

FISHERIES DEPARTMENT

REPORT

TO: Mr. Denzil Roberts- Chief Fisheries Officer
Ms. Ingrid Peters – Principal Fisheries Officer

FROM: Mr. Terrence Browne

DATE: 19th February, 2021

SUBJECT: Sea observer Annual Report (January- February 2020)

Introduction

In Guyana, the fishing industry is a significant contributor to the economy, accounting for 6% of its GDP and around 5% of total exports. Seabob is Guyana's most valuable seafood export and ranks fifth among exports overall. Almost all seabob harvested by the industrial fishery is exported to the US with a value of ~ US\$45 million annually. MSC certification will enable the fisheries expand marketing opportunities internationally and ensure environmental sustainability.

The Marine Stewardship Council (MSC) is an international non-profit organization established to address the problem of unsustainable fishing and safeguard seafood supplies for the future. It runs a certification and eco-labelling program for wild-capture fisheries. For a fishery to attain MSC certification, it must meet the MSC Fisheries Standard, which is based upon the United Nations Food and Agriculture.

Fishing boats can be dangerous workplaces, and observers may find themselves in unsafe conditions with limited options to be rescued or get medical help. In July 2020, the MSC designated £100,000 of the Ocean Stewardship Fund towards improving global best practice to secure a safe working environment for fishery observers.

At-sea observers are an independent source of fisheries data, including by-catch composition, mortality and interaction with sharks, marine mammals, sea birds and turtles. Organization (FAO) Code of Conduct for Responsible Fisheries of 1995 identified observer programmes as an integral part of MSC. In 2001, the International Plan of Action (IPOA), designed to prevent, deter and eliminate illegal, unregulated and unreported (IUU) fishing, adopted by the Committee on Fisheries (COFI), encouraged the implementation of observer programmes as an MSC tool.

Subsequent trips were conducted which laid the foundation to the programmes current modus operandi. The objective of the programme is to collect data on discards which are not reported and

to record the interaction of the trawl fishing gear with endangered threatened and protected species. This data collected help with fisheries management and compliance with Marine Stewardship Council. Additionally, the program will conduct comprehensive biological sampling.

COMPANIES INVOLVED:

- PRITIPAUL SINGH INVESTMENT (PSI)
- NOBLE HOUSE SEAFOODS (NHS)
- Gopie Investment Inc. (G.I.I)

OBSERVERS:

- Mrs D. Husbands,
- K. Jacobs
- Mr C. D'Anjou
- Mr T. Browne.

Objectives:

1. To collect data at-sea which will be is in compliance with Marine Stewardship Council.
2. To account for the discards which are not reported and interaction of the endangered threatened and protected species.

Method

- A schedule was created for sampling activities.
- Observers then went onboard a vessel to carry out sample activities (two observer per vessel).
- Observers then sampled trash/discards, then collect necessary data.

Research: Three trips were done (trip# 4, 5 & 6) were done in the closed season (test fishing activity). This was for research purpose (below the eight (8)) fathom line.

Trip one (21st – 29th January2020) was facilitated by the **Pritipaul Singh Investments Inc (P.S.I)**. The vessel used was **Liberty 99**, which was operated by Captain A. Perry. In addition five crew men were on board along with two fisheries officers/Observers.

Trip two (15th – 23rd February 2020) was facilitated by the **Noble House Sea Food Company (NHS)** Company. The vessel used was **Victoria**, which was operated by Captain Samuels. In addition four crew men were on board along with two fisheries officers/Observers.

Trip three (18th – 26th February 2020)) was facilitated by the **Noble House Sea Food Company (NHS)** Company, vessel used was Ebb Tide which was operated by Captain Mohalall Seepersaud . In addition four crew men were on board along with two fisheries officers/Observers.

Trip four (01st - 06th October 2020) was facilitated by Pritipaul Singh Inc. With vessel Liberty 99 which was operated by Captain S. Kissoon in addition six crew men were on board along with two fisheries officers/Observers.

Trip five (14th -21st October 2020) was facilitated by **Noble House Seafood with vessel Highliner 88** which was operated by Captain Rudy Gobin in addition four crew men were on board along with two fisheries officers/Observers.

