

# CARING COULTURE



**PORTOS  
DO PARANÁ**

P O R T   A U T H O R I T Y



João Paulo Ribeiro Santana- Environment Director



**Our home**



# Portos do Paraná - Location



# Portos do Paraná - Location





# Portos do Paraná - Location

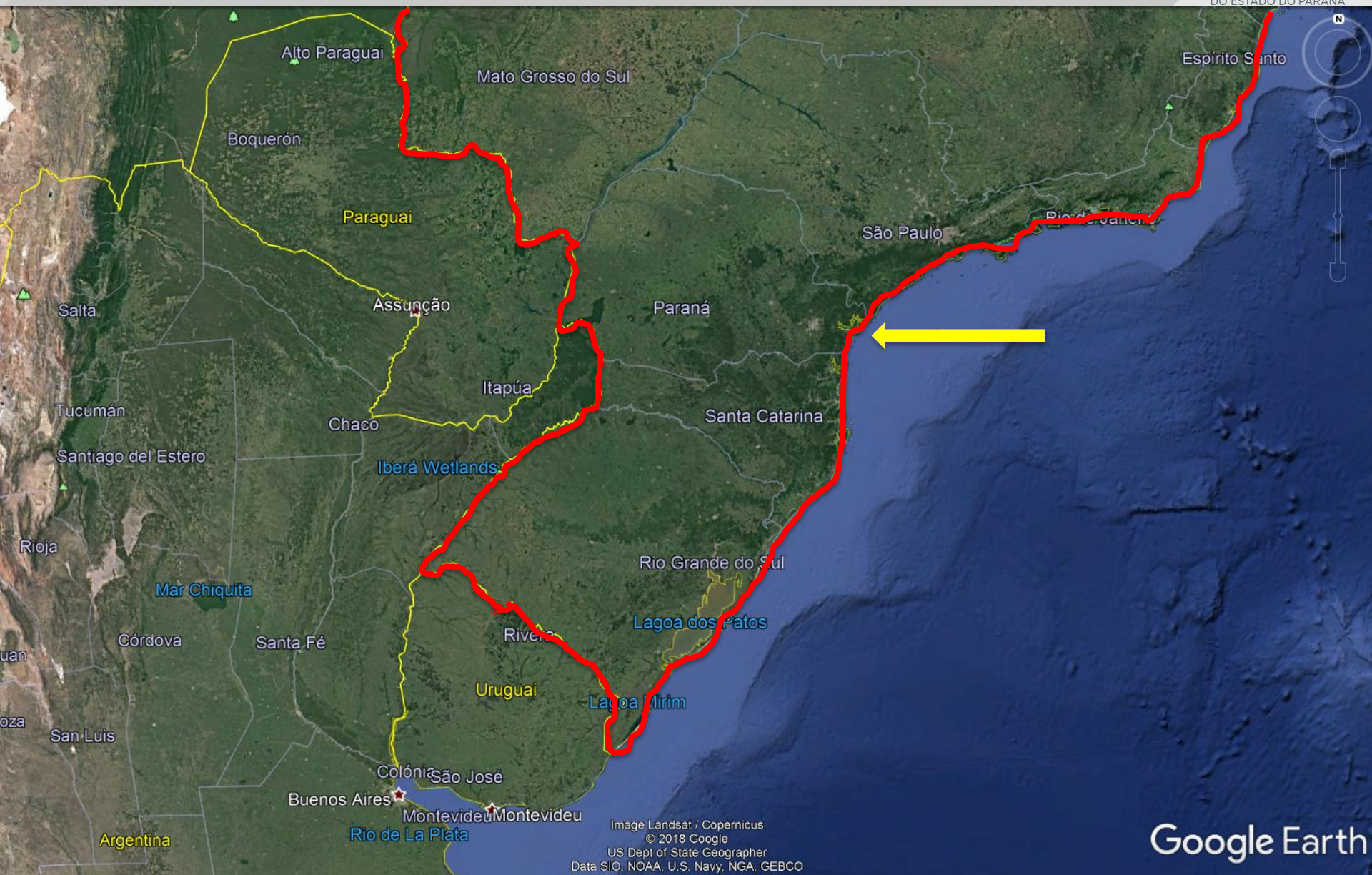


# Portos do Paraná - Location



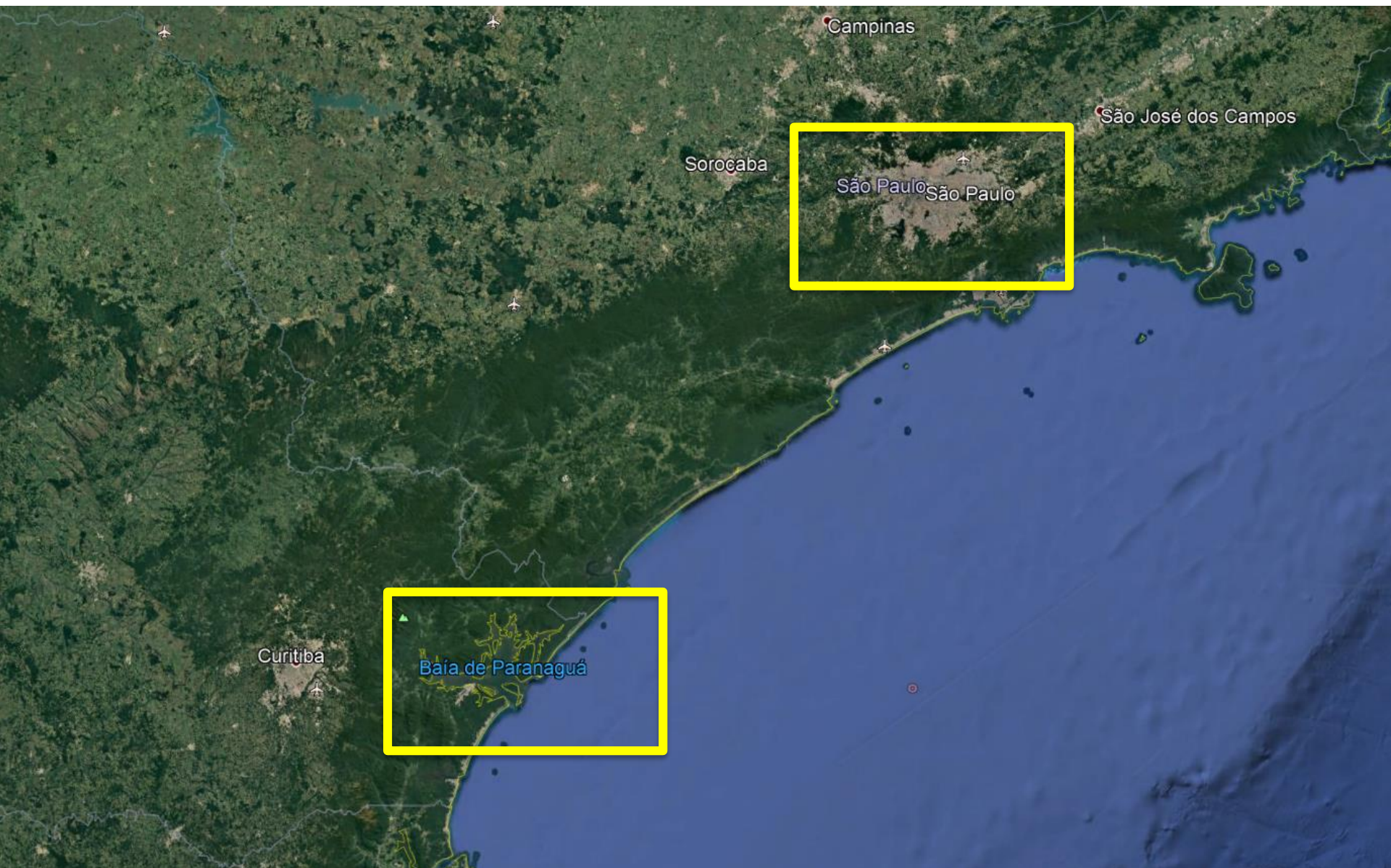


# Portos do Paraná - Location



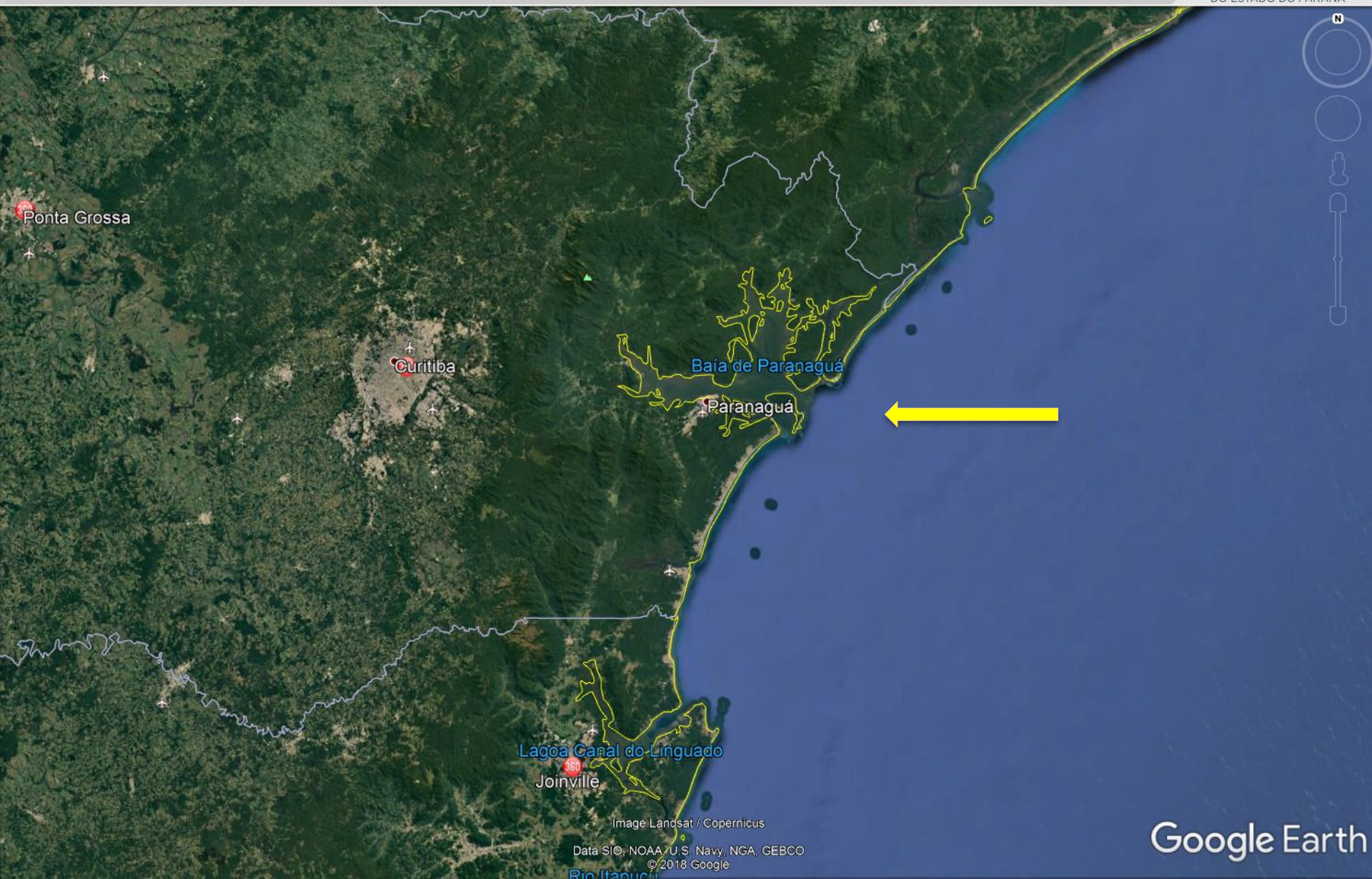


# Portos do Paraná - Location



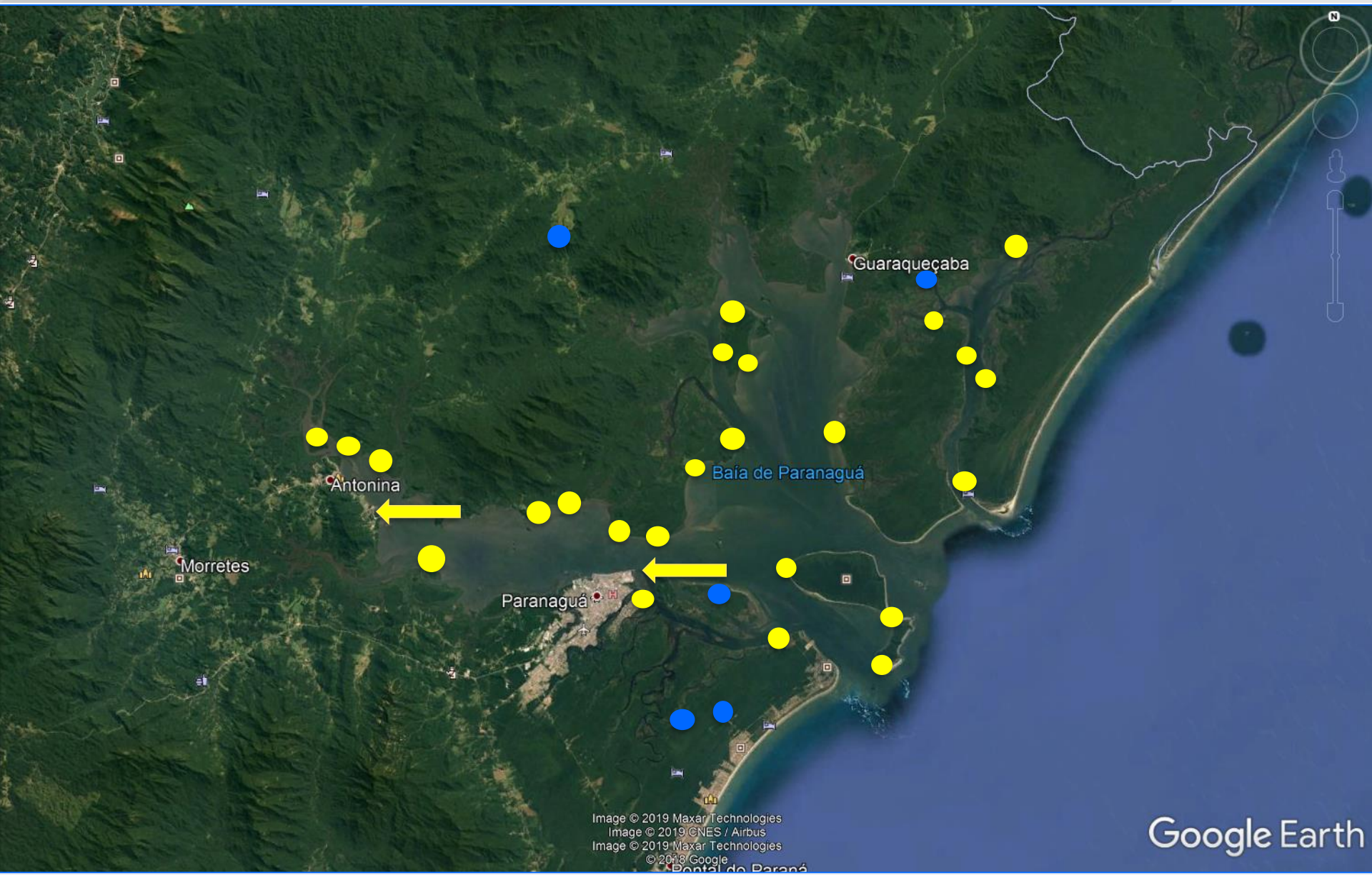


# Portos do Paraná - Location





# Portos do Paraná – Our surroundings





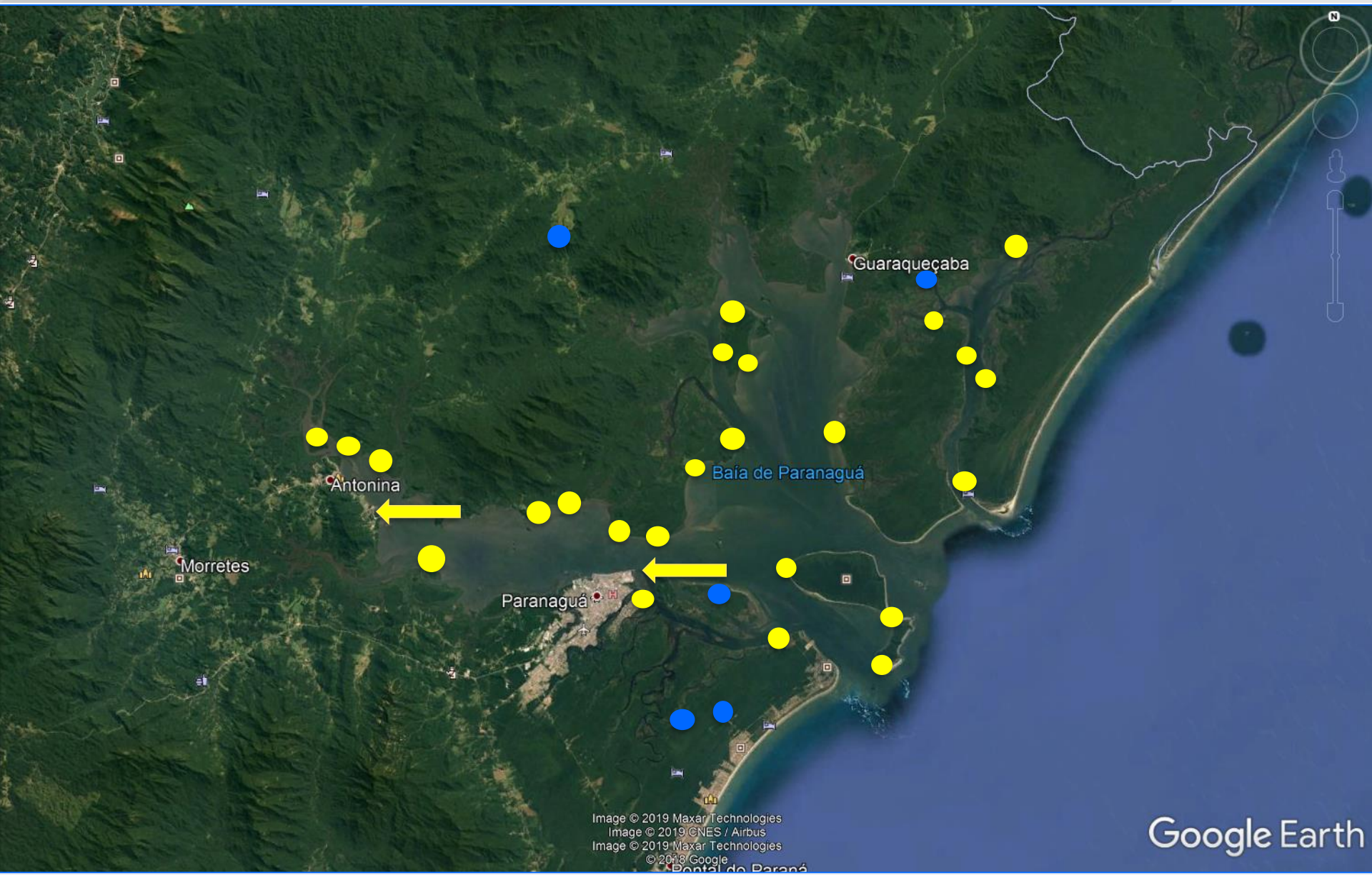
## Portos do Paraná – Our surroundings



# Google Earth



# Portos do Paraná – Our surroundings



# Portos do Paraná – Our surroundings



FOTO: PRISCILA FORONE



