

Interreg 2 Seas Mers Zeeën

Programme Priority : 4.Ressource efficient economy

Specific Objective : 4.1 Increase the adoption of new solutions for a more efficient use of natural resources and materials

# SUMARiS

## Sustainable management of rays and skates

Grant agreement : 2S03-024 SUMARiS

### WP n°1 Fishery knowledge

#### A 1.2 Gaining knowledge on key life traits

#### D1.2.4 Report on fecundity and post-natal survival in captivity

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# D1.2.4 Report on fecundity and post-natal survival in captivity

## 1. Summary

## 2. Introduction

### 2.1. Presentation of the SUMARiS project

Presentation of the SUMARiS project : partners, aims...

### 2.2. Presentation of the SUMARiS seatrips

Presentation of the SUMARiS seatrips : number, where

### 2.3. Presentation of the existing data on skate and ray eggs

Literature review

### 4.1. Presentation of the purpose of this research

## 3. Material and methods

### 3.1. Short outline of the protocol

### 3.2. Ethical statement

Supporting documents

- Certificat de capacité: A document certifying the capacity to hold and display several species including all Raja sp
- Autorisation d'ouverture: A document authorising to run the facility according to French regulations concerning animal welfare in captivity

### 3.3. Material

#### 3.3.1. Broodstock

Presentation of the number and origin of the broodstock with the stock coming from Nausicaa (living in captivity for several years) and from the SUMARiS project (caught in the wild environment and living in captivity for less than 6 months).

#### 3.3.2. Tanks for broodstock

Characteristics of broodstock storage tanks

### **3.3.3. Tanks for eggs and juveniles**

Characteristics of eggs and juveniles storage tanks

### **3.3.4. Life support systems**

Characteristics of the life support systems (filtration, parameters of the water: temperature, pH...)

## **3.4. Methods**

### **3.4.1. Broodstock**

Protocol of breeding and storage of broodstock (feeding, water...)

### **3.4.2. Eggs and juveniles**

Protocol of breeding and storage of eggs and juveniles (collection, incubation...)

### **3.4.3. Life support systems**

Protocol for monitoring the physico-chemical parameters of water

## **4. Results**

### **4.2. Physico-chemical data**

### **4.3. Broostock data**

### **4.4. Eggs and juveniles data**

## **5. Discussions**

## **6. Conclusion**

## **7. References**

## **8. Appendix**