Trip six (26th – 31st October 2020) was facilitated by Pritipaul Singh Investment Inc. The vessel used was Liberty 99 and it was operated by captain, N. Persaud. In addition, five crew men were on board along with two fisheries officers/Observers.

Trip seven (16th – 24th November 2020) was facilitated by Noble House Seafoods. The vessel used was Divinity and it was operated by captain, George Phang. In addition four crew men were on board along with two fisheries officers/Observers.

Trip eight (5th – 13th December 2020) was facilitated by Gopie investment Inc. The vessel used was Exprensa 11. In addition four crew men were on board along with two fisheries officers/Observers.

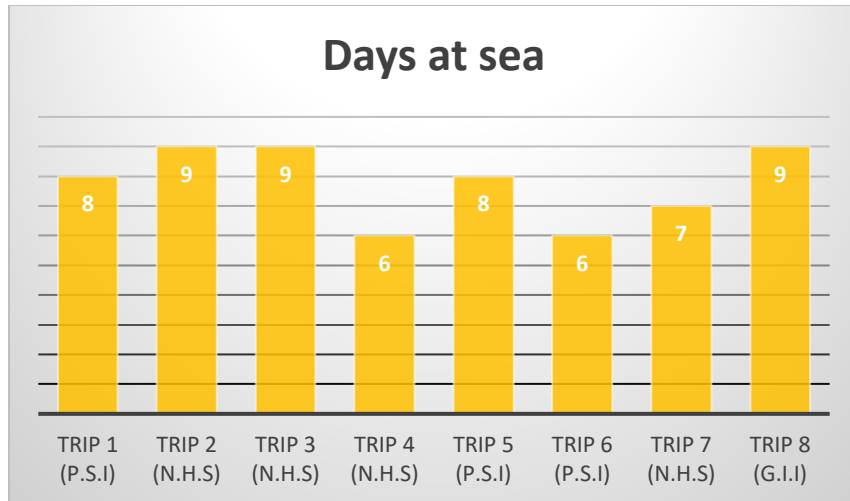


Figure 1: Showing days at sea.

The line graph above shows 'days at sea' for the three sea observer trips that were carried out the year of 2020.

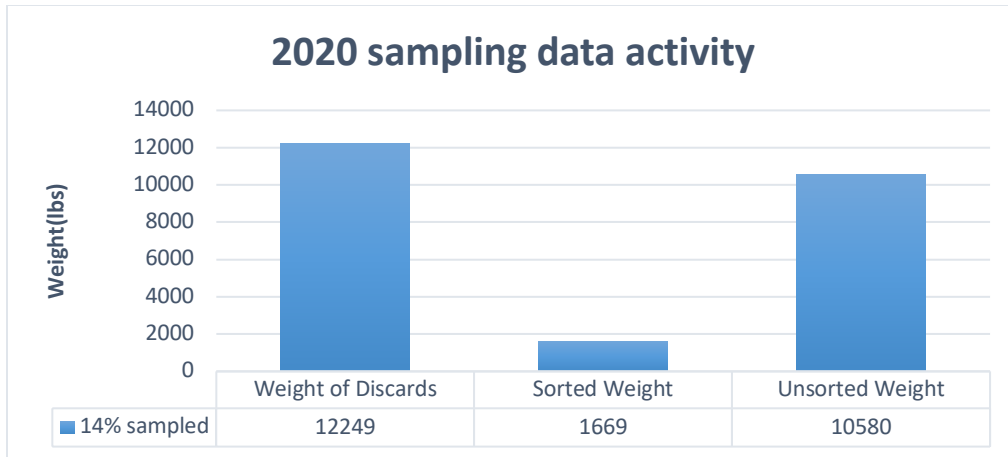


Figure 2: Showing comparison for total weight of discards, sorted weight, and unsorted weight for 2020 sampling activities.

The bar graph above shows total weight of discards throughout the year. In addition, it also depicts sorted and unsorted weight. There were eight (8) trips carried out for the year. Note: That each trip, six drags were to be sampled (three (3) day drags, 3 night drags) However an observer fell ill (sea sickness), normal duties were unable to be carried out (trip one (1)). Fourteen percent (14%) of the total weight of discards were sampled.

