11:45 | Meeting with South Water Caye Marine Reserve Staff |
| 12:30-14:00 | Return Trip by boat to Belize City |
| 14:30-17:00 | Focus Group Meeting with government representatives and NGO stakeholders (see Annex III – List of people met for details) |

Thursday February 7th, 2013

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|-------------|-----------------------------|
| 07:30-08:30 | Meeting with Martin Alegria |
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|-------------|--|
| 09:00-10:00 | Meeting with Rev. Dr. Rudolph Anthony (Secretary General of the Belize National Commission for UNESCO) |
| 10:00-10:30 | Meeting with Herbert Haylock (President of the Belize Tourism Industry Association) |
| 10:30-11:00 | Meeting with Leonel Requena (UNDP-GEF COMPACT Programme) |
| 13:00-15:00 | Meeting with Hon. Lisel Alamilla |
| 15:00-16:00 | Meeting with Beverly Wade |

Friday February 8th, 2013

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|-------------|--|
| 08:00-09:00 | Meeting with Arlene Young (National Protected Areas Secretariat, Assistant Programme Director) |
| 09:45-11:00 | Meeting with Jose Perez and Edilberto Romero (APAMO) |
| 11:00-12:00 | Meeting with Melanie McField (Healthy Reefs for Healthy People Initiative) |
| 13:00-14:00 | Meeting with Audrey Matura-Shepherd (OCEANA Belize, Vice President) |

February 9th, 2013

| | |
|-------------|---|
| 09:00-09:30 | Phone call with Leandra Cho-Ricketts (University of Belize) |
| 09:30-13:00 | Meeting between the mission team members |