# Portos do Paraná – Our surroundings





# Portos do Paraná – Our surroundings





# Portos do Paraná – Our movimentation numbers



**Solid Bulk Cargo – 28.04 mi/T**  
**Liquid Bulk Cargo – 4.32 mi/T**  
**General Cargo – 8.4 mi/T**  
**Containeres – 649,531 TEU**  
**Vehicles – 96,320 units**





Environmental licensing  
by Federal and State  
Agency



# Environmental Programs

- Monitoring programs;
- Social actions;
- Environment control;



# Environmental Programs

## Water Quality Monitoring Program





# Water Quality Monitoring Program





# Environmental Programs

## Sediments Quality Monitoring Program





## Groundwater Monitoring Program





# Environmental Programs

## Social Communication Program



PORTOS DO PARANÁ  
COMBATER A DENGUE  
É DEVER DE TODOS



[www.portosdoparana.pr.gov.br](http://www.portosdoparana.pr.gov.br)



### SEGURANÇA

#### USO OBRIGATÓRIO



CAPACETE  
ÓCULOS DE PROTEÇÃO  
CALÇADO DE SEGURANÇA

#### PORTE RECOMENDADO



PROTETOR AURICULAR  
PROTEÇÃO RESPIRATÓRIA  
LUVAS DE PROTEÇÃO





# Social Communication Program



Outdoor about endangered species



Ad in local newspaper



# Environmental Programs

## Environmental Education Program





# Environmental Education Program

Offers effective conditions for awareness and critical sense allowing the population an insight into their roles as agents in the process of improving individual and collective quality of life.

- Lectures, training in schools and with community residents.



**GOVERNO**  
DO ESTADO DO PARANÁ





# Environmental Programs

## Fishing Activity Monitoring Program





# Fishing Activity Monitoring Program

Monitors fishing parameters in the Estuarine, generating basic data and statistical information regarding fishing in the area.

- Quantity, fishing area, resale or own fishing.





# Environmental Programs

## Traffic Management Program





# Traffic Management Program

Monitors the urban area of Paranaguá and Antonina's infrastructure with minimization of environmental impacts from heavy vehicle traffic, as well as performs studies aimed at traffic planning in these areas.