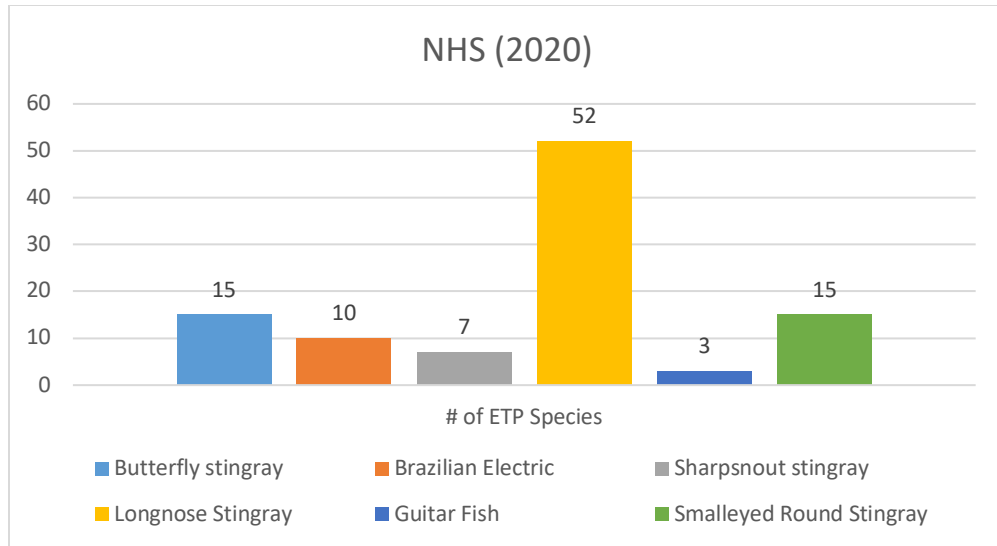


Figure: 3 Shows threatened and vulnerable species that were caught while fishing (dead)

The bar graph above shows total number of threatened and vulnerable species that were caught while fishing by the company, NHS. The Long nose stingray (*Dasyatis guttata*) was the most captured species for this company and its vessels, while the guitar fish (*Rhinobatus percellens*) was the least caught species.

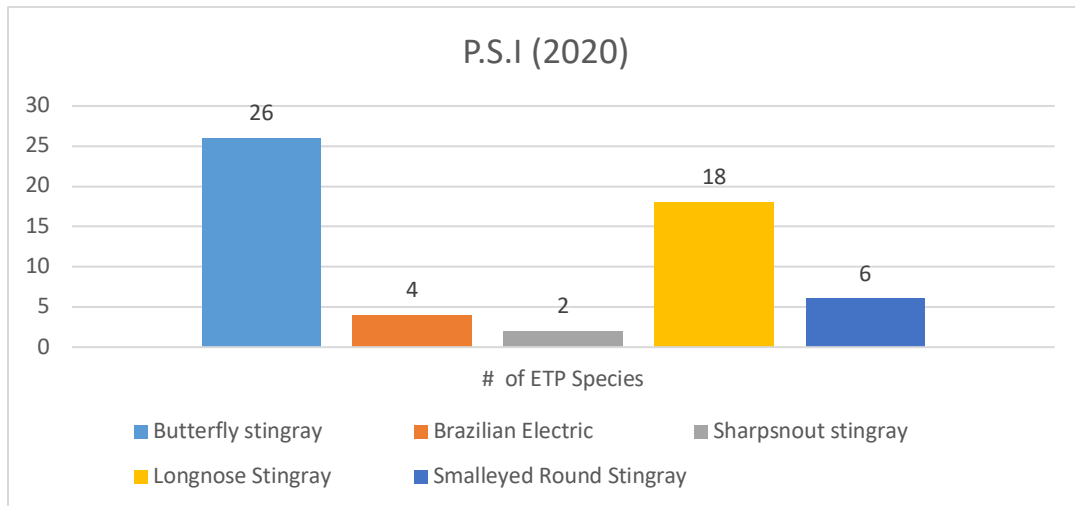


Figure: 4 Shows threatened and protected, and vulnerable that were caught while fishing (dead)

The bar graph above shows total number of threatened and vulnerable species caught while fishing. The butterfly stingray (*Gymnura micrura*) was the most caught species for this company and vessel, while the Sharpsnout Stingray (*Dasyatis geijkesi*) was the least caught.

