



**PROJECT FOR THE CONSERVATION OF MARINE RESOURCES IN CENTRAL  
AMERICA**

**Funding Agreement: (2010 66 836)**

**Annual Work Plan (AWP)**

**2015**

**Corozal Bay Wildlife Sanctuary**

## LOGICAL FRAMEWORK OF THE PROJECT

INTERVENTION LOGIC	VERIFIABLE INDICATORS	SOURCES AND MEANS OF VERIFICATION	HYPOTHESIS
<b>MAIN OBJECTIVE (MO)</b>			
To contribute to the conservation of the ecological functions of the Mesoamerican Reef System (MRS).	Mangrove areas in the project's CMPA equal to or greater than those of the baseline.	Baseline study and final study.	
	Seagrass areas of the project's CMPA equal to or greater than those of the baseline.	Baseline study and final study.	
<b>PROJECT OBJECTIVE (PO)</b>			
To consolidate the CMPA selected in the project's region and ensure the use of coastal and marine resources in the medium-term.	<b>PO VIO1:</b> The financial gap does not increase in 100% of the CMPAs included in the programme.	Baseline study and final study.	<ul style="list-style-type: none"> <li>The MAR ecosystem does not suffer irreparable damage by the effects of climate change.</li> <li>Countries with participation in the MAR coordinate their strategy.</li> <li>The four governments maintain and promote policies which support the protection and conservation of natural resources.</li> <li>Worldwide and domestic macroeconomic conditions do not adversely affect the financial resources available for the CMPAs.</li> <li>Social, migratory and population stability do not impose disproportionate pressures on the natural resources of the MAR.</li> <li>There are supportive policies for the tourism sector and the volume of tourist visits to the countries and protected areas is stable.</li> </ul>
	<b>PO VIO2:</b> Management plans are updated and under implementation in 100% of the MCPAs included in the programme.	Five MP developed; qualitative analysis of the programme / sub programme running.	
	<b>PO VIO3:</b> The CMPAs included in the programme have natural sustainable resources use plans under implementation.	Monthly and annual Project reports, informes de seguimiento de los fondos miembros.	
<b>RESULTS</b>			
<b>R1:</b> The protection and conservation of the coastal-marine ecosystems in the marine area are secured.	<b>R1 VIO1:</b> At least 12 initiatives for marine and terrestrial infrastructure built or rehabilitated and put into operation by the end of the third year (2017) and that will be used properly in accordance with their original purpose until the conclusion of the project.	Inventories and monthly and institutional reports; visitor records; patrol reports; Number of participants trained; user manuals. Photos.	<b>VIO1 &amp; VIO2:</b> There are no adverse weather conditions that affect the integrity of the infrastructure of the CMPAs. Funds allocated by the Executor for maintenance are available.
	<b>R1 VIO2:</b> The acquired facilities are being used properly and have regulation and usage logs.	Inventories; usage regulations; usage logs; operation and maintenance manuals; maintenance logs; biological monitoring reports; training reports. Photos	

INTERVENTION LOGIC	VERIFIABLE INDICATORS	SOURCES AND MEANS OF VERIFICATION	HYPOTHESIS
	<b>R1 VIO3:</b> The park rangers (officers and community members) receive at least two training sessions per year on the protection and conservation of natural resources.	Certificates/registration records/training reports and lists of participants.	<b>VIO3 &amp; VIO4:</b> There are sufficient funds to maintain human resources of the CVPAs.
	<b>R1 VIO4:</b> A control and supervision planning scheme exists and is being implemented in accordance with the operational capabilities of each area.	Reports on the planning and scheduling of control and surveillance activities; Patrol reports, logs.	
	<b>R1 VIO5:</b> At the end of 2015 (second year) five management plans (programs) exist and are being implemented (over the lifetime of the project).	5 Management Plans produced; qualitative analysis of the ongoing programs/sub-programs.	<b>VIO5 &amp; VIO6:</b> The five governments maintain policies which support the protection and conservation of natural resources; The CVPAs maintain their current administrative structures.
	<b>R1 VIO6:</b> At the end of the Project, the five CVPAs have improved their socio-economic and governance indicators by x%.	Baseline studies using the Management Effectiveness Assessment/final measurement.	
<b>R2:</b> Best management practices and the sustainable use of marine-coastal resources are applied.	<b>R2 VIO1:</b> The five CVPAs have a strategy/community development plan for the end of the second year.	5 strategies developed; qualitative analysis of activities in progress as part of the project.	<b>VIO1 &amp; VIO2:</b> There is community interest in participating in the project's actions; There is general macroeconomic stability (input costs/sales prices/open markets); Other entities (NGOs, local governments, academia) are interested in supporting productive initiatives that strengthen communities and grassroots organizations.
	<b>R2 VIO2:</b> 100% of the proposed productive initiatives have undergone feasibility/market and business studies/plans, in addition to studies on business aspects and training and technical support mechanisms.	Complete proposals (support studies).	
	<b>R2 VIO3:</b> Increased number of community members trained, accredited and involved in activities that support daily management tasks (biological monitoring; control and surveillance) of protected areas.	Accreditation reports and records, lists of participants; activity reports.	<b>VIO3 &amp; VIO4:</b> There is community interest in participate.
	<b>R2 VIO4:</b> The 5 CVPAs have mechanisms (community advisory committees or equivalents) which ensure the participation of local stakeholders in decision-making guidance regarding the management of the areas and meet at least twice yearly.	Rules on the constitutionality and functions of the committees/minutes of meetings/committee training reports/institutional reports/list of participants.	
<b>R3:</b> Communication and effective exchanges to promote the adoption of new practices.	<b>R3 VIO1:</b> At the end of the project, at least six (6) small regional projects implemented and monitored by the Member Funds: Three of them in a first call in 2015 and the other 3 in a second call in 2016.	Technical and financial reports; monitoring reports of the Member Funds.	There is an interest of proponents to participate in small grants projects.  The respective national authorities have shown interest in participating in regional meetings and monitoring the implementation of the agreements reached.  There is interest in participating.
	<b>R3 VIO2:</b> At least two regional meetings have been held and a strategy for monitoring the implementation of the agreements has been reached.	Meeting minutes, list of participants; activity report; statement of the agreements reached and monitoring plan.	
	<b>R3 VIO3:</b> At the end of the project, at least five exchanges of experiences between area managers and/or other stakeholders from each MCPA have been encouraged.	Visit report, list of participants.	
<b>ACTIVITIES</b>			
Result 1:			

INTERVENTION LOGIC	VERIFIABLE INDICATORS	SOURCES AND MEANS OF VERIFICATION	HYPOTHESIS
Investments in infrastructure in CMPA			
Investment in equipment in CMPA			
Development/updating of CMPA management plans.			
Support for the implementation of the control and surveillance system.			
Support for the implementation of assessment and monitoring systems.			
Protection of fragile ecosystems			
Recovery of degraded ecosystems.			
Institutional strengthening for areas managers.			
<b>Result 2:</b>			
Development of the production bases of communities /associations.			
Development/updating of plans for the sustainable use of marine-coastal resources in communities/associations.			
Participation of organized community groups in the management of natural resources.			
Strengthening communities/associations.			
Administrative expenses (administrator cost of Mexico NGO and bank fees).			
<b>Result 3:</b>			
Small regional implementation projects.			
Wide dissemination of results.			
Exchanges of experiences at the regional level.			
Exchanges between executors.			

## **CONTEX AND SENSITIVE POINTS**

The stakeholder communities of Corozal Bay, Sarteneja, Chunox and Copper Bank are primarily composed of the traditional reef fishermen (lobster /conch fishermen). These are considered among the most difficult communities in Belize to engage, with a general hostility to the concept of conservation and sustainable resource management, and suspicion of conservation organizations and their motives. A definite risk is therefore lack of, or limited, stakeholder engagement. However, SACD has learnt from past projects that whilst it is difficult to engage the entire villages, it is possible to engage targeted sectors, and is focused on strengthening the current partnerships with the Alliance members; tour guides association, fishermen associations, private sectors and the education sector, and gradually increasing its stakeholder buy-in through addressing new target groups – with the formation of young fishermen/local fishermen associations and women's group (Homestay Programme).

Whilst the communities are predominantly reef fisher based, the direct stakeholders of Corozal Bay Wildlife Sanctuary are a smaller sector - the local artisanal fishermen, whose families have used the Bay over the generations. SACD has come a long way in developing a partnership with this key sector, gaining their trust and participation; Trust is a fragile thing, though, and there is always the risk of losing that trust because of external factors, such as non-consultation in national policy making without them being consulted. The timing of activities can also affect attendance and participation. To ensure effective participation of these fishermen, we need to be proactive in maintaining continuity in the relevant activities and be able to adjust work to their timing.