- Road Planning
- Queue Elimination
- Road Signs Survey
- Awareness and Lectures



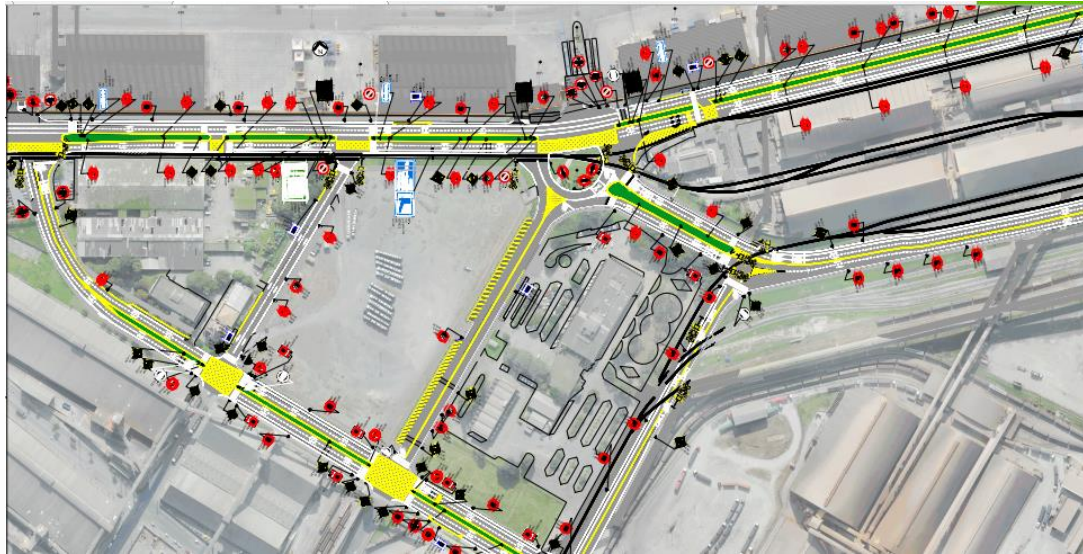
Parking signs and traffic restriction



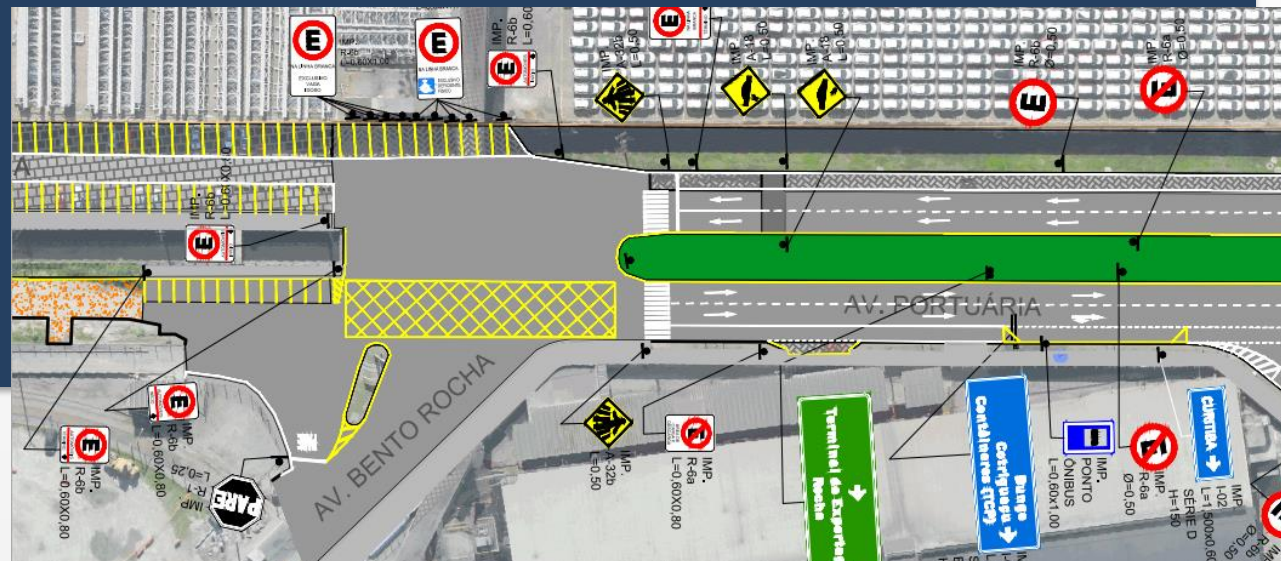
Checking the speed reducers



# Traffic Management Program



News signage map of Portos do Paraná area





# Environmental Programs

## Vector Proliferation Control Program



MOSQUITOS



DESINTETIZAÇÃO



ABELHAS



REMOÇÃO DA COLMEIA



ROEDORES



DESRATIZAÇÃO



POMBOS



TELAS DE PROTEÇÃO E DESALOJAMENTO DE POMBOS



CUPINS



DESCUPINIZAÇÃO



# Vector Proliferation Control Program

Reduces and controls pigeons (*Columba livia*), rodents, arthropods (cockroaches, bees, insects – specially *Aedes aegypti*) through environmental management and the application of control measures.

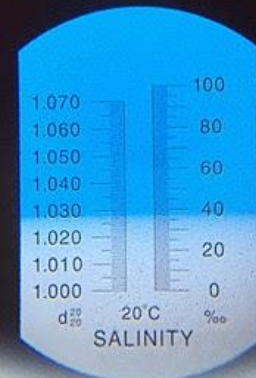
- Daily control.





# Environmental Programs

## Ship Ballast Water Verification Program





# Ship Ballast Water Verification Program

Assists in the compliance surveillance of the International and Brazilian Maritime Authority's regulations for ballast water management.