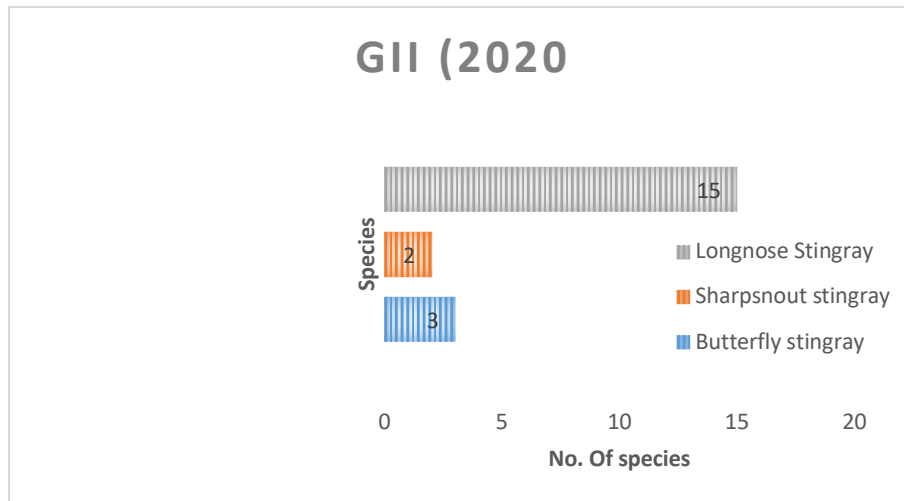


Figure: 5 Shows endangered threatened and protected, and vulnerable that were caught while fishing (dead)

The bar graph above shows threatened and vulnerable species that were caught while fishing. Out of a total of twenty (20), the long nose stingray (*Dasyatis guttata*) was the most encountered species for this company and its vessels, while the Sharpsnout ray (*Dasyatis geijkesi*) was the least encountered species.

