

APPENDIX 3

ABANDONED GILL NET REMOVAL/STUDY

PERIOD COVERED: July to September 1999

SUMMARY

Abandoned gill nets were retrieved from seven locations (Fig. 1) on Guam from July to September 1999. A total of 22 nets were recovered with an average mesh size of 1.75 in. and a total length of 1,232 ft. Of the 22 nets collected, 14 were identified to contain incidental catches of marine organisms and coral with a total of 5.66 kg of invertebrates, 0.05 kg of reef fish, and 53.79 kg of marine algae. Live corals and coral rubble fragments were also recovered for a total of 2.0 kg and 25.0 kg respectively.

OBJECTIVES

1. To identify and remove abandoned gill nets on reefs around Guam reported by fishermen and concerned citizens.
2. To collect data related to the destruction of reef habitat and incidental catch of marine organisms caused by abandoned gill nets.
3. To analyze data and identify locations affected by abandoned gill nets and evaluate the need for effective management related to this occurrence.

PROCEDURES

Information on the location and condition of abandoned gill nets were obtained during creel surveys from July to September 1999. Net location was verified by staff following the survey and removed at a later date. Gill net, marine organism, and coral habitat data was collected to quantify damage to organisms and coral. Data included locality, reef zone, water depth, additional remarks, coral and habitat damage (before and after net removal), and marine organisms collected (condition, length, weight, and species identification). Marine organisms capable of survival were released.

RESULTS

A summary of abandoned gill net collection data from July to September 1999 is included in Table 1. Data was subdivided into the following categories: nets, marine organisms, and habitat damage. Abandoned gill nets were located in seven inshore locations and collection data was summarized for each one. Location 67 (Fig. 1) had the greatest number of abandoned gill nets collected for a total of 14. Invertebrates comprised the majority of the incidental catch with 5.66 kg. Released invertebrates included the following: 55 *Holothuria atra*, 1 *Conus lituratus*, 1 *Zosymus aeneus*, and 1 *Ateragatis subdentatus*. In addition, approximately 54.0 kg of marine algae (primarily *Sargassum* and *Turbinaria*), 2.0 kg of live coral fragments, and 25.0 kg of rubble were collected during the study period.

RECOMMENDATION

Damage to coral habitat was difficult to quantify in the field, due to the absence of a standard measure. Photo documentation and cooperative efforts with UOG marine lab personnel should improve habitat assessment. The significant number of abandoned gill nets collected over the three month study period emphasize the need for continued removal and to further document the incidental catch and damage to coral habitats on Guam.

Table 1 Summary data of abandoned gill nets collected from July to September 1999.

NETS	LOCATIONS							Σ
	13	16	49	53	63	67	71	
Number	1	1	1	1	1	14	3	22
Avg Mesh (in)	1.5	2.0	2.5	2.0	1.5	2.4	3.1	1.75
Length (ft)	100	10	300	100	100	516	106	1,232
SPECIES								
# Fish	1	0	0	0	0	1	0	1
Fish (kg)	0.05	0	0	0	0	1	0	0.05
# Inverts	4	0	59	0	0	10	0	73
Inverts (kg)	0.33	0	3.89	0	0	1.44	0	5.66
Algae (kg)	2	1	12.04	0	4.5	34	0.25	53.79
HABITAT DAMAGE								
# Corals (Live)	N/A	N/A	2†	N/A	N/A	N/A	N/A	2
Dead Coral (kg)	N/A	N/A		N/A	N/A	N/A	€	25

†*Porites cylindrica* – estimated 2.0 kg at 120 mm each.

Coral Rubble – estimated 20.0 kg.

€*Acropora danai* – estimated 5.0 kg.