

<b>PROJECT:</b>	<b>SITE EXCHANGE</b> between Soufriere Marine Management Area, St. Lucia and Bonaire National Marine Park to support the establishment of No Take Marine Reserves
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**GOAL**

Build capacity and support on Bonaire for the establishment of No Take Marine Reserves (NTMRs or Fish Protection Areas) in order to safeguard and conserve Bonaire’s reef fish populations.

**AMOUNT REQUESTED**

US\$ 25,300.00 (Stg 14,892.00)

**RATIONALE**

Coral reefs throughout the Caribbean have been in a serious state of decline for more than two decades (Gardner, 2003). Bonaire’s reefs are an exception. Data collected using the Atlantic and Gulf Rapid Reef Assessment (AGRRA) protocol has resulted in the development of a Caribbean “health index” based on thirteen independent variables (including fish abundance). This data indicated that Bonaire has the highest index of reef health of any site studied in the Caribbean.

Nevertheless the Bonaire National Marine Park realized in 2002 that reef fish populations are under serious threat and that there is an urgent need to establish No Take Marine Reserves (NTMRs) to protect them. Whilst recent monitoring work (Roberts and Hawkins, 1994; AGRRA, 1999) has indicated that Bonaire’s fish populations are some of the healthiest and most diverse in the Caribbean, in October 2002 data was found from 1974 (Prof. Bak, pers. comm.), which clearly demonstrates that Bonaire’s reef fish populations are chronically overfished and in serious decline. Further analysis (Steneck, McClannahan ,2003) has shown both grouper and snapper populations to be in rapid decline. Whilst there has been no demonstrable increase in fishing pressure, the island is also starting to see switching of target species with parrotfish appearing on the menu for the first time in the last year - another classic indication of overfishing.

In response to this the Bonaire National Marine Park has developed a multifaceted programme to establish Fish Protected Areas at selected sites on the leeward shore of Bonaire. One component of this would be to conduct site exchanges consisting of mixed groups of park staff and leaders of the local fishing community with an area, which has a proven track record of setting up and successfully implementing NTMRs.

The Soufriere Marine Management Area (SMMA) on St Lucia has been selected by ICRAN-UNEP as a Caribbean Demonstration site precisely because of its outstanding and innovative work with local fishing communities in establishing and maintaining a system of NTMRs. Site exchanges with SMMA St. Lucia would allow for this knowledge and expertise to be transferred to Bonaire and would build local capacity for the implementation of NTMRs whilst increasing local community support for Fish Protected Areas on Bonaire.

## FISH PROTECTED AREAS PROJECT

The site exchange with St. Lucia would form one component of a comprehensive, multifaceted programme designed to successfully implement Fish Protected Areas on Bonaire and halt the decline in Bonaire's reef fish populations.

This would be a "stand alone" component, which is nevertheless critical to the success of the overall programme. The local community, fishermen and members of the fishing co-operative need to be convinced of the effectiveness of site closure in terms of fish replenishment and improvements in reef health. A positive and empowering example is needed to motivate local artesinal fishers. St. Lucia offers a superb example from which many lessons can be learnt and from whom both the Marine Park and fishing communities stand to benefit tremendously from sharing experiences, methods and outcomes.

Additional planned and on going programme activities include:

- ☒ **Community outreach** with is being undertaken under the leadership of the Bonaire National Marine Park. Engaging the fishermen and fishing co-operative in on going dialogue to established closed areas, their location, size, time frames for closure, policing of closed areas and catch data
- ☒ Collecting **baseline data** on benthos (coral and algae), fish populations and nutrient levels inside and outside of proposed Fish Protected Areas which is being undertaken by Dr. Robert Steneck and Dr. Tim McClannahan with the financial support of the Pew Fellows Marine Conservation co-operative grant and University of Maine School of Marine Science. Data collection commenced in 2003 and Drs Steneck and McClannahan are making their third site visit to Bonaire in October 2003 to consolidate their pre-closure data collection. Their first report "*A Report on the Status of the Coral Reefs of Bonaire with Advice on the Establishment of Fish Protection Areas*" was released in June 2003.
- ☒ On **going monitoring** of fished and non-fished areas after closure of Fish Protected Areas which will be undertaken by Dr. Robert Steneck and Dr. Tim McClannahan.
- ☒ Data collection on **fishing effort** and catch (catch per unit effort) of commercial and artesinal fishers which is being organised jointly with the Central Government Department of Public Health, (VOMIL) Curacao with financial support from VOMIL as part of a larger programme to assess fishing effort on the Antillean islands