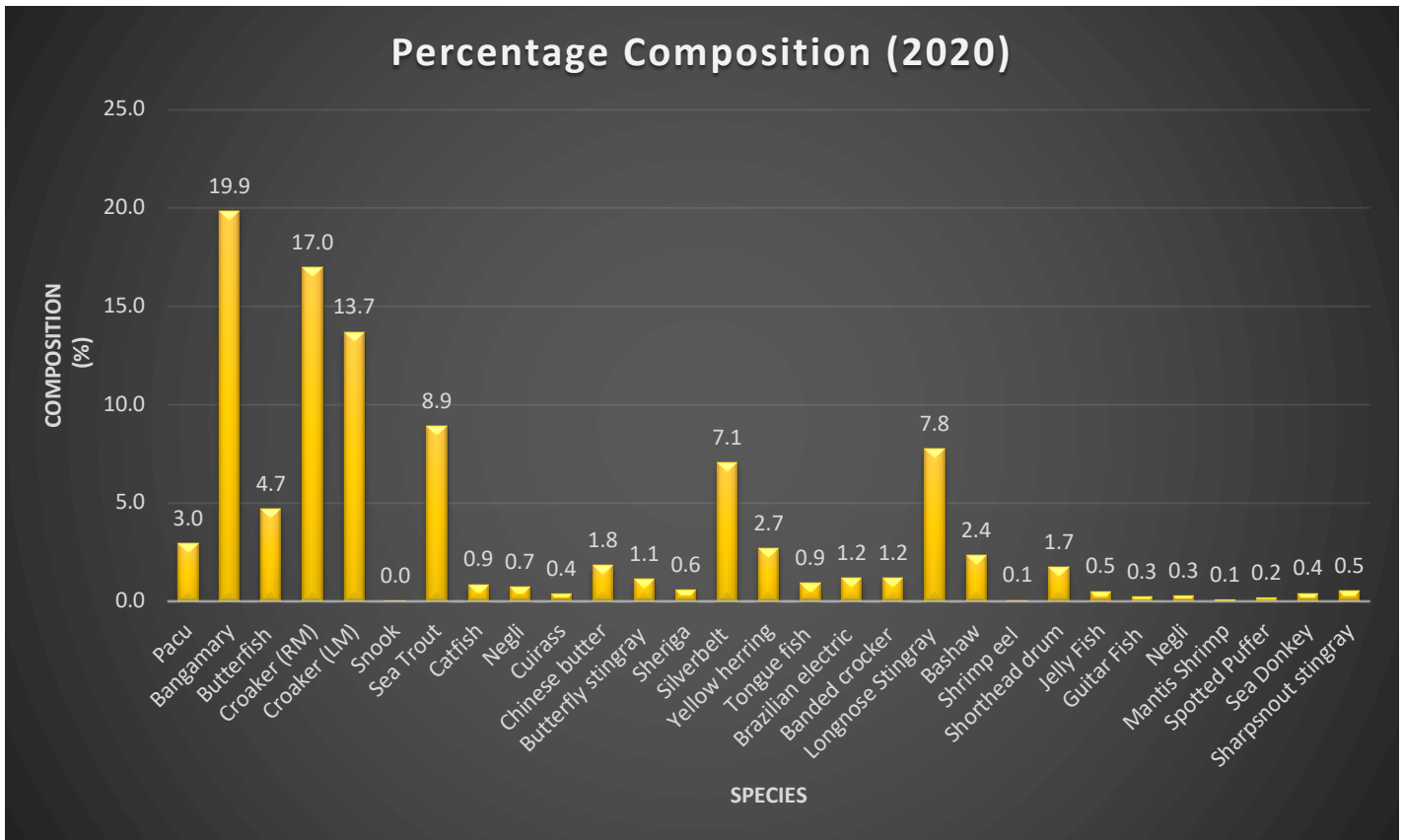


Figure: 6 Shows the species composition for the year of 2020. The species that were in abundance in was the bangamary (*Macrodon ancylodon*), Round mouth croaker (*Stellifer rastrifer*) and the long mouth croaker (*Stellifer microps*), having a having a composition of 19%, 17% and 13.7% respectively.

Table: 1 shows the number of ETP species that were caught while fishing and released.

Trip number (#)	Species	Number of alive species
2	Longnose stingray (<i>Dasyatis guttata</i>)	2
2	Smalleyed round stingray (<i>Urotrygon microphthalmum</i>)	1
3	Longnose stingray (<i>Dasyatis guttata</i>)	2
3	Smalleyed round stingray (<i>Urotrygon microphthalmum</i>)	1
3	GuitarFish (<i>Rhinobatus percellens</i>)	1
4	Longnose stingray (<i>Dasyatis guttata</i>)	6
4	Butterfly stingray (<i>Gymnura micrura</i>)	4
5	Butterfly stingray (<i>Gymnura micrura</i>)	3
5	GuitarFish (<i>Rhinobatus percellens</i>)	2
5	<i>Brazilian electric (Narcine brasiliensis)</i>	3
7	Longnose stingray (<i>Dasyatis guttata</i>)	5
7	Butterfly stingray (<i>Gymnura micrura</i>)	2
7	<i>Sharpsnout stingray (Dastyis geijkesi)</i>	1
7	Brazilian electric (<i>Narcine brasiliensis</i>)	1
8	Longnose stingray (<i>Dasyatis guttata</i>)	3
8	<i>Sharpsnout stingray (Dastyis geijkesi)</i>	1
8	Butterfly stingray (<i>Gymnura micrura</i>)	1
		Total =39

Table 2: Shows the overview and details of the sampled hauls for 2020.