National and Local politics are also risks to the project activities and implementation - a change in government could mean a change in the current positive environment. A lack of knowledge and unwillingness at the Government Level is not good for the project areas. This is also true at local level - village councils are often driven by politics and not for the true representation of the community needs. However, SACD is built on a strong foundation of community representatives that have devoted their time and energy to making SACD what it is - with policies in place to overcome political challenges, and a specific policy of non-political affiliation, we are able to work with any government in position.

Finally, Belize is in a hurricane belt, with northern Belize, including Sarteneja, being in the 'highest probability of hurricane impacts' band for the country. Hurricane Dean had significant impact on north east Belize in 2007, and several storm events have narrowly missed the area since then. With this background, SACD has experience in preparing for such storms, and staff have a system in place to ensure that all equipment and infrastructure is secure, to minimize storm damage.

## **HIGHER PROJECT OBJECTIVE**

“To contribute to the conservation of the ecological functions of the Mesoamerican Reef System.”

## **PROJECT OBJECTIVE.**

“To consolidate the CMPA selected in the Project’s region and ensure the use and marine resources in the medium-term.”

## **COMPONENT 1: PROTECTION AND CONSERVATION OF MARINE-COASTAL ECOSYSTEMS IN THE MARINE AREA ARE SECURED.**

The Sarteneja Alliance for Conservation and Development (SACD) works strategically to ensure effective management and conservation outcomes in its management of Corozal Bay Wildlife Sanctuary, based on its three programme areas – Natural Resource Management, Education and Outreach, and Sustainable Development. As a community-based organization, SACD’s philosophy is one of community engagement and participation, working closely with natural resource users, tour guides, educators, students and other stakeholders of the key communities. As a young, community-based organization, however, it is at times challenged in locating the funding required for even basic implementation of critical activities. Through this funding opportunity, SACD is focused on building a stronger foundation for improved protection and conservation management of this marine protected area and its critical ecosystems into the future, – not only for the health

of the biodiversity within the marine protected area, but also its role within the larger seascape, in maintaining the health of ecosystems and associated livelihoods along the northern Belize reef.

In the 2015 annual work plan, the activities focus on preparation and support of the different programme areas, with investment in the development of financial sustainability, a priority need for the Organization's long term existence and management of CBWS. Strengthening its institutional capacity is also an important component of this project, to ensure that SACD's staff and Board members have the capacity for sound decision making - having in place updated governing policies and procedures; and strengthening financial structures and management. Purchase of support equipment identified as critical for improved management effectiveness, investing in the research equipment, enforcement and surveillance equipment as well as educational support equipment required for effective implementation of these programme areas. The provision of a new vessel will also greatly improve SACD's enforcement, surveillance, monitoring and research activities, and improve its ability to communicate and participate at national level. Also key to the long term protection and conservation of the coastal ecosystems is having relevant infrastructure in place - this include the construction of a multipurpose building to be used as the head quarters of the Organization and its community partners.

#### **B.1.01 INVESTMENTS IN INFRASTRUCTURE**

Highlighted in both SACD's Strategic Plan (Key Results Area 1, Strategy 9) and the management plan for Corozal Bay Wildlife Sanctuary (Strategy E18: SACD has the infrastructure in place for effective management, constructed to hurricane standards and incorporating green technologies where possible). SACD seeks to become not only more financially sustainable, but also to reduce its carbon footprint as a component of its "going green" initiatives and at the same time strengthening community support for protection and sustainable resource use of Corozal Bay Wildlife Sanctuary. SACD seeks to invest in a multi-organization building to improve SACD's operational functionality, and to increase management cost-effectiveness of all Alliance members. The latter is to be achieved by providing office space to the Sarteneja Fishermen Association and the Sarteneja Tour Guide Association, with sharing of utilities and maintenance costs, and utilizing renewable power options where feasible, through the installation of an effective solar power system.

Key to the success of Objective One of the project is to maintain and strengthen collaboration with the local stakeholders, who are directly linked to, and dependent on, the health of the coastal ecosystems. In providing a central protected area facility, this activity will contribute towards the strengthening of SACD's ability to engage more with the local associations and to build its relationship with its Alliance members to support the long term protection and conservation of the coastal ecosystems. Having an operational centre will increased sustainability of the organization, providing infrastructural support - office space, equipment storage etc., for continuity of activities that include surveillance, research and other activities linked to the logical framework that contributes towards Result 1: The protection and conservation of the coastal-marine ecosystems in the marine area are secured. The verifiable indicators for this are R1 VI01: At least 12 initiatives for marine and terrestrial infrastructure built or rehabilitated and put into operation by the end of the third year (2016) and that will be used in accordance with their original purpose until the conclusion of the project.

For this year's work plan SACD will be undergoing the necessary planning to ensure that the investment in infrastructure conforms to national standards and environmental best practices.

#### **BC.1.01.02: Construction plan of a multipurpose building**

During the AWP for 2015, SACD will be preparing for the construction of a multi-purpose facility - the future SACD Headquarters, located in the primary stakeholder community of Sarteneja. This building provides a focus for communication between active organizations in the community – the Sarteneja Fishermen Association and Sarteneja Tour Guide Association - providing shared office space and utilities, and community meeting space. As such, it will also improve the management effectiveness and long term financial sustainability of the organization and its efficiency in protecting and conserving the marine - coastal ecosystems of the Corozal Bay Wildlife Sanctuary. This will be achieved by removing the need for continued renting, improving storage and maintenance of equipment, providing a venue for stakeholder engagement, and enabling continued cost sharing of utilities by community based organizations. Also, providing a strategic

location within Corozal Bay Wildlife Sanctuary, in the primary stakeholder community of Sarteneja, to have direct access to the north boundary as well as the east and south boundaries. At this stage, SACD is requesting to the Project USD\$750.00, to contract professional services to develop a building plan/ blue print in collaboration with SACD Executive Board, to ensure that the building conforms to national building standards and environmental best practices. Building construction will be implemented in the second year.

#### **B.1.02 INVESTMENTS IN EQUIPMENT**

Any aspect of management to ensure the protection of critical ecosystems in CBWS depends greatly on the availability of equipment for the implementation of activities under the different programme areas. During management planning, SACD assessed its equipment needs for the marine protected area, identifying priority equipment requirements for increasing management effectiveness in both the short and long term. The investments in equipment will be spread over the 5 years, ranging from office equipment to research and monitoring equipment. However, under the AWP 2015, SACD will be acquiring only equipment identified as critical and urgent for immediate strengthening of the programme areas. This will include office equipment essential for institutional strengthening, and tied to the introduction of the new financial structure for the organization, through transfer of the financial management to QuickBooks. The rehabilitation of the patrol boat and the purchase of the surveillance and enforcement equipment will greatly support the implementation of the surveillance and enforcement activities. These critical pieces of equipment will support the introduction of the nationally-adopted SMART reporting system as a mechanism to strengthen the surveillance and enforcement activities in line with the national framework - enabling more effective monitoring patrol activities, and much easier, less time consuming patrol reporting. The provision of a vehicle will also greatly support the enforcement and outreach activities in remote stakeholder communities.

This equipment will enable SACD to first increase its patrol presence in the Protected Area and second, to more effectively engage primary stockholder communities of CBWS. In doing so SACD will significantly increase its ability to effectively protect and conserve the coastal ecosystems of the Protected Area. In order for Result One to be achieved, SACD needs to be actively involved at both local and national levels. Under the logical framework, B1.02 contributes towards Result 1: The protection and conservation of the coastal-marine ecosystems in the marine area are secured.

##### **BC.1.02.01: Rehabilitation of patrol boat**

The patrol boat is critical for the effective management of CBWS and the implementation of the surveillance and enforcement activities. It is currently scheduled for rehabilitation to ensure that the boat is fully functional, with the necessary flooring and console. This will: 1. Increase the patrol team's effectiveness in its role in surveillance and enforcement by improving the state of the flooring of the boat, safeguarding the lives of patrol staff and protection of equipment, 2. ensure that there is an active patrol presence in area, and allow the performance of the staff to be improved - with increased area coverage, and numbers of spot checks conducted by the team and 3. Increase cost effectiveness. The rehabilitation of the boat will allow the boat to be lighter in weight, not just allowing for the boat to be faster but also consuming less fuel per patrol. With the support of this project, SACD will be contracting a boat builder in the first year, at the value of US\$3,500.00 to rehabilitate the boat - this contract will include the materials required for the rehabilitation.

##### **BC.1.02.02: Purchase and installation of marker buoys and information signs.**

As a mechanism to improve surveillance and enforcement of the marine protected area, signs will be installed at major entry points and critical manatee areas. This will increase general awareness of the protected area borders and encourage compliance with no wake regulations. This year SACD will be installing four 'No Wake' signs at four critical manatee areas, valued at US\$3,000.00, with the support of Save the Manatee Club. These signs have already been received, and are ready for installation by the SACD staff in collaboration with local fishermen. No charge is being attributed to this project for this year.

