

## 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

## CONTACTS OF PROJECT LEADERS

### IFREMER

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## FUNDING

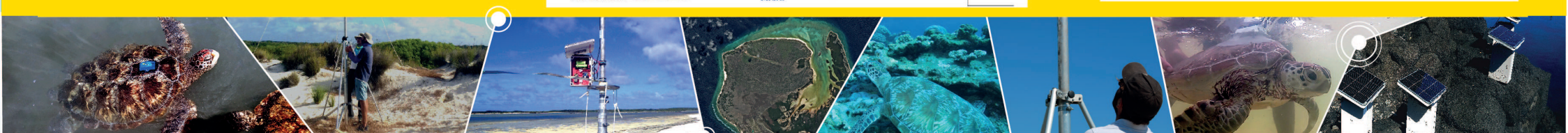
pIOT - Project implemented within the framework of the multidisciplinary Consortium «Scattered islands 2017-2020»



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



## PARTNERS





# PROJECT pIoT | PILOT PROJECT FOR INDIAN OCEAN SEA TURTLES

DEVELOP AND TEST IN A NATURAL ENVIRONMENT ON A SITE SCALE

DEPLOY 5 TAGS AND 5 RECEIVING STATIONS ON THE ISLAND OF EUROPA TO TEST THE TECHNOLOGY DEVELOPED IN A CONSTRAINING NATURAL ENVIRONMENT (temperature, isolation, non-expert personnel)

Contribute to the development of a first prototype of innovative reception stations and tags

Assess the feasibility of deploying a network to observe the movements and migrations of marine turtles using this technology



pIoT - Project implemented within the framework of the multidisciplinary Consortium «Scattered islands 2017-2020»



**STUDY PERIOD**  
**2018-2020**



# 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 6 SITES IN THE SOUTHWESTERN BASIN OF THE INDIAN OCEAN

Deploy the first regional observation network

Lead to the technological developments and launch the pre-industrialisation of a new generation of innovative tags



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



**STUDY PERIOD**  
**2019-2021**



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<https://www.ifremer.fr/lareunion/Projets/Innovations-technologiques/pIoT-2018-2020-IOT-2018-2021>