

Environmental Management Plan

*EMPOWERING WOMEN THROUGH NEW MARKETS FOR
INVASIVE LIONFISH JEWELRY*

Belize Lionfish Jewelry
SARTENEJA VILLAGE | COROZAL DISTRICT

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PROJECT BACKGROUND

Sarteneja village is located on the northeastern tip of the coast of Belize. It is 30 miles by road from Orange Walk Town or 18 miles by sea across the bay from Corozal Town. The major economic activity in the village is a mix of fishing and agriculture, with fishing being the dominant. It has a population of approximately 1,825, of which approximately 1,120 are under the age of 30 years. The village boasts a high school and two primary schools. There is also some tourism activity, with the women having developed a “Home Stay” programme in conjunction with the Belize Tourist Board. While agriculture still plays a major role in the economy of the village, fishing has been the primary income earner for the last 30 years. However, with the decline of fish stocks, agriculture is beginning to play a larger role. Agriculture, which was once the primary income earner, has now become the alternative to which residents are returning. The ethnicity is predominantly Belizean Hispanics, with a few expatriate residents. Many women lack job skills and are totally dependent on partners for income and survival.

The Belize Lionfish Jewelry was established in August 2015 and legally registered on 3rd September 2015. The group therefore has no experience or capacity for project management at this time. For that reason, the project is being managed by and implemented with the support of Blue Ventures, a UK charity and social enterprise. The members are primarily at risk women from across the country including the coastal communities of Sarteneja, Punta Gorda and Monkey River. The group has no assets apart from the jewelry making tools that members possess.

Over the last three decades, populations of the invasive red lionfish, *Pterois volitans*, have exploded throughout the Caribbean region, devastating fish and invertebrate communities on coral reef ecosystems. Although the eradication of lionfish is no longer considered possible, recent research shows that targeted fishing of lionfish can suppress their population sufficiently to allow native species to recover. Belize Lionfish Jewelry is a group that is currently making and selling jewellery that uses the parts of lionfish that are normally discarded. This group’s business will provide additional revenue to fishers, create new sources of income accessible to women within Belize’s coastal communities, and raise awareness of the invasion through lionfish jewellery sales and advertising.

PROJECT OBJECTIVES

General Objectives:

1. To improve the livelihood of members and their families in a sustainable manner through supplementary income generation using acquired skills in jewelry making.
2. To expand and market its products in tourist centers throughout Belize in order to increase sales and income.

Specific Objectives:

1. provide additional revenue to fishers,
2. create new sources of income accessible to women within Belize's coastal communities, and
3. raise awareness of the invasion through lionfish jewellery sales and advertising.

ACTIVITIES

Activity 1: Hold at least one Workshop to establish group structure, operations, and define group identity and brand. The group members will come together for a four day workshop that will focus on team-building and establishing the group vision and mission, define the institutional structure and the last two days will provide training on "Starting a Business", covering topics such as registration, tax, information technology, supply chain management, internal and external communications. During this four-day workshop, the group participants will receive training in group management, brand development and basic book-keeping.

Activity 2: Training from an expert jeweler to ensure product quality meets market expectations. An expert jeweler familiar with the US market standards and expectations will lead a four-day workshop to hone participants' jewelry-making skills, emphasizing the importance of material selection and attention to detail in creating finished products. Expectations from buyers on packaging, quality, standards, costing and pricing will be covered.

Activity 3: Establish online presence for international sales. The group will then establish a shop on www.etsy.com, an online global marketplace that provides small businesses and "creative entrepreneurs" specializing in handmade crafts with a free online shop.

Activity 4: Establish sales points in Belizean hotels and gift shops. Executive committee members will travel to potential sales points within Belize, such as high-end hotels and gift shops in Belize City, Placencia, San Pedro and Caye Caulker, to negotiate, establish and formalize sales agreements.

Activity 5: Purchase jewelry making and operational materials (assets). Make an initial capital investment in branded jewelry boxes, tags, stickers, stamps and envelopes will be made. Additionally promotional materials and display equipment (tables and tent for booths), t-shirts for group members, and laptop / phones for group management are included.

Activity 6: In-country travel for media appearances and meetings to establish agreements, such as with the BTB Unique Belize brand.

Activity 7: Quarterly management and decision-making meetings with elected steering committee.

EXPECTED RESULTS

The completion of this project implementation would definitely upgrade and strengthen the Women's Group which will consequently be able to:

1. Operate on a continuous basis and a larger scale,
2. Operate with a group of women that are trained and competent in the area of Jewelry production;
3. Increase income and profit levels, and
4. Become better established and formal in its business dealings.