##### **BC.1.02.03: Equipment and supplies to strengthen the surveillance and enforcement**

Patrolling is one of the most critical activities within the surveillance and enforcement programme. This is not achievable without the support of critical equipment for the patrol unit. As we

integrate more long-distant patrols within CBWS, we also need to ensure that the rangers have the necessary equipment to implement their duties. We also want to ensure that the boat has the relevant safety equipment in case of emergencies. Under the 2015 AWP with project funds, we want to ensure that the rangers have access to 3 professional life jackets, 1 anchor, 1 spot light, 1 tool set, 2 tarpaulins, 2 carts (load carriers), 1 propeller, 1 bilge pump, and 1 first aid kit, valued at approximately US\$1,067.00. Also requested are 2 tablets (US\$600.00), bringing the total to US\$1,667.00. These tablets are critical equipment for the introduction of a SMART system as a mechanism to strengthen the surveillance and enforcement activities in line with the national framework. This system provides a better tracking of activities, providing much easier, less time consuming patrol reporting. It also allows staff at the SACD headquarters to be able to monitor patrolling activities in real time. The tablets are designed for rigorous use on patrols, with pre-installed software - this enables the patrol team recording information more easily, whilst also facilitating extraction of information by the Natural Resource Manager on routes, inspections, incidences and locations covered by each patrol.

#### **BC.1.02.04: Purchase of office equipment**

SACD, with the support of this project is strengthening its institutional structure for improved management effectiveness of the marine protected area. This includes the overall strengthening of SACD's administration through purchase of critical office equipment, strengthening its capacity in record keeping and financial management. A needs assessment of the different SACD programmes, conducted during management planning for the marine protected area, has identified priority equipment requirements for increasing management effectiveness in both the short and long term. The investments on equipment under 1.02 have been identified as critical in supporting the management goals and programmes identified in the management plan, resulting in strengthened management and conservation of CBWS. Under the 2015 AWP, SACD will be purchasing 1 desktop computer, 1 professional printer, 2 memory sticks and 2 back up batteries. To safeguard organization and project files, we will also be purchasing 6 dry boxes and 6 dry bags, in the event of extreme weather conditions (hurricanes). The total amount requested to MAR Fund Project for Year 1 is US\$2,625 for the purchase of the above mentioned equipment. SACD has direct co-financing of US\$875.00 from SIDS-CBA for a laptop and a projector to also strengthen the organization administration programme.

#### **BC.1.02.04: Purchase of uniforms**

It is essential for not just rangers, but for SACD staff in general to be well identified and respected by the local communities SACD operates in. Rangers often know the people they encounter within the marine protected area, so it is important that they can be properly identified as SACD officers when on duty. Respect for their position as enforcers is reinforced by ensuring that they wear the uniform with the SACD and Forest Department logos, designating authority, and carry Fisheries Officer identification. For other staff within the organization, recognition through use of uniforms is just as important when it comes to engendering respect for the organization. Whether it's the Education Officer, Executive Director or the Natural Resource Management Programme Manager - they all play an important role in maintaining the reputation of the organization and as such will be adequately equipped with a kit composed of uniforms (three shirts and three pants for each of the five staff members), to perform SACD's objectives effectively. This is valued at US\$180.00 per kit, totalling, US\$900.00, to be covered in Year 1 by the project.

#### **BC.1.02.08: Upgrading monitoring equipment.**

Active research and monitoring activities, guided by the Monitoring Plan, are an important area of management, critically needed for providing information for management decisions that support the maintenance of the ecosystems of CBWS. Priority monitoring areas identified in SACD's monitoring plan (2013) are water quality, mangrove assessments, population surveys of the threatened West Indian manatee, and fish catch assessments. Essential equipment is required for these ongoing activities over the course of the next 3 years. Under the 2015 AWP, the project will be providing US\$143.00 to purchase 3 clinometers for mangrove assessment, 2 GPS support bags, 1 soil corer, and 1 water proof measuring tape. This programme will also be co-financed through funding from SIDS-CBA, through a community-based adaptation project that includes purchase of a weather station, total co-financing of US\$3,750.00.



### **BC.1.03 Generation/updating of MCPA Management plans**

Climate change is not currently addressed fully within the CBWS management plan, and SADC lacks the site level information to be able to fully integrate climate change predictions into its management decisions. As national assessments have identified northern Belize the area with the greatest potential to be affected by climate change, with reduced annual rainfall, higher temperatures and greater intensity of storms, it is critical that climate change becomes linked to all SADC activities and planning activities. Once this has been achieved, management decisions will be greatly strengthened. This is particularly critical for the local fishery and local fishermen, as the fish species they depend on and the seasons they fish are linked completely to the climate patterns. Without an understanding of these, the ability to effectively manage the protected area and safeguard the livelihoods of the fishermen in the long term, would be seriously undermined.

#### **BC.1.03.03: Development and implementation of Climate Change Community adaptation Plan**

Climate Change Adaptation Planning is identified as a priority for Corozal Bay Wildlife Sanctuary and its stakeholder communities. Northern Belize has been highlighted as one of the highest risk areas in the Country for climate change impacts, including increasing air and water temperatures, rising sea level, unseasonal rainfall with increased droughts and flooding, saltwater inundation of the aquifer, and increasing intensity of hurricanes.

As part of its 2015 work plan SADC is implementing a project entitled “Increasing adaptation and resilience of natural resource users and other community stakeholders of Corozal Bay Wildlife Sanctuary to predicted climate change impacts”, funded under SIDS-CBA, that will start the process of preparing stakeholder communities for climate change, increasing their awareness of the importance of maintaining their natural environmental buffers – particularly mangroves. The project has an allocation of US\$6,100.00 to hire a consultant to establish a community climate change adaptation programme, developed through a series of community workshops. There is no cost to the project for this activity in this year.

### **BC.1.04 IMPLEMENTATION AND STRENGTHENING OF THE SURVEILLANCE AND ENFORCEMENT**

Surveillance and enforcement activities in Corozal Bay Wildlife Sanctuary are identified as a priority strategy in the Management Plan, guided by the SADC Surveillance and Enforcement Plan, and implemented by the MPA rangers, under the management of the Natural Resource Programme Manager. The Natural Resource Management Programme objectives call for ensuring the effective conservation and sustainable use of natural resources of Corozal Bay Wildlife Sanctuary, with a number of strategies that enable SADC to establish protocols and collaborative agreements with Fisheries Department and other national counterparts, and to regulate illegal activities. Also a priority is the establishment of a transboundary initiative with Mexico’s Bahia de Chetumal to the north, and with contiguous boundaries to national protected areas to the east and south. SADC has focused on building partnerships to improve surveillance and enforcement at system level in the northern Belize region. It is also collaborating with SEMA, in Mexico, to identify transboundary mechanisms for improved effectiveness in addressing illegal incursions.

All these activities are outlined in the Surveillance and Enforcement Plan, which highlights the priority areas to be addressed. In the 2015 work plan, SADC seeks to accomplish the establishment of a trans-boundary working group to strengthen its enforcement activities. Strengthening of the rangers capacity to be able to enforce the fisheries and environmental laws - will be done by providing the necessary training and increasing the number of patrols in the project area. The outputs will better guide Surveillance and Enforcement activities and ensure that management strategies are aligned with the prioritised objectives of the Northern Belize Coastal Complex. Strengthening communication and developing a system for joint patrols with adjacent protected areas managers, and with coordinated patrols with the Mexican authorities/counterparts. This will maximise the resources to effectively protect and conserve the marine - coastal ecosystems, ensuring that the percentage of infractions are minimized and the impacts to the ecosystems are reported and addressed. This activity contributes towards Result 1: Best management practices and the sustainable use of marine resources are applied. The verifiable indicator for this is R1 VI04: A control and supervision planning scheme exists and is being implemented in accordance with the operational capabilities of each area. It aligns with R1.5: Support for the implementation of assessment and monitoring systems.

#### **BC.1.04.03: Implementation of surveillance and enforcement programme**

The Surveillance and Enforcement Plan is being implemented with the direct co-financing support of OAK Foundation, increasing SACD's patrolling in 2015 by at least 25%. SACD is conducting targeted patrols of an average of 3 days per week, increasing as the fishing season starts. These patrols are targeting illegal fishing activities, transboundary incursions, non-permitted development and mangrove clearance. The protection and conservation of the coastal ecosystems of CBWS is greatly dependent on the presence of the patrols, with fuel consumption being one of SACD's highest costs. However, this investment is critical in ensuring that the resources are being used sustainably and that there is respect for the regulations. For 2015, OAK Foundation is providing US\$20,000.00 for the purchase of fuel for implementation of the Surveillance and Enforcement Plan. There will be no cost to the project for this activity in this year.