# Environmental Programs

## Aquatic Biota and Bioindicators Monitoring Program





# Aquatic Biota and Bioindicators Monitoring Program

Monitors port activities' impact and possible biotic organisms' contamination in the Estuarine and adjacent coastal environment.

- **Planktonic community monitoring subprogram**
- **Unconsolidated and consolidated benthic community monitoring subprogram**
- **Ichthyofauna and carcinofauna monitoring subprogram**
- **Cetacean and chelonian Monitoring Subprogram**
- **Bird Monitoring Subprogram**
- **Tissue Contamination Analysis by Heavy Metals and Hydrocarbons Program**

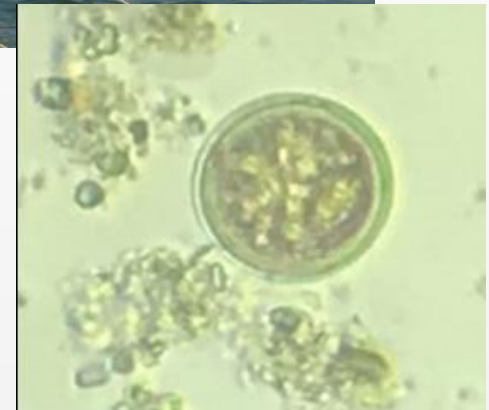


# Aquatic Biota and Bioindicators Monitoring Program

## Planktonic Community Monitoring



- 16 sample units in the Estuarine
- Quaterly



Diatom *Thalassiosira* sp.



# Aquatic Biota and Bioindicators Monitoring Program

## Benthic Community Monitoring



- 16 sample units in the Estuarine
- Quaterly

- 5 sample units in the Estuarine
- Quaterly



# Aquatic Biota and Bioindicators Monitoring Program

Ichthyofauna and Accompanying Fauna Monitoring



- 9 sample units in the Estuarine
- Quaterly





# Aquatic Biota and Bioindicators Monitoring Program

## Mangrove Carcinofauna Monitoring

- 3 sample units in the Estuarine
- Quaterly



# Aquatic Biota and Bioindicators Monitoring Program

## Cetacean and Chelonian Monitoring



*Sotalia guianensis*

- ~150 km transect in the Estuarine
- Quaterly

*Chelonia mydas*





# Aquatic Biota and Bioindicators Monitoring Program

## Bird Monitoring

- 5 samples units + 50 km aquatic transect in the Estuarine
- Monthly



*Sula leucogaster*



*Phimosus infuscatus*

*Nyctanassa violaceae*



*Amazonas brasiliensis*



*Aramides cajaneus*

# Aquatic Biota and Bioindicators Monitoring Program

Tissue Contamination Analysis by Heavy Metals and Hydrocarbons



- 4 sample units in the Estuarine
- Quaterly



*Anomalocardia brasiliana*



# Environmental Programs

## Mangrove Monitoring Program





# Mangrove Monitoring Program

Evaluates the structure of the mangroves surrounding Portos do Paraná.

- Phytosociological (6 mangroves);
- Mangrove Cleaning (3 mangroves);
- Erosive processes (5 mangroves).



de velocidades



# Environmental Programs

## Contaminated Area Recovery Program



# Contaminated Area Recovery Program



Gas station off

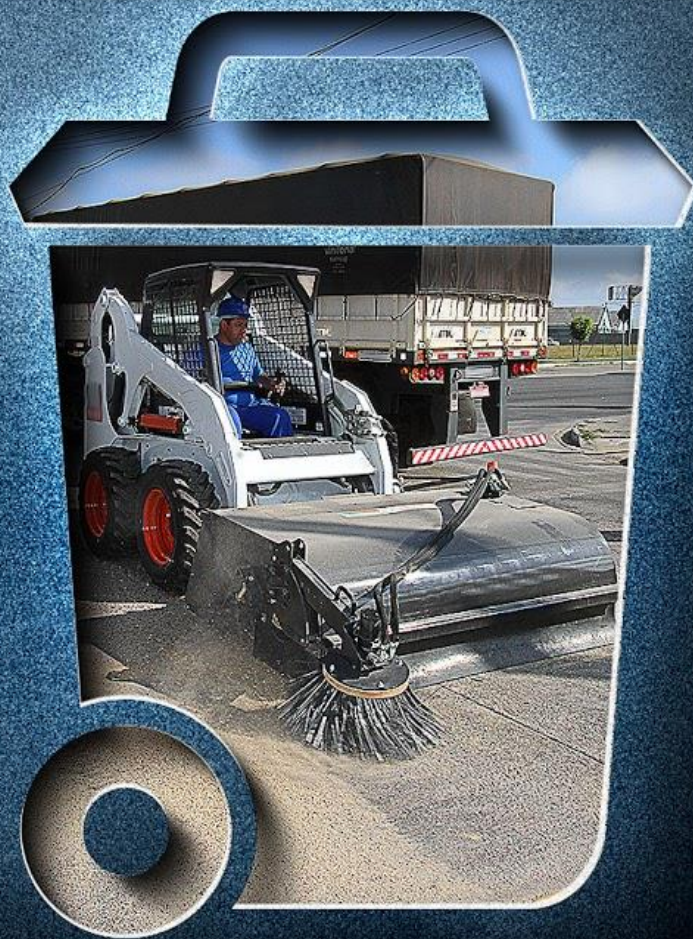


Mineral coal



# Environmental Programs

## Solid Waste Management Program



### RECICLÁVEIS



- **PAPÉIS:** papelão, jornais, revistas, embalagens longa vida.
- **METAIS:** alumínio, latas, fios, correntes.
- **PLÁSTICOS:** copos descartáveis, sacolas, garrafas plásticas, vasilhames de produtos de limpeza.
- **VIDROS:** copos, garrafas e jarras.