Proper implementation of this project will result in the increase of part-time employment and income to members of 20 households in five coastal communities, including Sarteneja, Monkey River and Punta Gorda. The resulting local investment/job creation initiative will be a direct contribution to the overall socioeconomic development of these communities.

EXPECTED IMPACTS

This project is expected to have a positive impact on the environment as it is creating a high value product from the byproducts of an invasive species. There is a direct relationship between the success of this project and a reduction in the lionfish population. There are no expected negative impacts from air, water or other forms of pollution from this project as it focuses primarily on capacity building, implementation of best practices for institutional development and jewelry production, equipment and material purchase, and marketing.

Points that should be considered:

- a. The commercial divers in Belize are opportunistic and will legally take anything that is commercial value when they are in the water. As a result the lionfish is targeted because there is a market primarily for the fillet.
- b. A market has developed for the lionfish fillet and it is sought as an alternative to the other forms of fish fillet because of the creamy white appearance and delicate texture. Some restaurants carry it on their menu and it has attracted much attention.
- c. The project will incorporate other byproducts into the jewelry making process, primarily the conch shell and coconut shell.
- d. The inputs for the lionfish jewelry project can be placed into two main categories; low value, such as the fins, shells etc that would have been discarded; and high value such as the wire and clasps which are too expensive to be wasted.

MITIGATION MEASURES

The mitigation measures will involve ensuring that the group follows best practices for the production of the items they will market. Because of the high value nature of the product it is not expected that there will be inefficiencies in the production process and very little wastage. The conversion of the low value inputs into a high value product ensures that there will be very little wastage since the group is seeking to maximize profits. The process is also a close to zero waste primarily for this reason.

MONITORING PROGRAM

Any monitoring program will of necessity be an integral part of the production process. It will be anchored by (i) the daily production schedules, and (ii) weekly and monthly production outputs. The group will need to monitor the amount of daily orders and ensure that the amounts of materials ordered can efficiently provide the output. Weekly and monthly production numbers will indicate the extent to which production targets were met and the amount of scraps that is generated. This will then be used to determine the level of efficiency and ways in which it can be improved. Where necessary, corrective action will be taken where necessary at every step in the process.

LINES OF RESPONSIBILITY

The Executive Committee of the Lionfish Jewelry Group is responsible for the management of the affairs of the organization. The Executive Committee reports to the membership on a quarterly basis and all other bodies and individuals report to the Executive Committee. The Lionfish Jewelry Group will use the services of Blue Ventures, a UK-based charity and social enterprise, as a coordinator/manager to manage the project in the initial stages. Blue Ventures will report to the Executive Committee and everyone working directly with the project will report to the person assigned by Blue Ventures.

CULTURALLY APPROPRIATE CONSULTATION AND PARTICIPATION

In July of 2013 Dr. Roy Young, the consultant hired by BEST to do the baseline assessment and Project Orientation held two 1-day workshops in Sarteneja for residents of that community. At the meetings participants were informed about the project and encouraged to come up with ideas for projects that would be beneficial for the environment and which would generate income. Coming out of those meetings were suggestions for Processing of Fruits and Vegetables, Agriculture/Farming, Planting and Processing of Animal Feeds, Aquaculture (including tilapia farming). After further consultation with the community, six project proposals were developed from concepts and these include: Tilapia farming, Water Taxi Service, Pig Rearing, Honey Production, Sewing and Jewelry making from Lionfish fins. Of the six, four were recommended for funding by the TAC.

BEST made its first presentation to the Lionfish Group in August of 2015 at a workshop in Monkey Bay. During the development of the proposal and the due diligence process, several meetings were held with the group in Sarteneja. BEST staff always insisted that members of the group actively participate in meetings and share their opinions and concerns. Internally the group also held its own meetings. The bylaws for the group were recently completed and defines a process for meetings and consultations and follows the traditionally accepted methods and protocols. No other consultation and participation mechanism was used. BEST continues to engage the association and the community in this manner.

COST ESTIMATES AND SOURCES OF FUNDS

The cost of putting in place the mitigation measures is already built into the budget as a byproduct of the production process. As a result there is no need for additional budgeting for these activities.

Line Item	JSDF	Beneficiary Contribution	Total
Travel	2,100	1,450	3,550
Accommodation	7,480	1,740	9,220
Food	2,070	1,740	3,810
Disposables	400		400
Materials	9,535	2,660	12,195
Consultant	7,500		7,500
Communications	3,400		3,400
TOTAL:	32,485	7,590	40,075

ADDITIONAL INFORMATION

There is currently no specific legislation that deals with jewelry making.