#### **BC.1.04.06: Training of rangers in Fisheries regulations, weapon handling and green laws**

SACD has already trained the Head Ranger as Special Constables, and in the Fisheries regulations, (with the support of Fisheries and Forest Departments) in the 2013 and the first quarter of 2014. This provides the patrol team composed of the head ranger and a community ranger with the authority to conduct searches and make arrests. Though, these trainings are scheduled for every two years (refreshers), to ensure that the rangers are updated on any amendments to the Fisheries, Forest and Special Constable Regulations and will be covered from this project in a later period of the project. Though, SACD will be introducing the SMART system in August 2014 for strengthening surveillance and enforcement, co-financed by WCS, at the value of US\$2,000.00. The training for the use of SMART system depend greatly on the availability of the tablets that have already been requested in the equipment budget in Year 1 (BC1.02.03), scheduled for the month of August. This training will be a three day session with the WCS expert in the use of the system for the patrol team and the programme manager. These will include training in the introduction and use of the system. This will improve the surveillance and enforcement activities, provide monitoring of the patrolling and improve efficiency of reporting. Considering that the system provides for a better tracking of activities, much easier, less time consuming patrol reporting. Enabling the patrol team to record information more easily, whilst also facilitating extraction of information by the Natural Resource Manager on routes, inspections, incidences and locations covered by each patrol. There is no direct cost to MAR Fund Project associated to this activity under Year 1. (Training in SMART systems already completed).

#### **BC.1.04.11: Planning for improved system and transboundary management**

By the end of 2015, management of Corozal Bay Wildlife Sanctuary will be strengthened as an integrated part of a collaborative partnership with adjacent MPAs as part of the Northern Belize Coastal Complex. Collaboration with transboundary MPAs is also being strengthened through the development of a transboundary collaboration mechanism – SACD is currently in discussions with partners in both Mexico and Belize for the establishment of this mechanism - the target for completion is by the end of 2014, with the production of a Conservation Action Plan for the Northern Belize Coastal Complex, to improve system level and trans boundary communication, collaboration and implementation. This activity will provide strategies for improved collaboration between adjacent MPA's both in Belize and Mexico to strengthen surveillance and enforcement of the system. This will be completed through a series of workshops with all levels of stakeholders, including fishers, tour guides, MPA managers, government and researchers. The Management Plan will be revised to incorporate the system-level and trans-boundary priorities identified in this process. SACD will be investing US\$30,000.00 towards the collaborative planning process in Year 1 with the support of the Protected Areas Conservation Trust (PACT). Four planning workshops are planned with the participation of minimum 35 persons per workshop, targeting the protected areas managers, local users (fishers etc.), government departments and researchers; to establish an action plan for the Northern Coastal Complex - inclusive of Bacalar Chico, Hol Chan and Caye Caulker marine reserves. Separate to the plan we also seek to consolidate a transboundary working group that will facilitate coordinated and communication for research but most importantly surveillance and enforcement. There will be no cost for this activity under the MAR Fund Project. (This activity is now close to completion - final plan to be completed, printed and distributed by mid February)

#### **BC.1.05 SUPPORT FOR THE IMPLEMENTATION OF ASSESSMENT AND MONITORING SYSTEMS**

SACD is implementing its Research and Monitoring Programme (SACD, 2013), identified as a priority strategy in the CBWS management plan, with a Research and Monitoring Plan providing an integrated framework for research and monitoring activities for Corozal Bay Wildlife Sanctuary. This is a critical programme area, providing information for management decisions focused on the effective protection and conservation of the biodiversity of the protected area. Activities are guided by the SACD Vision, Mission, and Objectives, and by the conservation target strategies identified in the management plan, developed in collaboration with the stakeholder communities, and focused on providing information for improving viability of Corozal Bay Wildlife Sanctuary as a functional protected area within Belize.

These strategies focus on continuing and strengthening monitoring of fish traps catches, developing and implementation of water quality monitoring programme for CBWS, integrate sea grass net monitoring, coastal impacts among others. The core of the Research and Monitoring Programme is based on the initial requirements highlighted in the Surveillance and Enforcement Plan and identified knowledge gaps, focused on the identified Conservation Targets. Also integrated into the Programme are strategies developed during 2010 and 2011, as part of the adaptive management process. These include strategies from the Planning for a Sustainable Fishery output, outputs from the Water Quality Monitoring Sub-Programme, and from the Conservation Plan for West Indian Manatees of Corozal Bay Wildlife Sanctuary. The outputs will better guide Surveillance and Enforcement activities and ensure effective implementation of key management strategies – conservation of key ecosystems and species, improved resilience, health and benefits to stakeholder communities, and the establishment of a local, traditional Sustainable Fishery

Under the logical framework, activity B1.05 contributes towards Result 1: The protection and conservation of the coastal-marine ecosystems in the marine area are secured.

**BS.1.05.01: Generation of a baseline of mangrove cover and marine grassland in the five MCPAs**

Based on the consultancy results of Phase I of the Project and in order to use the same methodology for the base line analysis of mangrove cover and marine grassland, a remote sensing consultancy will be hired to conduct this activity, using satellite imagery to determine the extent of mangrove and sea grass cover in the marine protected area. MAR Fund will be hiring the consultant and the payment of this contract will done by the MPA. This consultancy will be implemented during April and May 2015. A total of US\$15,000 of the Project funds will be used to cover the cost of the activity.

**BC.1.05.01: Ground truthing for mangrove cover and marine grass lands**

SACD has mapped coastal mangrove presence and impacts in 2011, providing a baseline that is being updated in the first year of the project (Corozal Bay Wildlife Sanctuary Coastal Mapping, 2012), with identified information gaps addressed, as part of SACD's research and monitoring activities. This will be achieved in collaboration with Wildtracks and Adam Lloyd, the Wildtracks GIS consultant.

Current baseline activities are focused on developing a baseline map of seagrass and other benthic communities within CBWS. This has been supported by Lighthawk flights in 2013, providing geo-referenced photography for the east coast of the protected area, and is integrating GIS remote sensing data for generation of a baseline map. Further overflights will be conducted in 2014, to finish coverage of the area, and ground truthing using basic seagrass net methods has been started (2013), with further work scheduled for mid-Year 1 going into Year 2. US\$2,000.00 has been allocated for mangrove assessment under the SIDS – CBA project, supporting the ground truthing activities identified under the Research and Monitoring Plan. There will be no cost to the project for this activity in this year. (the funds for this activity were also delayed and are now scheduled for this year - 2015)

**BC.1.05.06: Fish catch assessments of commercial important species**

Corozal Bay Wildlife Sanctuary has supported a local, traditional fishery since the establishment of the communities in the area. As pressures increase, it becomes increasingly important for long term sustainability that this fishery is managed effectively, as a rights-based fishery, following the

principles of best practices, and with the full participation of the local fishermen. As it moves towards a rights-based, sustainable fishery management regime, SACD recognizes the importance of monitoring fish catch and fishing effort, with point of capture monitoring of fish traps identified as the most realistic mechanism with the human and financial resources available (Activities B11 and B12 in the management plan). The fish catch monitoring activities and protocols are detailed in the Research and Monitoring Plan, adopted as the guiding document for monitoring activities under the Research and Monitoring Programme in the management plan.

Baseline data has been collected and analysed, and monitoring is ongoing. A similar baseline will be developed for the net fishing within the area, with funding of US\$2,400.00 for fuel and stipends for fishermen participation, through the SIDS-CBA project. SACD also has support from Wildtracks and Blue Ventures in the fish catch assessments, with an in-kind contribution valued at a minimum of US\$5,000 for the year. The total co-financing for this year's activities is estimated to be US\$7,400.00. No cost is being charged to the MAR Fund Project for this year.

#### **BC.1.05.07: Monitoring of water quality**

As a large, shallow estuarine system, Corozal Bay Wildlife Sanctuary is considered critically important in the maintenance of the health of coastal waters of northern Belize. As the scale of climate change impacts increase, the physical conditions of the system are expected to change, with shifting seasons, less predictable rainfall patterns, changing salinity, increasing water levels and increased intensity and frequency of large storms. This will lead to a greater need for adaptive management, with information required to make effective management decisions.