Trip #	Drag	Month	Date of Drag	Start time	End time	Day/night	Trawling time(hours)	Start latitude	Start longitude	Depth (Fathom)
1	1	January	22	2:30	4:30	Day	3hrs	zone4		7
2	1	February	16	12:47	4:30	Day	3hrs&43mins	06:22N	57:06W	12
2	2	February	17	2:15	6:00	Night	3hrs&45mins	06:22N	57:16W	11
2	3	February	17	14:10	18:00	Day	3hrs&50mins	06:22N	57:16W	11
2	4	February	18	2:14	6:00	Night	3hrs&46mins	06:24N	57:12W	10
2	5	February	19	2:15	6:00	Night	3hrs&45mins	06:25N	57:13W	10
2	6	February	19	10:15	14:00	Day	3hrs&45mins	06:25N	57:13W	12
3	1	February	19	2:30	5:30	Day	3hrs	zone 4		10
3	2	February	20	16:15	20:15	Night	4hrs	zone 5		10
3	3	February	21	2:20	5:30	Day	3hrs&15mins	zone 4		10
3	4	February	24	14:30	17:30	Night	3hrs	zone 4		10
3	5	February	25	2:30	6:00	Day	3hrs &30mins	zone 3		10
4	1	October	2	7:25	11:00	Day	3hrs&35mins	zone 3		10
4	2	October	2	15:30	19:00	Night	3hrs &30mins	zone 3		10
4	3	October	3	6:20	10:00	Day	3hrs&40mins	zone 4		10
4	4	October	4	14:30	17:30	Day	3hrs	zone 4		10
4	5	October	5	2:30	6:00	Night	3hrs&30mins	zone 3		10
4	6	October	6	2:30	6:00	Night	3hrs&30mins	zone 6		10
5	1	October	15	6:30	9:45	Day	3hrs&15mins	zone 1		10
5	2	October	15	15:30	18:00	Night	2hrs&30mins	zone 1		10
5	3	October	17	6:20	10:00	Day	3hrs&40mins	zone3		7
5	4	October	18	14:30	17:30	Day	3hrs	zone4		10
5	5	October	16	16:30	19:30	Night	3hrs	zone3		10
5	6	October	17	17:30	19:30	Night	2hrs	zone 6		10
6	1	October	27	8:00	12:00	Day	4hrs	08:22 N	59:02 W	12
6	2	October	27	18:00	20:00	Night	2hrs	08:19 N	59:00 W	9
6	3	October	28	1:30	5:30	Night	4hrs	07:48 N	58:30 W	11
6	4	October	28	10:30	14:30	Day	4hrs	07:32 N	58:19 W	8
6	5	October	29	18:00	22:00	Night	4hrs	06:45 N	57:45 W	5
7	1	November	17	10:30	14:00	Day	3hrs&40mins	06:59 N	57:47 W	11
7	2	November	18	10:30	14:00	Day	3hrs&40mins	06:59 N	57:47 W	11
7	3	November	18	14:30	18:00	Day	3hrs&30mins	06:51 N	57:41 W	11
7	4	November	19	2:30	6:00	Night	3hrs&30mins	06:48 N	57:37 W	11
7	5	November	19	10:30	14:00	Night	4hrs&30mins	06:49 N	57:38 W	10
7	6	November	21	14:36	18:00	Night	4hrs&30mins	06:42 N	57:33 W	10
8	1	December	6	6:00	9:35	Day	3hrs&35mins	06 :41 N	57: 46W	8

8	2	December	6	19:10	22:55	Night	3hrs&45mins	06 :41N	57:43W	8
8	3	December	7	5:45	9:15	Day	3hrs&30mins	06: 52N	57 :48W	7
8	4	December	8	17:55	21:30	Night	1hrs&30mins	06: 52N	57 :49W	9
8	5	December	8	13:30	16:00	Day	2hrs&30mins	06:38N	57:35W	8
8	6	December	8	20:48	0:10	Night	3hrs&22mins	06:38N	57:31W	7

Table: 3 Shows a list of common names and scientific names for various marine species.

