Please note that this template is provided to facilitate information submission on a voluntary basis, only when the information provider finds this template appropriate. If the available information does not fit the format of this template, information can be submitted in another format, in consultation with the Secretariat.

Appendix

Template for Submission of Scientific Information

to Describe Ecologically or Biologically Significant Marine Areas

*Note: Please **DO NOT** embed tables, graphs, figures, photos, or other artwork within the text manuscript, but please send these as separate files. Captions for figures should be included at the end of the text file, however.*

Title/Name of the area: Bahamas Deep-Sea Corals 2009

Presented by (*names, affiliations, title, contact details)*

John Tomczuk
OAR Coral Coordinator
NOAA's Office of Ocean Exploration and Research
Silver Spring, MD
301-734-1009

Main Contact:
Chief Scientist: Scott C. France
University of Louisiana at Lafayette
france-at-louisiana-dot-edu.
337-482-6320.

Abstract (*in less than 150 words)*

March 13 to 31, 2009 the Deep-water Connections science team explored the deep slopes of the Northern Bahamas, looking for deep-sea communities of *octocorals* (commonly referred to as soft corals, gorgonians, or sea fans). The expedition, led by Chief Scientist Scott C. France, is a continuation of earlier investigations. For the past eight years, France and colleagues from the University of Louisiana – Lafayette have studied deep-sea corals in North Atlantic waters between 1,000 and 2,500 meter (3,280 and 8.202 foot) depths, including a previously unexplored group of extinct underwater volcanoes.

Introduction

(To include: feature type(s) presented, geographic description, depth range, oceanography, general information data reported, availability of models)

Location

(Indicate the geographic location of the area/feature. This should include a location map. It should state if the area is within or outside national jurisdiction, or straddling both. It should also state if the area is wholly or partly in an area that is subject to a submission to the Commission on the Limits of the Continental Shelf)

Three major areas of interest were identified: the mouth of Little Abaco Canyon (north of Abaco Island), the Bahama Escarpment (the steep-walled drop-off from the Bahama Plateau into the North Atlantic Basin), and the San Salvador spur (an underwater feature that juts northward from the Bahama Plateau). Biological communities in these deep-sea areas have never before been explored using modern imaging technologies, such as the high-definition video.

Map link:

http://oceanexplorer.noaa.gov/explorations/09deepseacorals/logs/summary/media/bahamas_region_600.html

Feature description of the proposed area

(This should include information about the characteristics of the feature to be proposed, e.g. in terms of physical description (water column feature, benthic feature, or both), biological communities, role in ecosystem function, and then refer to the data/information that is available to support the proposal and whether models are available in the absence of data. This needs to be supported where possible with maps, models, reference to analysis, or the level of research in the area)

In the western North Atlantic, a major deep-sea current flows from north to south along the slope of the continental USA, but as it approaches the tropics, it encounters deep, cold water flowing northward from Antarctica. Our goal is to determine if the coral species, and their associate fauna, living in the subtropical Bahamas are the same as those on the seamounts to the north, or will we begin to see a different group of species reflecting a southern influence?

Feature condition and future outlook of the proposed area

(Description of the current condition of the area – is this static, declining, improving, what are the particular vulnerabilities? Any planned research/programmes/investigations?)

The most surprising discovery was that of a spectacular wall approximately 300 meters (~1000 feet) tall, found greater than 1 mile deep (between 1635 -1900 meters depth (5395- 6270 feet)) and covered with a diversity of sponges of varying colors, sizes and shapes, and octocorals in high abundance. In most places in the food-poor deep sea, the density of larger animals is quite low, so it was remarkable to see this wall feature covered by so many animals over such a large area.

One of the most important discoveries was the diversity (number of species) of octocorals we found in this region. The study areas were dominated by species from two families of deep-sea corals: bamboo corals (Isididae) and chrysogorgiid corals (Chrysogorgiidae). Even though we explored a relatively small area of the bottom, we estimate we found 14 bamboo coral species

and 7 chrysogorgiid coral species, most of which will be new to science. Before this expedition, fewer than a dozen bamboo coral species were known from the entire North Atlantic.

One of the reasons we are finding so many previously unknown species is because of the ROV technology we are using to explore. These species are living on sheer vertical walls, under hangs, and rugged topography where net trawls – the method of sampling historically used to obtain deep-sea animals – would likely be lost. Even if trawls were successfully deployed and recovered, some of these corals have fragile skeletons and would be destroyed in a trawl before being recovered on the deck of the ship.

Assessment of the area against CBD EBSA Criteria

(Discuss the area in relation to each of the CBD criteria and relate the best available science. Note that a candidate EBSA may qualify on the basis of one or more of the criteria, and that the boundaries of the EBSA need not be defined with exact precision. And modeling may be used to estimate the presence of EBSA attributes. Please note where there are significant information gaps)

CBD EBSA Criteria (Annex I to decision IX/20)	**Description** (Annex I to decision IX/20)	**Ranking of criterion relevance** (please mark one column with an X)			
		Don't Know	**Low**	**Some**	**High**
Uniqueness or rarity	Area contains either (i) unique ("the only one of its kind"), rare (occurs only in few locations) or endemic species, populations or communities, and/or (ii) unique, rare or distinct, habitats or ecosystems; and/or (iii) unique or unusual geomorphological or oceanographic features.				
Explanation for ranking					
Special importance for life-history stages of species	Areas that are required for a population to survive and thrive.				
Explanation for ranking					
Importance for threatened, endangered or declining species and/or habitats	Area containing habitat for the survival and recovery of endangered, threatened, declining species or area with significant assemblages of such species.				
Explanation for ranking					

Vulnerability, fragility, sensitivity, or slow recovery	Areas that contain a relatively high proportion of sensitive habitats, biotopes or species that are functionally fragile (highly susceptible to degradation or depletion by human activity or by natural events) or with slow recovery.				
Explanation for ranking					
Biological productivity	Area containing species, populations or communities with comparatively higher natural biological productivity.				
Explanation for ranking					
Biological diversity	Area contains comparatively higher diversity of ecosystems, habitats, communities, or species, or has higher genetic diversity.				
Explanation for ranking					
Naturalness	Area with a comparatively higher degree of naturalness as a result of the lack of or low level of human-induced disturbance or degradation.				
Explanation for ranking					

Sharing experiences and information applying other criteria (Optional)

Other Criteria	**Description**	**Ranking of criterion relevance** (please mark one column with an X)			
		Don't Know	**Low**	**Some**	**High**
Add relevant criteria					
Explanation for ranking					

References

(e.g. relevant documents and publications, including URL where available; relevant data sets, including where these are located; information pertaining to relevant audio/visual material, video, models, etc.)

http://oceanexplorer.noaa.gov/explorations/09deepseacorals/logs/summary/summary.html

Maps and Figures

Rights and permissions

(Indicate if there are any known issues with giving permission to share or publish these data and what any conditions of publication might be; provide contact details for a contact person for this issue)