

PROJECTS pIOT & IOT FOR INDIAN OCEAN

SEA TURTLES

BIOLOGICAL ISSUES

THE CONSERVATION OF MARINE TURTLES IN THE SOUTHWESTERN INDIAN OCEAN

The western Indian Ocean is one of the main breeding and spawning grounds for green (*Chelonia mydas*) and hawksbill turtles (*Eretmochelys imbricata*)

IUCN

2 SPECIES RED LIST



LACK OF SCIENTIFIC KNOWLEDGE ON THE YOUNG STAGES OF THESE 2 SPECIES



ACQUISITION OF ESSENTIAL DATA FOR THE IMPLEMENTATION OF CONSERVATION MEASURES

THE NATIONAL ACTION PLAN FOR MARINE TURTLES IN THE SOUTHWESTERN INDIAN OCEAN IDENTIFIES THE USE OF FUNCTIONAL MARINE TURTLES HABITATS AS A RESEARCH PRIORITY

TECHNOLOGICAL CHALLENGES

Satellite tags used for marine turtles monitoring are expensive (limits the number of deployments), cumbersome and of low accuracy

DEVELOP A NEW GENERATION OF INNOVATIVE, LOW COST AND OPEN SOURCE TAGS AND STATIONS

USE OF A NEW LoRa TRANSMISSION SYSTEM, BASED ON CONNECTED OBJECT TECHNOLOGY



LOW COST



LOW ENERGY CONSUMPTION



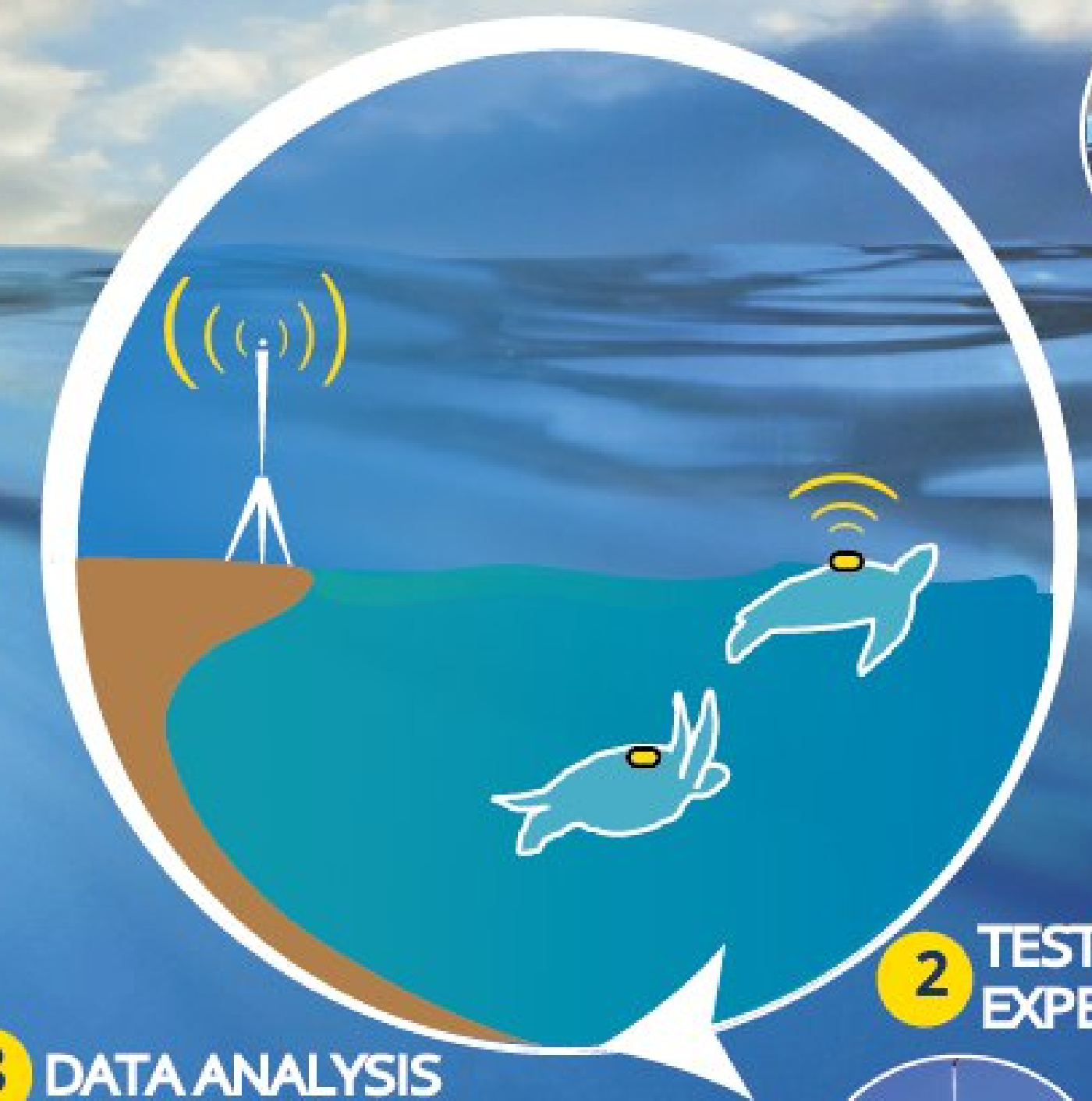
ENERGY SELF-SUFFICIENT



FINER PRECISION

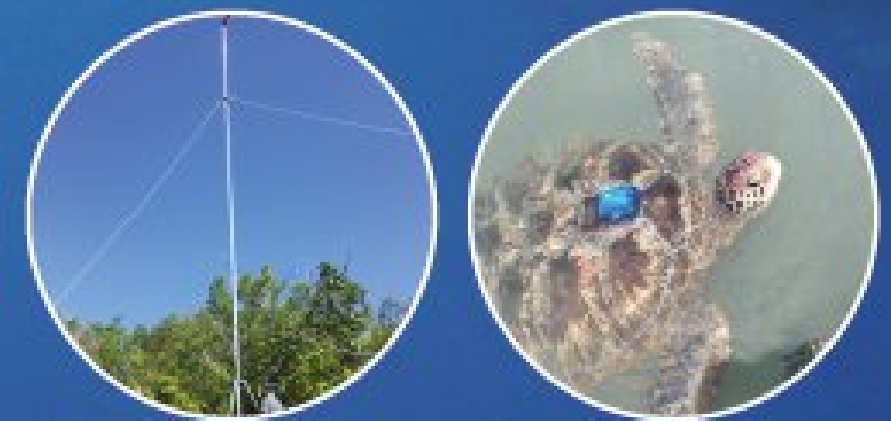
PROJECT OBJECTIVES

1 TAG DEVELOPMENT



2 TESTS & EXPERIMENTS

3 DATA ANALYSIS



PROJECT IOT | PROJECT FOR INDIAN OCEAN SEA TURTLES

DEVELOP THE FIRST REGIONAL OBSERVATION NETWORK OF MARINE TURTLE MOVEMENTS

DEPLOY 10 TAGS AND 5 RECEIVING STATIONS ON 4 SITES IN THE SOUTHWESTERN BASIN OF THE INDIAN OCEAN

- Deploy the first regional observation network
- Lead the technological developments and launch the pre-industrialisation of a new generation of innovative tags

IOT - Project co-funded by the European Union with the framework of the PO INTERREG V Indian Ocean