Annex III – List and contact details of people met

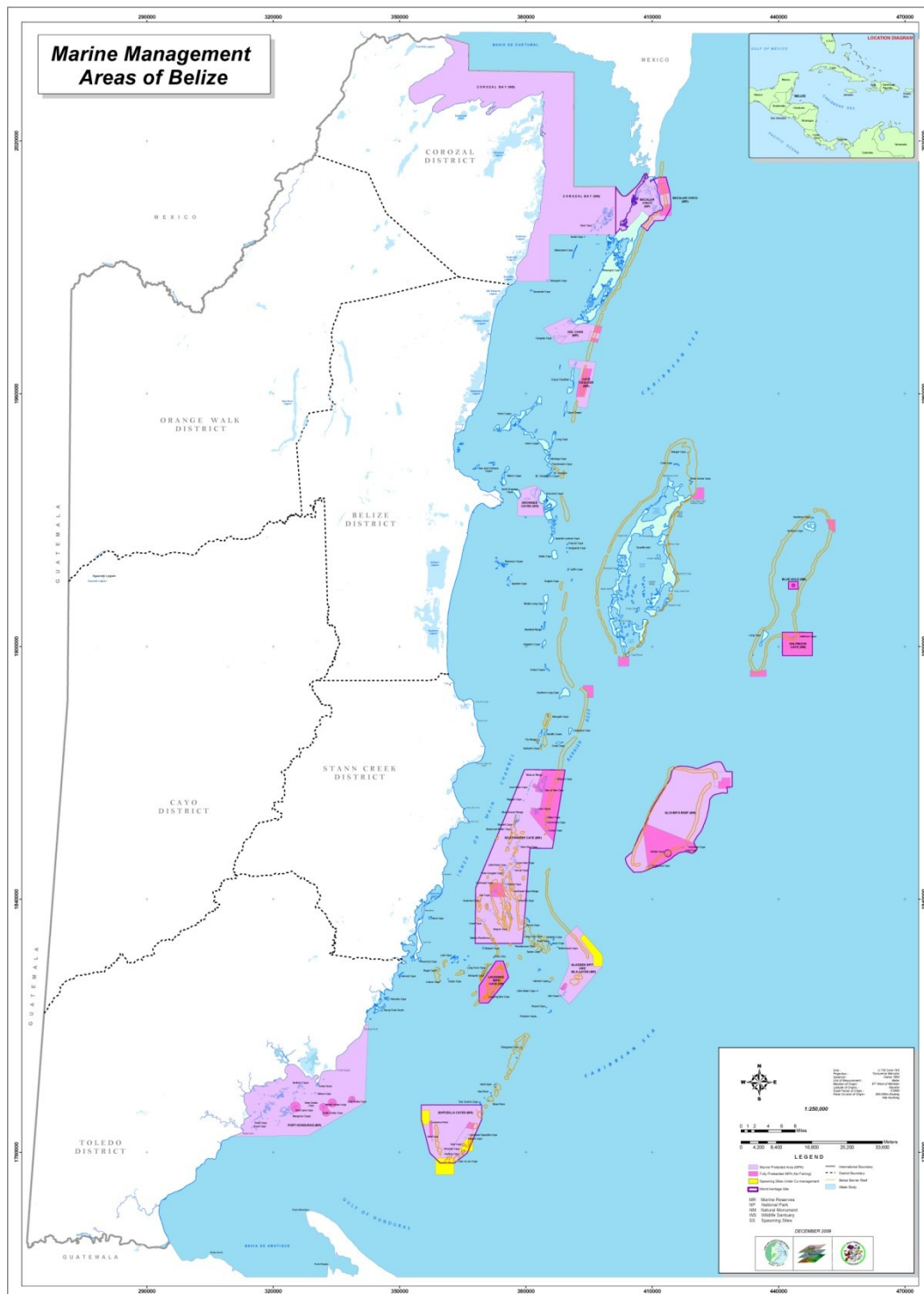
| Name | Organization, Position | Email |
|--|--|---------------------------------------|
| 04.02.2013, Belize City and Belmopan | | |
| Tracy Panton | Ministry of Tourism & Culture, CEO | ceotourism@travelbelize.org |
| Hon. Patrick Faber | Minister of Education, Youth and Sports | pfaber@moe.gov.bz |
| David Leacock | Ministry of Education, Youth and Sports, CEO | ceo@moe.gov.bz |
| Hon. Lisel Alamilla | Minister of Forestry, Fisheries & Sustainable Development | Minister@ffsd.gov.bz |
| Beverly Wade | Ministry of Forestry, Fisheries & Sustainable Development, Fisheries Administrator | Fisheries_department@fisheries.gov.bz |
| Wendel Parham | Ministry of Forestry, Fisheries & Sustainable Development, CEO | ceo@ffsd.gov.bz |
| Wilber Sabido | Ministry of Forestry, Fisheries & Sustainable Development, Chief Forest Officer | cfo@ffsd.gov.bz |
| Martin Alegria | Ministry of Forestry, Fisheries & Sustainable Development, Chief Environmental Officer | martin Alegria@hotmail.com |
| Beverly Castillo | Ministry of Natural Resources & Agriculture, CEO | ceo@mnrei.gov.bz |
| Andre Cho | Ministry of Energy, Science & Technology and Public Utilities, Director and Inspector of Petroleum | Director.gpd@estpu.gov.bz |
| Isaias Majil | Fisheries Department, MPA Coordinator | isaiasmajil@yahoo.com |
| James Azueta | Fisheries Department | jamesazueta_bz@yahoo.com |
| 05.02.2013, Glover's Reef Marine Reserve and South Water Caye Marine Reserve | | |
| Vivian Belisle-Ramnarace | Ministry of Forestry, Fisheries & Sustainable Development, Fisheries Officer | vivawoof@yahoo.com |
| Alicia Eck | Glover's Reef Marine Reserve, Reserve Manager | gloversreefreserve@yahoo.com |
| Gilford Martinez | Glover's Reef Marine Reserve, Ranger | |
| Luis Novelo | Glover's Reef Marine Reserve, Ranger | |
| Roberto Carballo | South Water Caye Marine Reserve Advisory Committee | recarballo@yahoo.com |