### NÃO RECICLÁVEIS



- **PAPÉIS:** adesivos, etiquetas, carbonos, fotos, papéis metalizados ou plastificados, papel higiênico usado, absorventes usados.
- **PLÁSTICO:** espuma, tomadas.
- **METAIS:** cliques, grampos, esponjas de aço.
- **VIDROS:** espelhos, cerâmicas, louças, vidros temperados.

### ORGÂNICO



- Restos de alimentos.
- Pó de café.
- Cascas e bagaços de frutas.
- Madeira.
- Sobras de jardim.

### RESÍDUOS PERIGOSOS



- Pilhas e baterias.
- Lâmpadas fluorescentes.
- Produtos químicos.
- Tinta, óleo.
- EPIs contaminados com óleo ou graxa.





# Solid Waste Management Program



ificação dos redutores de velocidades



# Solid Waste Management Program

## Trainings



# Solid Waste Management Program

## Mechanized Sweeping





# Environmental Programs

## Atmospheric Emissions Management Program



## Noise Emission Management Program





# Noise Emission Management Program



# Portos do Paraná

Safety - Environmental Readiness Center



- Specialized company available 24h
- Trainings
- Simulates



# Social Relation with community





# Social Diagnosis



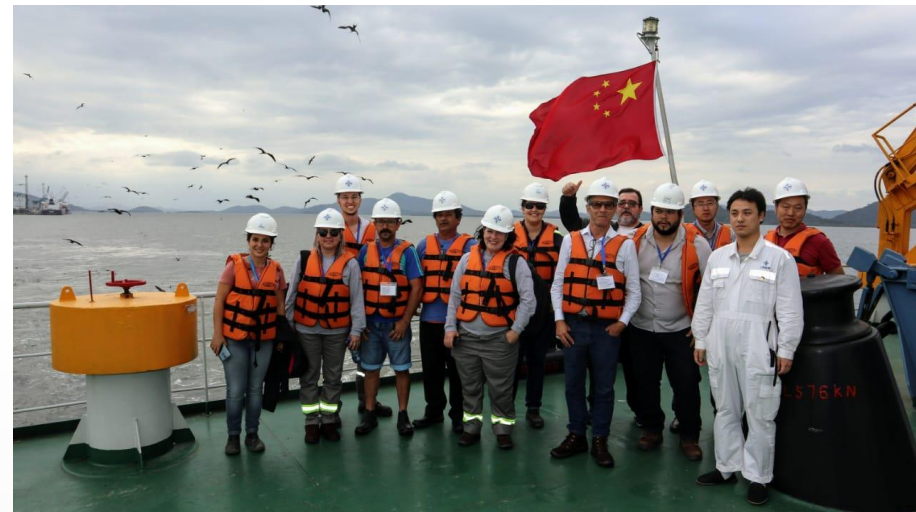


# Boat Engine mechanics course





# Maintenance Dredging – Visit to the dredge





# Portos do Paraná – Lectures



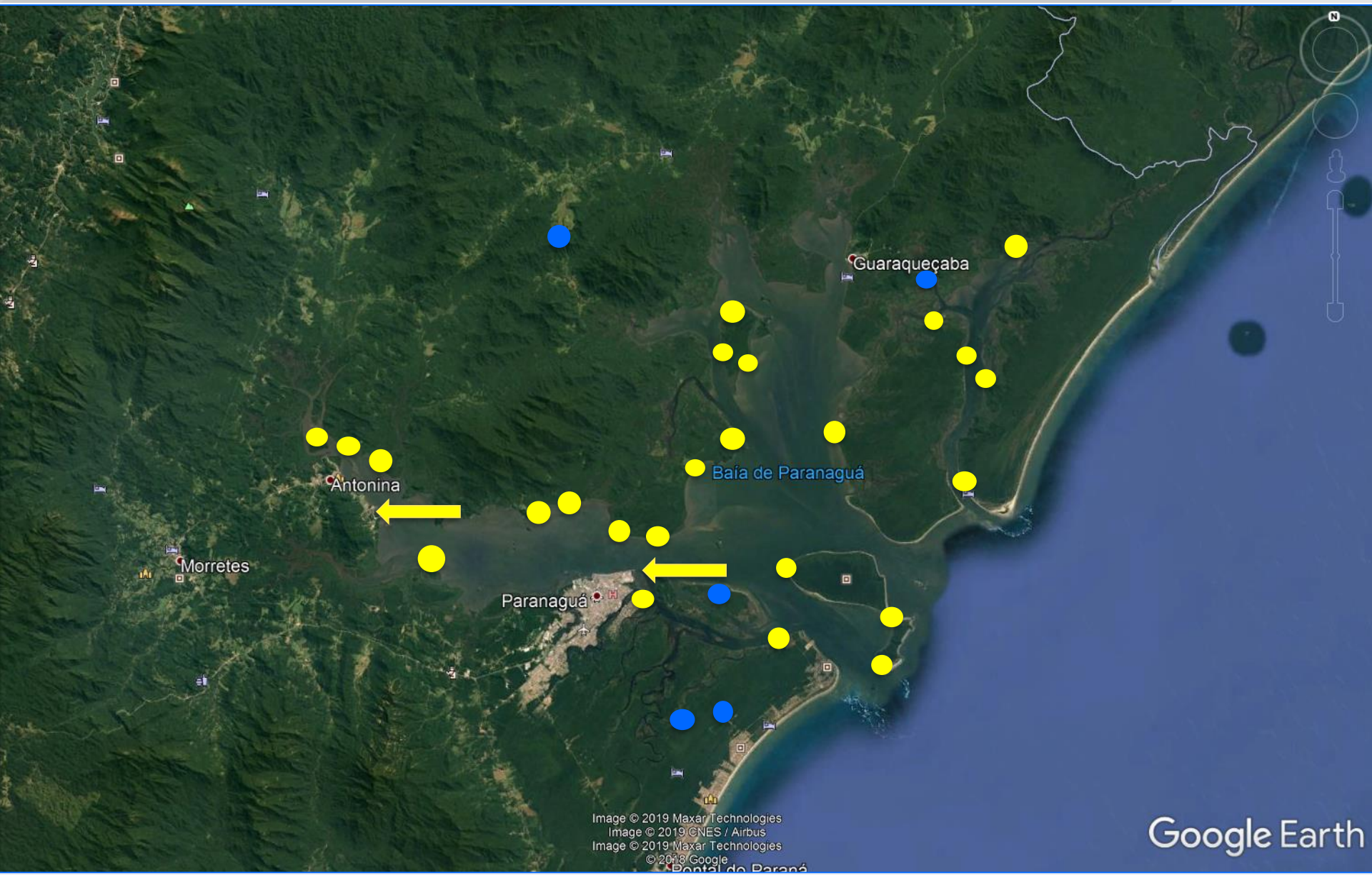


# Children Visiting The port



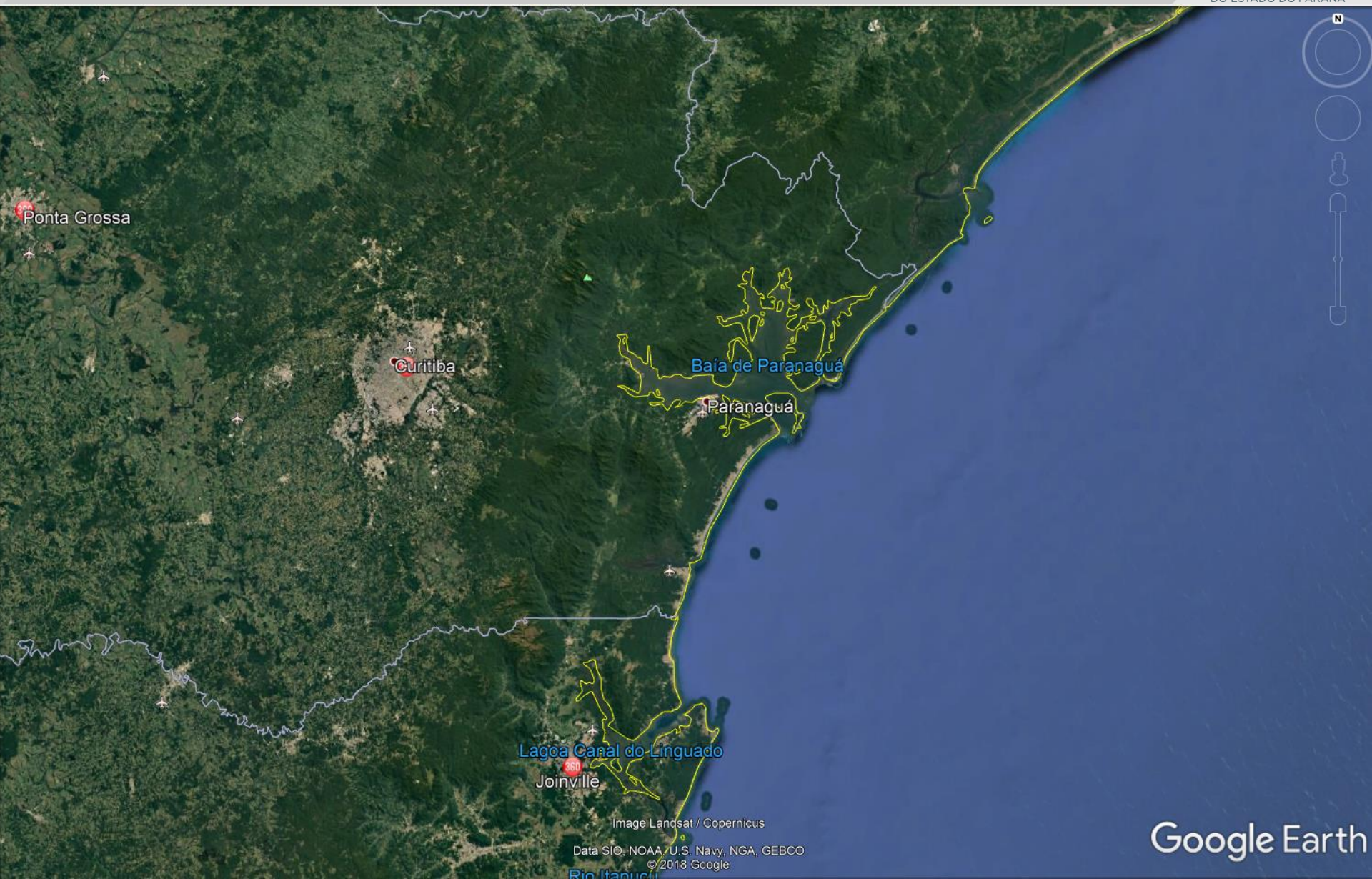


# Portos do Paraná – Our surroundings





# Portos do Paraná - Location





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# Portos do Paraná - Location







**Our home**



# THANK YOU! GRACIAS!



João Paulo Ribeiro Santana – Environment Director  
ENVIRONMENTAL BOARD

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