The water quality monitoring activities and protocols utilized are detailed in the SACD Research and Monitoring Plan, adopted as the guiding document for monitoring activities under the Research and Monitoring Programme. Baseline surveys of salinity, temperature, pH dissolved oxygen and turbidity have been conducted in dry, wet and northern seasons in 2012, 2013, 2014 and are ongoing in 2015. Permanent loggers for water depth, temperature and salinity have also been deployed. Equipment and equipment maintenance have been included in the MAR/kfw research and monitoring equipment budget. The co-financing purchase value of the equipment currently in use is US\$ 7,410.00 and the CBA project is providing for a boat captain and 2 community researchers for each of the 3-day transects in each of the 3 seasons + 1 storm event; With 70 gal fuel per trip x 3 trip at a value of US \$4,175.00 for this year's activities. Work is and will be conducted by SACD interns, in collaboration with Wildtracks and Blue Ventures at an in kind contribution of US\$3,000.00 for this first year of this project. The total co-financing for this year's activities is estimated to be US\$14,585.00. Input from ECOSUR (Mexico) for transboundary collaboration for monitoring of the entire estuarine system is also part of this activity. There is no cost to the project for this activity in this year.

#### **BC.1.05.07: Monitoring of important indicator species and other important aspects**

The Research and Monitoring Plan will be amended once the system level Conservation Action Planning has been completed, through the core monitoring activities for coastal vegetation (including mangroves), seagrass, commercial fish species, West Indian manatees, sharks and rays, water quality and stromatolites. Some aspects are not fully operational and require greater attention. This includes the West Indian manatee – an important indicator species of the health of the CBWS. These indicator species are captured in this activity and are fully supported by OAK Foundation, which is providing US\$2,500.00 for fuel to implement the monitoring activities. Co-financing is also provided by Lighthawk for the over flights of CBWS for manatee seasonal manatee surveys (though the value of this has not been included in the co-financing it can be estimated at approximately US\$900 per survey for six surveys – US\$5,400.00). Wildtracks also provides technical assistance for the data analysis and interpretation. There is no cost to the MAR Fund Project for this activity in this year.

#### **BC.1.05.10: Develop baseline and monitoring programme for environmental and socio-economic impacts**

SACD recognizes the need to know its stakeholder communities, and to be able to measure the impact it is having on the socio-economic conditions of its key stakeholders. It is therefore updating its 2008 socio-economic survey of Sarteneja, and extending it to provide a baseline of all

three key stakeholder communities of CBWS, and to provide information for Community Development Plans (Activity D9 in the management plan). The survey protocols are based on the Global Socioeconomic Monitoring Initiative for Coastal Management (SOCMON), with specific additional information being gathered on climate change awareness. The surveys have already started and are being conducted by SACD interns in each of the three communities - Chunox, Copper Bank, and Sarteneja. This activity is co-financed by the COMPACT / SIDS-CBA project at a value of US\$4,563, and is to be completed by the end of this year. This includes the development, printing and execution of the surveys. There is no cost to MAR Fund Project for this activity in this year. (This activity is now completed)

#### **BC.1.06. PROTECTION OF FRAGILE ECOSYSTEMS**

SACD has identified the fragile ecosystems (seagrass, mangroves and stromatolites) and threatened species of Corozal Bay Wildlife Sanctuary (including the Critically endangered Goliath grouper, hawksbill turtle, endangered Antillean manatee, and is implementing structured conservation strategies to protect these conservation targets, based on ongoing surveys and input from technical specialists. As part of the SACD system- level planning initiative, it will also be focusing on how Corozal Bay Wildlife Sanctuary can contribute towards the viability of conservation targets in the larger seascape including the coral reefs of the adjacent protected areas. This planning greatly increases SACD's ability to direct its surveillance and enforcement activities to critical areas, and concentrate on identified critical threats towards ensuring effective protection of these ecosystems and species. This is strengthened by the current NBCC process, linking targets and indicators across the seascape for effective monitoring and management of the ecosystems and biodiversity of the area. The conservation target monitoring activities also provide a mechanism for community participation in active conservation measures within the protected area; particularly the local fishermen.

Under the logical framework, activity B1.06 contributes towards Result 1: The protection and conservation of the coastal-marine ecosystems in the marine area are secured, and to Result 2: Best management practices and the sustainable use of marine-coastal resources are applied.

##### **BC.1.06.04 Mapping services (manatee resting areas, stromatolites, no take areas)**

The SACD Research and Monitoring Programme rely heavily on spatial data and mapping of results to analyse and disseminate information on the conservation targets of Corozal Bay Wildlife Sanctuary. In 2015, geo-referenced patrol information and mapping will also be incorporated in the review and revision of the Surveillance and Enforcement plan, to ensure effective surveillance and enforcement activities within the MPA. SACD will be retaining a GIS technician on an annual contract of US\$1,000.00 under MAR Fund Project, to continue translating the geo-referenced data and remote sensing information into maps. The consultant, Adam Lloyd of Spatial Data Solutions, based in Punta Gorda, will also be contributing with an in-kind contribution of the value of US\$1,000.00 for this year's activity as part of his services. This provides SACD with data analysis and mapped outputs for the georeferenced data, providing useable information on, for example, seasonal manatee distributions and abundance, mapping of surveillance incidences to improve patrol planning, predictive modelling of water quality outputs and other activities tied to SACD's activities.

#### **BC.1.08. INSTITUTIONAL STRENGTHENING FOR AREAS MANAGERS**

SACD uses a number of tools to ensure institutional growth and sustainability, and is developing a framework for assessment and evaluation based on: annual institutional assessment (using the TNC self-assessment tool), and an annual evaluation of management effectiveness (using the national Protected Area Management Effectiveness tool). Also recognized as of critical importance is the revision of its Policy and Procedures Manual (Activity E5 of the management plan), and of the organization's Articles of Association. The composition of the Board of Directors ensures strong community participation in management decisions, through representation of different community sectors – the tour guides, the local and reef fishermen, the education and business sectors, and Wildtracks, a local conservation NGO. Building the capacity of the Executive Director

and the Board of Directors for effective decision-making is also considered a priority (Activities E1, E2 and E13 under the Governance and Administration Programme).

As part of these strategies, SACD is seeking technical assistance and input towards the development and implementation of a Financial Sustainability strategy (E25 and 26, both priority strategies under the Governance and Administration Programme). The outputs of this activity will provide SACD with a strong and stable institutional foundation, with effective decision-making processes in place, with increased institutional capacity. This will ensure that as the co management agency for CBWS, we have the competence to address problems affecting the area and are able to advocate effectively to Government to ensure that protection of the marine - coastal ecosystems continues and is strengthened. These activities contribute to Results 1: The protection and conservation of the coastal-marine ecosystems in the marine area are secured and 2: Best management practices and the sustainable use of marine-coastal resources are applied.

#### **BC.1.08.03: Build capacity of Executive Director in Natural Resource Management**

SACD places great importance on the institutional capacity of its staff – particularly the Executive Director. The MAR Leadership opportunity has provided valuable capacity building opportunities for the Executive Director, building leadership skills and investing in capacity building in natural resource management in the MAR region. To further build his capacity, the Executive Director is currently attending a Natural Resource Management course at a nearby institution to be better qualified in his professional endeavours. This course is ongoing and will persist up until to 2016 at a part time basis during the months of January to May and August to November in this year. His skills development and increased capacity will serve well for the Organization and for the effective management of CBWS. The cost of this activity is valued at US\$2,154.00 for Year 1, as a co-financing from MAR leadership.

#### **BC.1.08.05: Financial Sustainability Study**

SACD, as an organization, currently relies on project funding for achieving its goals, but has a vision, mission and structure that are attractive to a variety of funding agencies. Under a grant from OAK Foundation, SACD has funding for three years towards operational costs, providing the continuity it needs to be able to grow, and a three-year window in which to diversify its funding base. With MAR Fund Project funding of US\$15,000.00, SACD will be working with a consultant to explore financial sustainability options and develop a Financial Sustainability Plan to reduce dependency on grant funding. The budget estimate for the consulting services is projected to include the consultant costs and all expenses related to the research, consultations and preparation of the plan. These include any travelling or accommodation required by the consultant. With increasing tourism to the Sarteneja area (tourism visitation has more than doubled in the last five years), the options for implementing small scale financial sustainability mechanisms increase, with the potential for SACD to charge an entrance fee to the mpa, and to seek supporting donations from visitors to the area. For long term financial sustainability, however, SACD recognizes that it has to develop a more effective financial sustainability mechanism, with less reliance on funding partners, based on reducing overheads, establishing an endowment fund towards annual operational costs and developing a toolkit of other options. This is important at the early stages of the project to ensure the long term sustainability of the project activities.

#### **BC.1.08.05: Update of Financial structure / Quickbooks**

SACD has recognized the need to start using more professional financial software to meet the standards that are required at the level of MPA management in Belize and being able to improve identification of core costs, tracking of programme costs and relative sub-programme expenditures, and improve access to data for annual audits, improving key financial mechanisms that support conservation management effectiveness. Since its establishment, SACD has been working effectively with Excel, but it is becoming increasingly difficult with the increasing number of projects currently managed by SACD. This project will provide the financial structure for SACD through the provision of US\$3,000.00 to establish Quickbooks as the financial management system. This will be to acquire the software and licensing for this activity. This activity also seeks to strengthen other Alliance members operating in collaboration with SACD, - the Sarteneja Fishermen Association (SFA) and the Sarteneja Tour Guide Association (STGA).