STUDY PERIOD
2019 - 2022

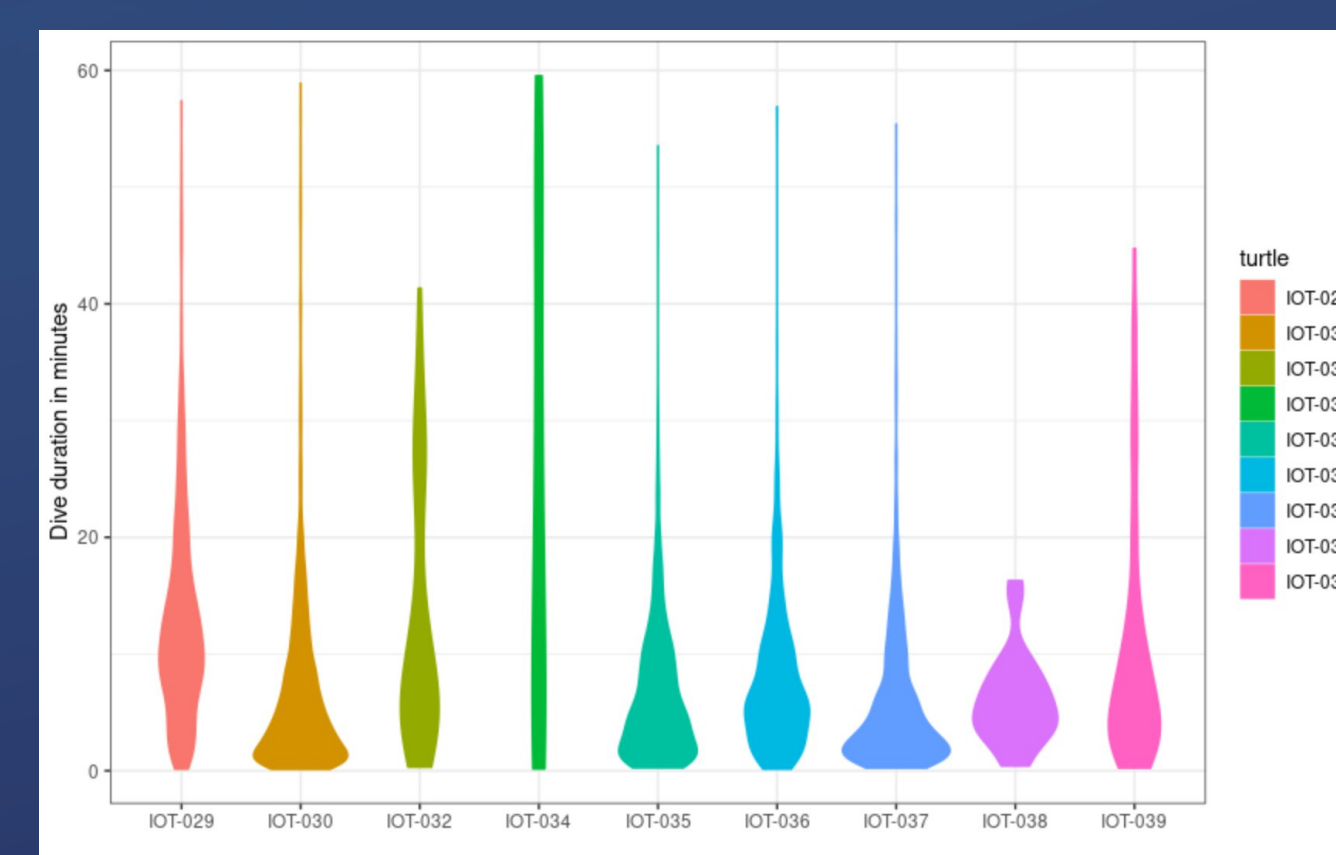
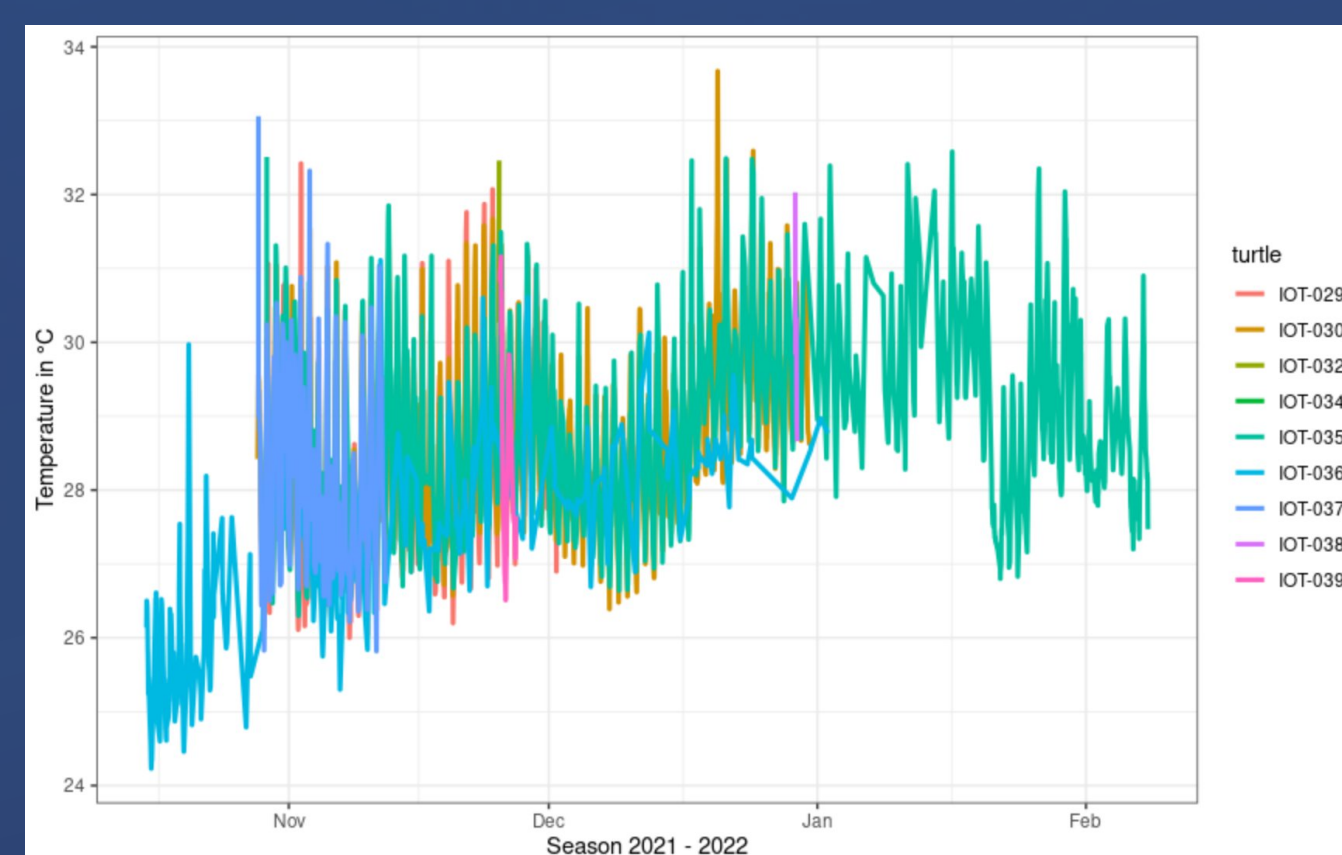
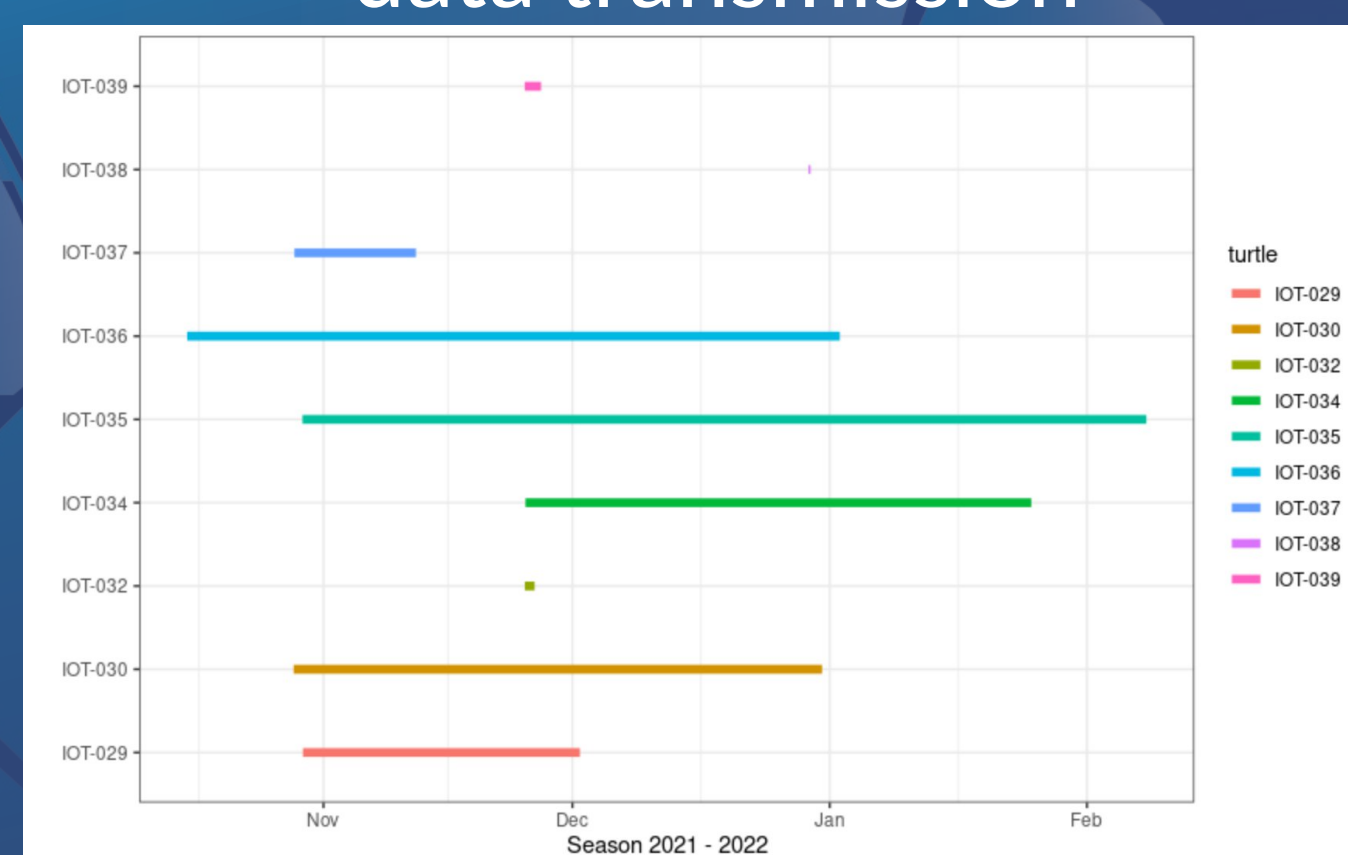
RESULTS IN ALDABRA

10 tags deployed between October 2021 and April 2022 with up to 3.5 months of data transmission

recording temperature and depth

to get biological information such as dive durations

more information and development to come !



The network is operational and could be used a variety of environmental application

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TECHNICAL AND TECHNOLOGICAL SUPPORT

