

## 2018 SMALL GRANT IN AID OF RESEARCH – ANNUAL SUMMARY REPORT

### INFLUENCE OF ABIOTIC FACTORS ON HABITAT USE OF GUIANA DOLPHINS IN ILHÉUS, NORTHEASTERN BRAZIL

*Anna Libório - annaevelin.liborio@gmail.com*

*Yvonnick Le Pendu, advisor*

*Universidade Estadual de Santa Cruz, Brazil*

#### **SUMMARY REPORT**

The Guiana dolphin (*Sotalia guianensis*) is a coastal dolphin categorized as "vulnerable" to extinction in Brazil. The ecology of the Guiana dolphin in northeastern Brazil is still poorly understood. We proposed to investigate which abiotic factors influence the activity and habitat use of *S. guianensis* in a Brazilian northeastern estuary, the Rio Cachoeira estuary. The funds provided by SMM was used to buy 200 glass fiber filters (type AP40) used to analyze water samples and to pay 13 out of 36 data collections (boat pilot and gasoline). Five water parameters were collected from January to December 2019 in 6 points of the estuary: temperature, salinity, dissolved oxygen, water transparency. A land-based monitoring of the Guiana dolphins was carried out from February 2019 to January 2020. We compared abiotic parameters and dolphins detections rates obtained in 2019 with data collected from July 2013 to September 2014. The detection rate of dolphins was higher in 2013-2014 than in 2019 (0.39 and 0.11 dolphins per hour, respectively) and mean group size was larger in 2013-2014 ( $5.1 \pm 1.7$  and  $1,7 e \pm 0,8$ , respectively). The environmental impacts resulting from the construction of a bridge at the mouth of the estuary in 2019 may explain the decrease in the presence of Guiana dolphins in the estuary. We conducted a GLM to investigate if the five water parameters and three tidal parameters explained the presence of the Guiana dolphins in the estuary. The analysis failed to evidence a clear relation between abiotic parameters and the presence of the dolphins. We hypothesize that other factors influence the presence of the dolphins in the estuary, such as the availability of prey. We plan to submit one manuscript based on the results of the study in the next few months. We would like to thank the Society for Marine Mammalogy for their support in the execution of the study.