| | | |
|----------------------------|--|--|
| Nolan Jackson | South Water Caye Marine Reserve Advisory Committee, Land Owner at Tobacco Caye | |
| Julian Lewis | South Water Caye Marine Reserve Advisory Committee | |
| Charles Bradley | South Water Caye Marine Reserve Advisory Committee, Fisherman, Tobacco Caye | |
| Rosella Zabaneh | South Water Caye Marine Reserve Advisory Committee, BTIA Dangriga | |
| Richard Sjogreen | South Water Caye Marine Reserve Advisory Committee, Fisherman | |
| John Pandolfi | Smithsonian Institution, Researcher | pandolfi.john@nmnh.si.edu |
| Dr. Candy Feller | Smithsonian Institution, Senior Scientist | felleri@si.edu |
| Zachary Foltz | Smithsonian Institution, Station Manager | foltzZ@si.edu |
| 06.02.2013, Belize City | | |
| Imani Fairweather-Morrison | OAK Belize Foundation | imani@oakfnd.org |
| Janet Gibson | Wildlife Conservation Society, Country Programme Director | jgibson@wcs.org |
| Nicole Auil Gomez | Southern Environmental Association (SEA), Executive Director | execdirector@seabelize.org |
| Tanya Williams | Belize Coalition to Save Our Natural Heritage, Coalition Coordinator | coalitioncoordinator@belizecoalition.org |
| Amanda Acosta | Belize Audubon Society, Executive Director | executivedirector@belizeaudubon.org |
| Shane Young | Belize Audubon Society, Protected Areas Manager | marineparks@belizeaudubon.org |
| Chantalle Clarke | Coastal Zone Management Authority and Institute, Coastal Planner | Coastalplanner.czmai@gmail.com |
| Colin Gillet | Coastal Zone Management Authority and Institute, Director | Directorczmai@gmail.com |
| Victoria Cawich | Forest Department, Forest Officer | |
| Hannah Martinez | Forest Department | hannastluce@yahoo.com |
| Melanie McField | Healthy Reefs for Healthy People Initiative, Director | mcfield@healthyreefs.org |

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|-------------------------------------|--|-----------------------------|
| Nadine Nembhard | Belize Fishermen Cooperative Association, Executive Secretary | bfca@btl.net |
| 07.02.2013, Belize City | | |
| Rev. Dr. Rudolph Anthony | Belize National Commission for UNESCO, Secretary General | unesco.secgen@moe.gov.bz |
| Herbert Haylock | Belize Tourism Industry Association, President | btiapresident@gmail.com |
| Leonel Requena | UNDP-GEF COMPACT Programme, Local Coordinator | Leonel.requena@undp.org |
| 08.02.2013, Belize City | | |
| Edilberto Romero | Association of Protected Areas Management Organisations (APAMO), Chairperson | execdirector@pfbelize.org |
| Jose Perez | APAMO, Executive Director | execdirector@apamo.net |
| Arlene Maheia-Young | National Protected Areas Secreteriat, Assistant Programme Director | apd.npas@ffsd.gov.bz |
| Audrey Matura-Shepherd | OCEANA Belize, Vice President | amatura-shepherd@oceana.org |
| 09.02.2013, Belize City, phone call | | |
| Dr. Leandra Cho-Ricketts | University of Belize, Marine Science Director | lricketts@ub.edu.bz |