#### **BC.1.08.05: Training for use of accounting systems**

SACD has identified a number of training needs for its staff, with strengthening of accounting procedures as the primary capacity building requirement, particularly as the organization moves to a new financial management system (Quickbooks). This will ensure that staffs within SACD have the ability to use Quickbooks effectively, to improve identification of core costs, tracking of programme costs and relative sub-programme expenditures, improving key financial mechanisms that support conservation management effectiveness. This will be achieved by contracting an accountant professional to set up the system and train the staff in its effective use. This to be accomplished in the early stages of the project, currently set forth in July or August at the latest, and it will cost US\$2,000.00. The training will be open for participation to the related staff of both the SFA and STGA, estimated at least 5 persons effectively trained in the used and management of QuickBooks - 3 from SACD (Finance Officer, Executive Director and project coordinator), 1 from STGA and 1 from SFA.

#### **BC.1.08.06: Consultant to review and update Articles of Association and Policies and Procedures manual**

During the SACD Strategic Planning process (2011) the Board recognized that the Articles of Association are not really reflective of who we are - SACD is a Community Based NGO with representation from different focal sectors of the community - the Sarteneja Tour Guide Association, Sarteneja Fishermen Association, the education sector, local fishing sectors and local NGO's and as such that needs to be reflected in SACD's guiding documents. SACD will be reviewing and updating its Articles of Association and Policies and Procedures Manual in accordance to the recommendations of SACD's Strategic Plan (2012 - 2017) (institutional strengthening) to ensure efficiency and effectiveness of the organization. This will improved governance, institutional, human and financial resource management with associated improved management effectiveness of natural resources of Corozal Bay Wildlife Sanctuary. Under the 2015 AWP, with the MAR Fund Project, a consultant will be contracted for US\$3,000.00 under this project, to work in collaboration with the Executive Board and staff of SACD to review and update both documents, to be approved by the Board and fully operational by the first quarter of this year 2015. The Executive Board will be contributing a great portion of their time to this activity.

### **COMPONENT 2 - BEST MANAGEMENT PRACTICES AND THE SUSTAINABLE USE OF MARINE-COASTAL RESOURCES ARE APPLIED.**

SACD is built on a foundation of community collaboration and support at organizational level, but recognizes that it needs to strengthen its social sustainability. It seeks to strengthen the engagement of different community sectors – of the women, the education sector and young fishermen, as well as increasing engagement of local fishermen that use Corozal Bay Wildlife Sanctuary. It also seeks to strengthen communication with the stakeholder communities, increasing recognition of the organization, with greater stakeholder understanding of what SACD is and support for what it hopes to achieve, and increased support for its activities - important for both short and long term social sustainability.

The activities for this year are focused on establishing the foundation from which supplemental economic opportunities can be developed. This will be done by developing a community strategy that covers all three of the CBWS vulnerable communities, incorporating the three Community Development Plans. These will be developed by the targeted communities (Sarteneja, Chunox and Copper Bank), facilitated by, and in close collaboration with, SACD Sustainable use of the natural resources and climate change resilience are important parts of the planning process and will be integrated into the identification and feasibility assessment of development strategies for the communities. To strengthen this component we are not only seeking to provide opportunities for sustainable, economic initiatives, but also to create a new generation of stewards by engaging the communities in awareness activities, to increase understanding of basic concepts of natural resource use, sustainability and the environment. SACD is also investing in long term community strategies through its scholarship programme, providing opportunities for further education for youths of these communities – identified as future conservation leaders. For many, this will also remove a critical barrier, as without any assistance to continue in education,, the only alternative for many of the youths is to go fishing. With environmentally strong development plans, integrating best practices, and greater engagement of informed stakeholders, SACD will be

contributing towards Result 2: Best management practices and the sustainable use of marine-coastal resources are applied. The verifiable indicators for this are R2 VI01: The four CMPAs have a strategy / community development plan for the end of the second year, and R2 VI03: Increased number of community members trained, accredited and involved in activities that support daily management tasks (biological monitoring, control and surveillance) of protected areas.

### **BC.2.01 DEVELOPMENT OF THE PRODUCTIVE FABRIC OF COMMUNITIES/ASSOCIATIONS**

The sub-activities planned under this activity are identified as priorities under the Sustainable Development Programmes in the 5 year management plan for Corozal Bay Wildlife Sanctuary. Providing and improving access to supplemental / alternative opportunities to natural resource use for key stakeholders is considered a key strategy. For Sarteneja, the focus is on facilitating the development of Sarteneja as a tourism destination, to provide opportunities for alternative livelihoods, with diversification away from traditional fishing – both local and on the reef. However, to complement the recommendations of the management plan a community strategy will be developed to serve as a guide for the provision and development of the any supplemental economic opportunity for the communities. This will take into consideration a strategic approach to the community needs as well as best practices for the sustainable use of the resources. The outputs of this activity will increase community awareness about best management practices and sustainable resource use. The community development plan, facilitated by SACD, will provide a guiding framework for the communities towards environmentally sustainable development. The structured nature of the plans, integrated monitoring and evaluation component, and high level of community participation throughout the planning process will provide the communities with increased leverage to seek funding for plan implementation. It will also identify specific supplemental livelihoods needs linked to Corozal Bay Wildlife Sanctuary. The planning process itself will strengthen community engagement in all three buffer communities, and develop improved communication and collaboration mechanisms, with greater support for the protection and conservation of the protected area.

#### **BC.2.01.01: Development of Community strategy**

A community strategy is planned for the early stages of the project, to guide activities towards strengthening community engagement, identify areas of support for sustainable community development. This will give us a structure under which economic alternatives are well planned in accordance with the needs of the communities and incorporating best practices where feasible. This project will provide US\$2,500.00 for contracting technical assistance for the development of the community strategy - done at a contract basis. Although this activity is critical for guiding investment in community alternatives, we are not allocating more than the proposed budget as much of this has already been completed by national initiatives in Belize (Economic Alternatives & Fisheries Diversification) and its further supported through the SIDS-CBA project, which will be conducting a series of consultations looking at Community Based Adaptation mechanisms to climate change impacts, and tying this into community development needs. The consultant's job under this project will be to research and compile the information and review with the communities.

### **BC.2.03 PARTICIPATION OF ORGANIZED COMMUNITY GROUPS IN THE MANAGEMENT OF NATURAL RESOURCES**

As mentioned above - SACD is built on a foundation of community participation, collaboration and support at organizational level, with the structure of the Board of Directors based on representation from the different community groups active in the area.

However, it recognizes that maintaining and strengthening its social sustainability is an ongoing task. SACD is strengthening engagement of different community sectors – of the women, the Education sector and young fishermen. This component of the project also strengthens communication with the Sarteneja community, increasing recognition of the organization as an integral part of the community, with greater stakeholder understanding of what SACD is and what it hopes to achieve, leading to increased support - important for both short and long term social and environmental sustainability. This will be done by empowering a generation of people by engaging them in awareness activities to increase their understanding of basic concepts of the



environment and the concepts of sustainable resource use. Scholarship opportunities provided through this project will encourage youths to continue education beyond primary level, providing them with the education, skills and confidence to seek jobs, reducing the number of youths going into the fishing industry.

#### **BC.2.03.02 Environmental education campaigns focusing on environmental awareness, importance of marine reserves, and socialization of the project.**

Raising awareness is considered a critical strategy within the management plan, with activities presented in the Education and Outreach Programme. SACD focuses on increasing understanding of basic concepts of estuary and reef ecology, conservation and the sustainable use of marine resources in the community, as well as of concerns currently facing marine resource managers, including climate change, towards greater ecological sustainability of the resources on which the community stakeholders depends. With the national footprint of the northern fishermen throughout Belize's coastal waters, SACD also recognizes and contributes towards addressing the national need for building understanding of the reef and its resources in one of the primary stakeholder groups of the Belize barrier reef, building capacity among resource users towards greater sustainable use. This is further strengthened at community level through SACD activities within the local schools and open days, such as Manatee Day etc. This project will provide US\$500.00 to purchase materials that will include a banner and promotional materials such as (T-shirts, pens, and water bottles, exercise books and stickers) for giveaway during SACD awareness activities. Most importantly in SACD's annual community open day targeted for September 2014, focused on the work of SACD and the importance of CBWS, while, also showcase the work of the Sarteneja Tour Guide Association, Sarteneja Fishermen Association, Las Sartenejeñas Cooperative, Wildtracks, Blue Ventures, and possibly the Fisheries Department and Forest Department by establishment of a booth each. This event will also serve for socialization of the project by including information of the project on the promotional materials and as part of the opening ceremony as well as on the SACD booth (this activity has already been done, however, the promotional material will be required to continue socializing the project and to be used on the "2015 Community Day"). There will also be co-financing from the SIDS-CBA project for climate change awareness activities, which will include environmental education activities with 7 schools in the area - the amount for this activity being co-financed is US\$3,250.00 for providing transportation and materials for the Education officer to implement mangrove field lessons and presentation in 7 schools within communities of CBWS. This co financing will also provide for the materials, transportation and prizes for the seven schools to participate in a school open day related to the importance of mangroves and climate change impacts.