Common Name	Scientific Name
Annafolk	<i>Genyatremus leteus</i>
Atlantic bumper	<i>Chloroscumbrus chrysurus</i>
Banded croaker	<i>Paralanchurus braziliensis</i>
Banded puffer	<i>Colomesus psittacus</i>
Bangamary	<i>Macrodon ancylodon</i>
Barba	<i>Polydactylus virginicus</i>
Bashaw	<i>Micropogonias furnieri</i>
Bay whiff	<i>Citharichthys spilopterus</i>
Boxcrab	<i>Hepatus gronovii</i>
Brazilian electric ray	<i>Narcine brasiliensis</i>
Broad_Striped Anchovy	<i>Anchorella lepidentsole</i>
Butterfish	<i>Nebris microps</i>
Butterfly stingray	<i>Gymnura micrura</i>
Catfish	<i>Bagre bagre</i>
Cavalli	<i>Caranx hippos</i>
Chinese butterflyfish	<i>Paralanchurus elegans</i>
Chinese snook	<i>Centropomus pectinatus</i>
Chola guitarfish	<i>Rhinobatus percellens</i>
Cownose stingray	<i>Rhinoptera bonasus</i>
Croaker 1m	<i>Stellifer microps</i>
Croaker 2m	<i>Stellifer rastriifer</i>
Cuirass	<i>Arius proops</i>
Deep water drum	<i>Sciaena bathytatos</i>
Drab sole	<i>Achirus achirus</i>
Green puffer	<i>Sphorades testudineus</i>
Grunt	<i>Conodon nobilis</i>
Guyanapikeconger	<i>Cynoponticus savanna</i>
Least puffer	<i>Sphoeroides parvus</i>
Longnoze stingray	<i>Dasyatis guttata</i>
Longtail sole	<i>Apionichthys dumerili</i>
Lookdown	<i>Selene vomer</i>
Mantis shrimp	<i>Squilla mantis</i>
Moonfish	<i>Selene browni</i>
Negli	<i>Anchoa mitchilli</i>
Pacu	<i>Batrachoides surinamensis</i>
Pagi	<i>Lobotes surinamensis</i>
River_pellona	<i>Pellona flavipinnis</i>

Scaled_herring	<i>Harengula jaguana</i>
Seabob	<i>Xiphopenaeus kroyeri</i>
Seadonkey	<i>Chaetodipterus faber</i>
Seapansy	<i>Renilla muelleri</i>
Seatrout	<i>Cynoscion virescens</i>
Sharpsnout stingray	<i>Dasyatis geijkesi</i>
Sherigacrab	<i>Callinectes ornatus</i>
Shrimp eel	<i>Ophichtus gomesi</i>
Silver_snapper	<i>Larimus breviceps</i>
Silverbelt	<i>Trichiurus lepturus</i>
Siriball	<i>Persephona lichtensteinii</i>
Smalleyed round stingray	<i>Urotrygon microphthalmum</i>
Snook	<i>Centropomus undecimalis</i>
Softhead seacatfish	<i>Amphiarius rugispinis</i>
Southern kingcroaker	<i>Menticirrhus americanus</i>
Specule anchovy	<i>Anchoa spinifer</i>
Spiky puffer	<i>Diodon holacanthus</i>
Sweetman	<i>Pseuduchenipterus nodosus</i>
Tongue fish	<i>Symphurus plagusia</i>
Fringed flounder	<i>Etropus crossotus</i>

DISCUSSION

In total, the observers sampled forty one (41) drags for the year. A total of eight trips were done, three trips (trip#1,2&3) were done in the first half of the year. Due to the pandemic (**covid-19**) sampling could not have been carried out for a lengthy period of time. Three trips (trip# 4, 5 & 6) were done in the closed season (test fishing activity) and two in the open season (trip#7 &8) for the latter of the year. The decision was made by the seabob working group, the fisheries department and the trawler association for the observers to carry out sample onboard.

Data on the Species composition for the year of 2020 was also collected. The species that were in abundance in was the bangamary (*Macrodon ancylodon*), Round mouth croaker (*Stellifer rastrifer*) and the long mouth croaker (*Stellifer microps*), having a having a composition of 19%, 17% and 13.7% respectively.

In addition, a total of 32 rays were captured and released (alive).

Lastly, there were some shortcomings for two sample trips, for the month of April and July. Due to the pandemic, observers didn't went back to sea until the close season with the aim of sampling by means of test fishing activities.

RECOMMENDATION

- Continued collaboration between the fisheries department and stakeholders in order for Utilization of data, for thorough analysis, to inform decision makers in both the industry and the Department.
- Binoculars should be given to observers to have a better view of other vessels and marine life.