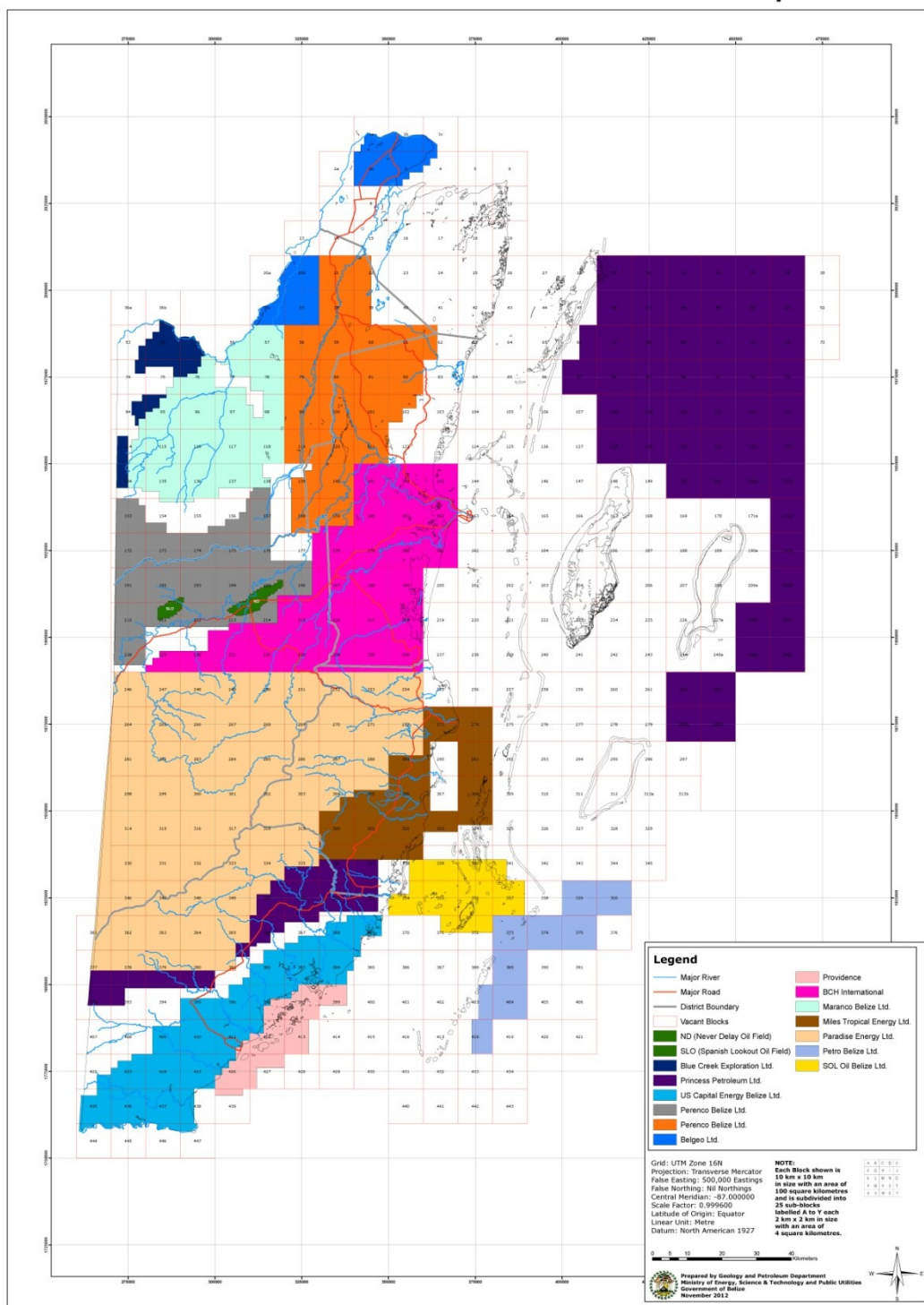
Annex IV – Maps

Map 1. Marine Management Areas of Belize (Fisheries Department, Survey Department, Land Information Centre, 2009). Boundaries of the World Heritage Property are marked with purple.



Map 2. Belize Petroleum Contract Map (Geology and Petroleum Department, 2012)

Belize Petroleum Contracts Map



Annex V – Photographs

Photo 1. Fisherman Caye (South Water Caye Marine Reserve) – Proposed site for the Yum Balisi Resort (2007). © Fisheries Department



Photo 2. Fisherman Caye (2012). © Fisheries Department