#### **BC.2.03.10 Support of community youths through the continuation of the Volunteer Internship Programme and Scholarship programme**

SACD has an established ongoing Volunteer and Internship Programme that is focused on engaging youths in conservation and strengthening the capacity of the community by investing in future conservation leaders. This Programme integrates upper primary level students into conservation-related activities, training and involving them in basic biodiversity monitoring, garbage clean-ups etc, with 4-year high school scholarships awarded to the 4 best students – the most interested and motivated. As part of the scholarship requirements, the students then enter the Internship component of the VIP programme, participating in more technical aspects of the Research and Monitoring Programme, such as the seasonal water quality monitoring, with training in data management and analysis. The Scholarship Programme is considered an important strategy to encourage youths to continue education beyond primary level, providing them with the education to seek jobs, reducing the number of youths going into the fishing industry. The cost associated with this activity for this year activities under MAR Fund Project is US\$7,000.00 to support 16 scholarships of an average of US\$437.50 per scholarship for the three communities of Sarteneja, Chunox and Copper Bank to cover for tuition fees only. This is paid directly to the High School, with a contract signed with parents to commit them to covering the costs of books, uniforms and other costs, for the value of US\$500 per student per year, totalling US\$8,000 per year for 16 students – a counterpart contribution from the parents of the students. (The funds are committed for the school year 2014 - 2015 and due since August 2014).

#### **BC.2.05. Administrative Expenses**

### **BC.2.05.02 Bank Fees**

With every wire transfer of funds from the project account, SACD will use US\$500 of the project funds to offset this cost.

### **BC.1.6 Unforeseen expenses**

#### **BC 1.6.02 Unforeseen expenses.**

For the implementation of this year's activities of the Project, approximately 3% of the total Budget for this year will be considered as unforeseen expenses and corresponds to the amount of US\$1,773.00 of the project.

## **5. SUSTAINABILITY STRATEGY**

### **INSTITUTIONAL SUSTAINABILITY.**

SACD uses a number of tools to ensure institutional growth and sustainability. It is currently developing a framework for assessment and evaluation, based on: annual institutional assessment (using the TNC self-assessment tool), and the annual evaluation of management effectiveness (using the national Protected Area Management Effectiveness tool). With these assessment protocols in place, SACD can significantly strengthen its institutional capacity, using the outputs to identify priority strategies to incorporate into its adaptive management regime. SACD will also be revising its Policy and Procedures Manual, and its Articles of Association. Both of these were developed when SAD was first established in 2008, but as the organization has developed and grown, particularly in the number of staff employed, these two documents need to be more complex to better guide the Board of Directors and the organization as a whole, particularly in day to day operations.

### **FINANCIAL SUSTAINABILITY.**

SACD, as an organization, currently relies on project funding for achieving its goals, but has a vision, mission and structure that are attractive to a variety of funding agencies. Under a grant from OAK Foundation, SACD has a three year grant towards operational funds, providing the continuity it needs to be able to grow, and a three-year window in which to diversify its funding base. Under the MAR KfW funding, SACD will be working with a consultant to explore financial sustainability options and to develop a Financial Sustainability Plan to reduce dependency on grant funding.

With increasing tourism to the Sarteneja area, the options for implementing small scale financial sustainability mechanisms increase, with the potential for SACD to seek supporting donations from visitors to the area. For long term financial sustainability, however, SACD recognizes that it has to develop a more effective financial sustainability mechanism, with less reliance on funding partners, based on a toolkit of alternative options, through reducing overheads, and locating endowment funding towards annual operational costs.

### **ENVIRONMENT. (MEASURES TAKEN TO REDUCE THE ENVIRONMENTAL IMPACTS)**

SACD has an unwritten green policy of all activities being conducted following best practices for ecological sustainability, and SACD seeks to build the same respect for the environment in project partners and the Sarteneja community as a whole. Equipment is selected for minimizing environmental impacts – for example, 4-stroke outboard engines replacing 2 stroke, and using energy efficient light bulbs, and using electronic communication to minimize Printing and paper use where possible. SACD has also included a solar power installation component in the MAR KfW Project, to provide a cleaner energy source for its operational headquarters in Sarteneja.

All staff understand and follow the basic concepts of litter management, and this is one of the focuses of SACD's work with the schools, integrating coastal clean-ups into school activities.

As a protected area co-manager, SACD is focused on environmental sustainability as the cornerstone of its protected area management. It is addressing impacts in Corozal Bay (water contamination, over fishing, removal of mangroves), developing and strengthening collaboration

between conservation stakeholders towards more effective marine protected area management at system level, improving ecological sustainability. This estuarine system, the largest in the MAR region, is a critical nursery ground for several important commercial species, as well as for the viability of the vulnerable West Indian manatee. The area is also an important nursery for bull sharks in Belize, assisting in the maintenance of this top predator of the reef system. These aspects are to be taken into consideration during future zoning of the protected area, to increase effective management.

SACD also focuses on increasing understanding of basic concepts of reef ecology, reef conservation and sustainable use in the community, as well as concerns currently facing the marine resource managers, including climate change, towards greater ecological sustainability of the resources on which Sarteneja, as a community, depends. With the national footprint of the Sarteneja fishermen within Belize's coastal waters, building understanding of the reef and its resources in one of the primary stakeholder groups of the Belize barrier reef, building capacity among resource users towards greater sustainable use. This is further strengthened at community level through SACD activities in the local schools.

#### **APPROPRIATE TECHNOLOGY. (MAKING SURE EQUIPMENT IS SUSTAINABLE – LOCAL EQUIPMENT TO REDUCE MAINTENANCE COSTS)**

Where feasible, SACD buys equipment locally, partly to ensure it is contributing to the economy of Belize, but also to ensure that there is the in-country knowledge to maintain and fix equipment. For this reason, it always selects Yamaha outboards – the first choice for all fishermen in the community, in the knowledge that spare parts and mechanical knowledge are available for any issues that may occur.

As part of the organizational philosophy of reducing its impacts on the environment, SACD has included a solar power installation component in the MAR KfW Project, to provide a cleaner energy source for its operational headquarters in Sarteneja, and to reduce impact to operations from local power issues – brown outs and black outs, which can cause damage to equipment.

#### **SOCIO-CULTURAL AND MAINSTREAMING SUSTAINABILITY. (CULTURAL COMPATIBLE – GENDER EQUALITY)**

SACD is built on a foundation of community collaboration and support at organizational level, but recognizes that it needs to strengthen its social sustainability. It seeks strengthening the engagement of different community sectors – of the women of the Homestay Group, the Education sector and young fishermen, as well as increasing engagement of local fishermen that use Corozal Bay Wildlife Sanctuary. It is also strengthening communication with the Sarteneja community, increasing recognition of the organization as an integral part of the community, with greater stakeholder understanding of what SACD is and what it hopes to achieve, and increased support - important for both short and long term social sustainability.

SACD seeks to strengthen alternative incomes within Sarteneja, a step in the long process towards economic sustainability for the community. It addresses the need for supplemental income for local fishermen if they are to be engaged in the development of a local sustainable fishery and continue to participate in surveillance and enforcement activities in the Wildlife Sanctuary. It has also worked with women in the Community, providing alternatives skills training.

Tourism has been identified as an important foundation for the sustainable development of the community, and perhaps the only option for shifting and diversifying the economic base away from fishing. A Community planning initiative, the Sarteneja Tourism Development Plan, identifies options for sustainable tourism development, highlighting gaps in facilities and infrastructure, and barriers to development. A budget has been included for tour guide training, targeted at the young fishermen. This is considered an important target for the future economic sustainability of the Community, as these are the people who have an increased level of education - with a better understanding of the tourism market and targeted training, they will be the ones to see investment opportunities in future tourism initiatives in Sarteneja, and have the capacity to leverage funding.