## WORK PLAN FOR SITE EXCHANGE WITH ST LUCIA

### Preparation

- Open dialogue, establish needs and interest, agree timeline
- Collect baseline data on fish populations (underway with Drs Steneck/McClannahan)

### Phase 1: Field visit to Bonaire by St. Lucian delegation (one week)

- Make logistical arrangements (flights, accommodation, transfers)
- Introductions: STINAPA, Tourist Office, Dive Operator Association, Fishing Co-operative
- Presentations on Bonaire, the reefs, Bonaire National Marine Park, fishing on Bonaire
- One on one time with Bonaire National Marine Park staff
- One on one time with Bonairian fishermen, community and members of fishing cooperative
- One on one time with tourism interests
- Debrief (questionnaire), closing ceremony, BBQ

### Phase 2: Follow up visit to St. Lucia by Bonairian delegation (one week)

- Introduction to St. Lucia, SMMA and local fishing community
- One on one time with fishermen
- One on one time with SMMA Park staff
- One on one time with dive/tourism interests

### Reporting

## DETAILED BUDGET - *attached*

## TIMELINE

The project would begin immediately on receipt of funding with contacts being established, preparations made, sensitization of participants and logistical arrangements being made for the first field visit.

Field visits would be of one week duration each. It is important that the visits are timed to be as convenient as possible to all participants (ie avoiding key fishing activities - such as dorado season on Bonaire - major trade shows, local events etc).

The first would take place within three months of the commencement of the project and the second exchange would be scheduled three to six months later (logistics permitting).

The project is scheduled for completion within one year

## LINKAGES TO ICRI FRAMEWORK FOR ACTION

This project addresses two of the four key elements identified in the ICRI Call to Action namely management and capacity building whilst incorporating research and monitoring within the overall project framework.

The project aims to address the overriding priority identified within the ICRI Framework for Action namely, supporting "actions which will have tangible,

positive and measurable effects on coral reefs ... and the communities which depend upon them". It further aims to "develop national capacity to conserve and sustainably use coral reefs and related ecosystems ..." whilst working within the existing management frameworks in each country.

In terms of *management* the project addresses:

- Achieving a sustainable artesinal fishery on Bonaire
- Promoting and replicating the success of the SMMA
- Supporting management measures to improve socio-economic condition of local communities

In terms of *capacity building* the project addresses:

- Supporting informal education of the community at the local level
- Strengthening the management capacity on Bonaire
- Increasing community awareness and involvement in fisheries management
- Utilizing Caribbean regional expertise in improving management capacity

## DELIVERABLES

- Report on the exchange programme including lessons learnt and recommendations
- Evaluation of the success of the project, ongoing concerns and the need for follow up work
  
- Improved understanding of the need for Fish Protected Areas amongst workshop participants
- Substantial increase in community support for Fish Protected Areas on Bonaire amongst those involved in the workshops
- Establishment of Fish Protected Areas on Bonaire under a co-operative working agreement with the BNMP
- Support for data collection and monitoring amongst stakeholders

## CONTRIBUTION OF THIS PROJECT TO ICRAN WORK IN THE CARIBBEAN

Both SMMA and BNMP have been selected as "Demonstration sites" within the Caribbean. SMMA because of its innovative work with fishing communities in the establishment of NTMRs and BNMP because of its success in becoming self financing through the introduction of diver admission fees as well as its co-operative working relationship with the local tourism and the dive industries.

Both sites have much to learn from one another and site exchanges have already been identified as one of the most effective means of exchanging expertise, learning by example and building capacity at the local level.

Such an exchange will enhance the ICRAN programme, using the sites in the way they were meant to be used under ICRAN - as demonstration sites or show cases of excellence - to build much needed capacity at both sites so that they can better work with local communities, manage their marine resources and ultimately better protect their coral reefs.

## DURABILITY OF THE PROJECT

The setting up of Fish Protected Areas on Bonaire is seen as a long term investment in the health of Bonaire's reefs and reef fish populations. It is a critical investment in Bonaire's tourism product and will contribute to the island's continued economic stability supporting local businesses and employment.

Once established, in principle, these areas would be maintained and the results of closure monitored indefinitely.

It is furthermore the intention that the links with St Lucia would be enhanced and maintained over the long term thereby maximizing the opportunity for on going exchanges of information and expertise.

## PROJECT STATUS

Kai Wulf (SMMA manager), Maarten Schuit (BNMP manager) and Elsmarie Beukenboom (Director of STINAPA Bonaire) have already expressed their enthusiasm for the site exchanges between SMMA and BNMP. Kai Wulf is familiar with the process as SMMA have already hosted two similar groups.