PROJECT DEVELOPMENT TABLE

Objective	Expected Result	Main Activity	Sub-Activity	Unit of Time											Performance Indicator	Impact Indicator	Sources of Verification	Supposition Risks	% Execution	
				Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov						
Consolidation of the Marine-Coastal Protected Areas (MCPAs) in the region of the Project, with conservation and sustainable use of marine and coastal resources secured in the medium term	Result 1. Protection And Conservation Of Marine-Coastal Ecosystems In The Marine Area Are Secured	BC.1.01 Investment in Infrastructure	BC.1.01.02 Construction of a multipurpose building												SACD has a blueprint for the construction of the SACD HQ	By the end of the 2 <sup>nd</sup> year, SACD has a functional HQ	ToR / Contract with architect Digital copy of blueprint	Architect contracted has the required capacity		
		B.1.02 Investment in equipment	BC.1.02.01 Rehabilitation of the patrol boat.													SACD has a functional boat	SACD is able to conduct regular, reliable, safe patrols, increasing management effectiveness of CBWS	SACD / CBWS inventory	The SACD boat functionality is not impacted by other issues (eg. broken outboard motor)	
			BC.1.02.02: Purchase and installation of marker buoys and information signs													four 'No Wake' signs at four critical manatee areas installed	general awareness of the protected area borders increased	4 buoys installed		
			BC.1.02.03 Equipment and supplies to strengthen the Surveillance and enforcement													SACD has an operational boat, equipped for effective surveillance and enforcement SACD rangers have safety equipment for emergencies	The SACD patrol boat is able to support effective surveillance and enforcement activities Staff are safer with equipment for emergency situations. Surveillance and enforcement activities are more effective, with improved reporting	SACD / CBWS inventory	Boat may develop mechanical issues, reducing surveillance and enforcement effectiveness despite purchase of listed equipment	
		BC.1.02.04 Purchase of office equipment												Functional Desktop Computer Financial Reports	Financial reports are used routinely in management decisions	SACD / CBWS inventory Quickbooks installed	SACD Admins officer is able to take training in Quickbooks			

Objective	Expected Result	Main Activity	Sub-Activity	Unit of Time											Performance Indicator	Impact Indicator	Sources of Verification	Supposition Risks	% Execution		
				Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov							
																	Board minutes include quarterly financial report	SACD is able to retain its trained Admin. Officer			
			BC.1.02.04 Purchase of uniforms														All SACD staff can be identified from their uniforms	Surveillance and enforcement is more effective as staff recognized as having the authority to enforce	SACD / CBWS inventory	Uniforms are of good quality SACD staff take care of the uniforms	
			BC.1.02.08 Upgrading monitoring equipment														SACD is able to conduct essential research and monitoring activities, as per its Research and Monitoring Plan	SACD research and monitoring activities are informing management decisions	SACD / CBWS inventory Annual report of research and monitoring outputs	Equipment is used properly and free of damage	
		<b>BC.1.03 Generation/updating of MCPA Management plans</b>	BC.1.03.03: Development and implementation of Climate Change Community adaptation Plan														Development and implementation of Climate Change Community adaptation Plan	awareness of the importance of maintaining natural environmental buffers increased	ToR / Contract Final document		
		<b>BC.1.04 Implementation and Strengthening of the surveillance and enforcement</b>	BC.1.04.03: Implementation of surveillance and enforcement programme														3 days per week patrols	Protection and conservation of the coastal ecosystems of CBWS. Surveillance and enforcement activities are more effective, with improved reporting	Logs and repots.		
			BC.1.04.06: Training of rangers in Fisheries regulations, weapon handling and green laws														three day session training	surveillance and enforcement activities improved, as well as monitoring of the patrolling and efficiency of	Final report of the training session.		

Objective	Expected Result	Main Activity	Sub-Activity	Unit of Time											Performance Indicator	Impact Indicator	Sources of Verification	Supposition Risks	% Execution	
				Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov						
																reporting				
			BC.1.04.11: Planning for improved system and transboundary management													Four planning work shops developed.	transboundary collaboration mechanism development to improve system level and trans boundary communication, collaboration and implementation	Final report of the workshops. Conservation Action Plan for the Northern Belize Coastal Complex		
		BC.1.05 Support for the implementation of assessment and monitoring systems	BC.1.05.01 : Ground truthing for mangrove cover and marine grass lands												Base line of mangrove and sea grass. GPS points.	Conservation Of marine resources through monitoring actions	Final report with GPS points.			
			BC.1.05.06: Fish catch assessments of commercial important species												Fish catch assessment of commercial important species monitoring		Final report, data sheets.			
			BC.1.05.07: Monitoring of water quality												Water quality monitoring of CBMS		Final report, data sheets.			
			C.1.05.07: Monitoring of important indicator species and other important aspects												Monitoring of important indicator species		Final report, data sheets.			
			BC.1.05.10: Develop baseline and monitoring programme for environmental and socio-economic impacts												baseline and monitoring programme		Baseline and monitoring programm. Final report, data sheets.			

Objective	Expected Result	Main Activity	Sub-Activity	Unit of Time											Performance Indicator	Impact Indicator	Sources of Verification	Supposition Risks	% Execution	
				Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov						
		BC.1.06 Protection of fragile ecosystems	BC.1.06.04 GIS support for mapping services for surveillance and enforcement, and research / monitoring re. stromatolites, sea grass, mangroves and manatee resting areas													SACD is able to produce geo-referenced data	SACD is collecting field data Geo-referenced information is informing management decisions	ToR / Contract with SDS (GIS specialist) Maps integrated into surveillance and research and monitoring outputs	That the data is properly collected by community researchers and rangers to ensure the maps are accurate. There is always the risk of weather conditions affecting the geo reference/ data collection and interpretation of satellite images	
			BC.1.08 Institutional strengthening for areas managers	BC.1.08.05 Development of financial Sustainability Plan													SACD has a Financial Sustainability Plan that identifies potential financial sustainability mechanisms and guides its development of diversified funding lines	SACD is able to diversify its funding base over the five years of the project, through implementation of the recommendations of the Financial Sustainability Plan	ToR / Contract Financial Sustainability Plan, approved by the Board of Directors	Consultant has the required capacity and the plan is well defined within the context of it location with innovative ideas and mechanisms that suit the local context
		BC.1.08.05 Upgrade of financial Structure/Quickbooks														SACD has switched its financial management to Quickbooks, the industry standard	SACD has improved management and reporting of its finances	Receipt for Quickbooks Quickbooks installed on computer	SACD is unable to retain the Financial Officer and has no-one in the organization with the capacity to use Quickbooks effectively	
		BC.1.08.05 Training for use of accounting systems														The SACD Financial Officer has the capacity to use Quickbooks effectively for financial management of the organization	SACD has improved management and reporting of its finances. Quarterly financial reports are submitted to the Board of Directors	Receipt for training costs Certification of completion of course by the Financial Officer Board meetings	SACD is unable to retain the Financial Officer and has no-one in the organization with the capacity to use Quickbooks effectively	



Objective	Expected Result	Main Activity	Sub-Activity	Unit of Time											Performance Indicator	Impact Indicator	Sources of Verification	Supposition Risks	% Execution		
				Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov							
																	include quarterly financial reports				
			BC.1.08.06 Consultant to review and update Articles of Association and Policies and Procedures manual													SACD has revised, updated Articles of Association, updated Policies and Procedures that better define the governing rules and regulations of the organization	The SACD Board and Executive Director have clearer guidelines for organizational management	Revised Articles of Association, Policies and Procedures approved by the Board of Directors	Participation of Board of Directors is adequate - the recommendations are suited to and reflective of SACD		
	<b>Result 2: Best management practices and the sustainable use of marine-coastal resources are applied.</b>	<b>BC.2.01 Development of the production bases of communities/ associations</b>	BC.2.01.01 Development of community strategy, with viable recommendations for alternative livelihoods														SACD is better able to identify how and in which areas it can assist communities in becoming less reliant on CBWS and the reef	Communities develop alternative that reduce their reliance on CBWS and the reef	Community strategies / Adaptation Plans have been developed for all three key stakeholder communities	Communities are engaged and willing to participate	
			<b>BC.2.03 Participation of organized community groups in the management of natural resources</b>	BC.2.03.02 Implementation of at least one environmental education campaign focusing on environmental awareness-raising, importance of marine reserves													SACD is able to engage local stakeholders, and raise awareness of the importance of marine reserves – particularly CBWS	CBWS stakeholders are more aware of the role of mpas, and use the marine resources more sustainably, following the rules and regulations of the mpas	Education campaign workplan Pre- and post-surveys indicating increased awareness	Communities are engaged and willing to participate	
			BC.2.03.10 Awarding of at least 16 scholarships for students to attend a secondary education														SACD provides 16 students that have shown conservation leadership qualities with high school scholarships	SACD has greater support in the future, with future community leaders being knowledgeable about and fully supportive of conservation initiatives	16 signed scholarship agreements	Students with increased opportunities for education may leave the community / Belize for higher education, and not return as leaders	

