



October 2nd 2024 | **HSR Conference Hall**

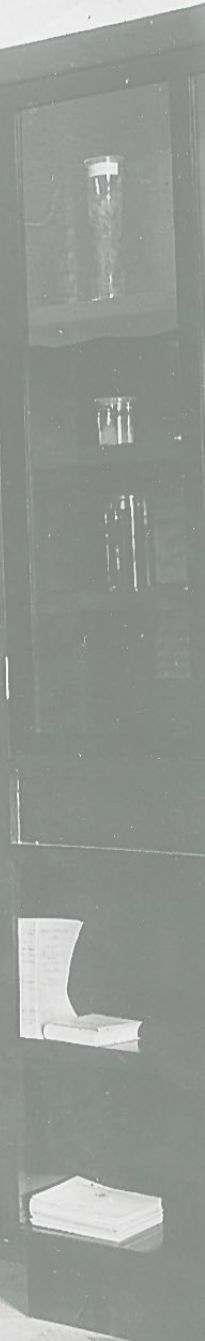
Hydrobiological Station of Rhodes | Aquarium

Research | **Conservation** | **Public Awareness**

Georgios-Angelos Hatiris, Marine Geologist, Head of HSR
Gerasimos Kondylatos, Ichthyologist PhD(c)
Konstantinos Kalaentzis, Biologist PhD(c)
Paraskevi Louzidou, Marine Biologist PhD(c)

Research of biological invasions

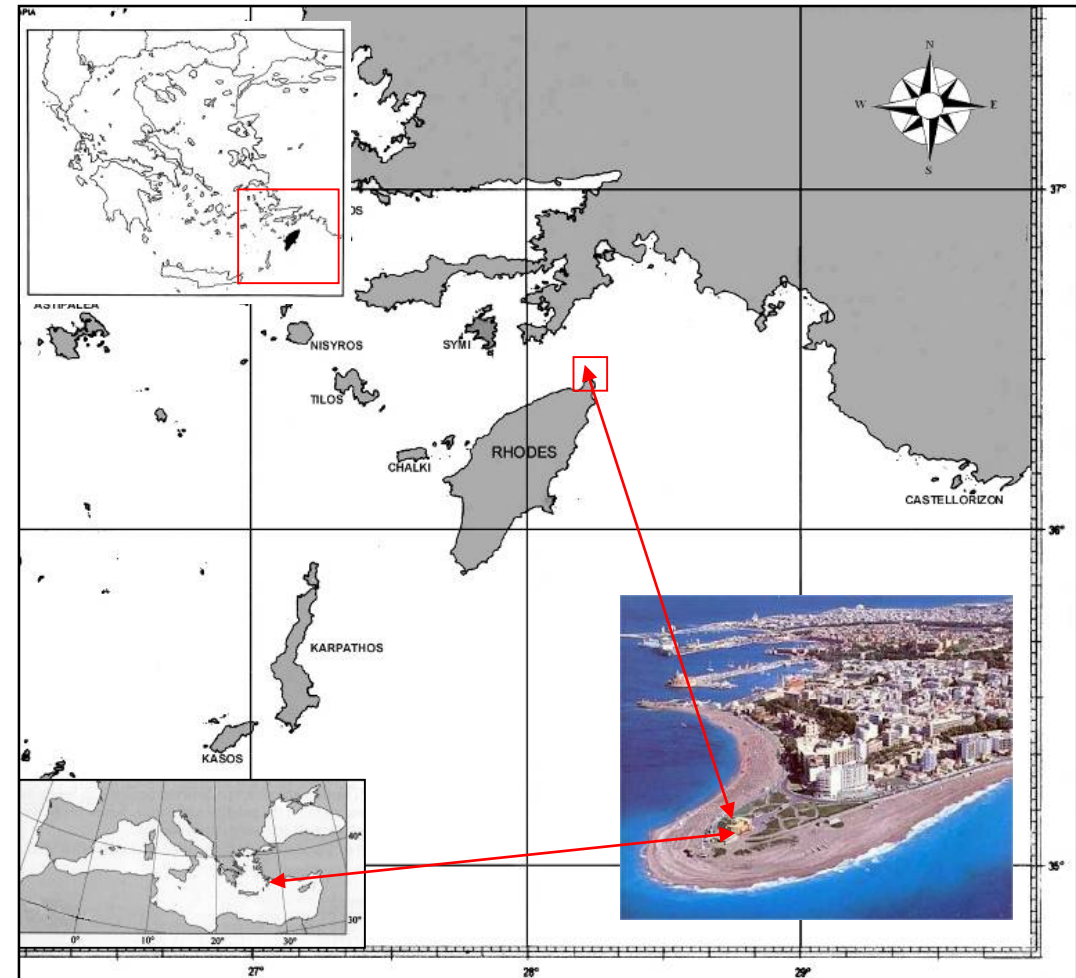
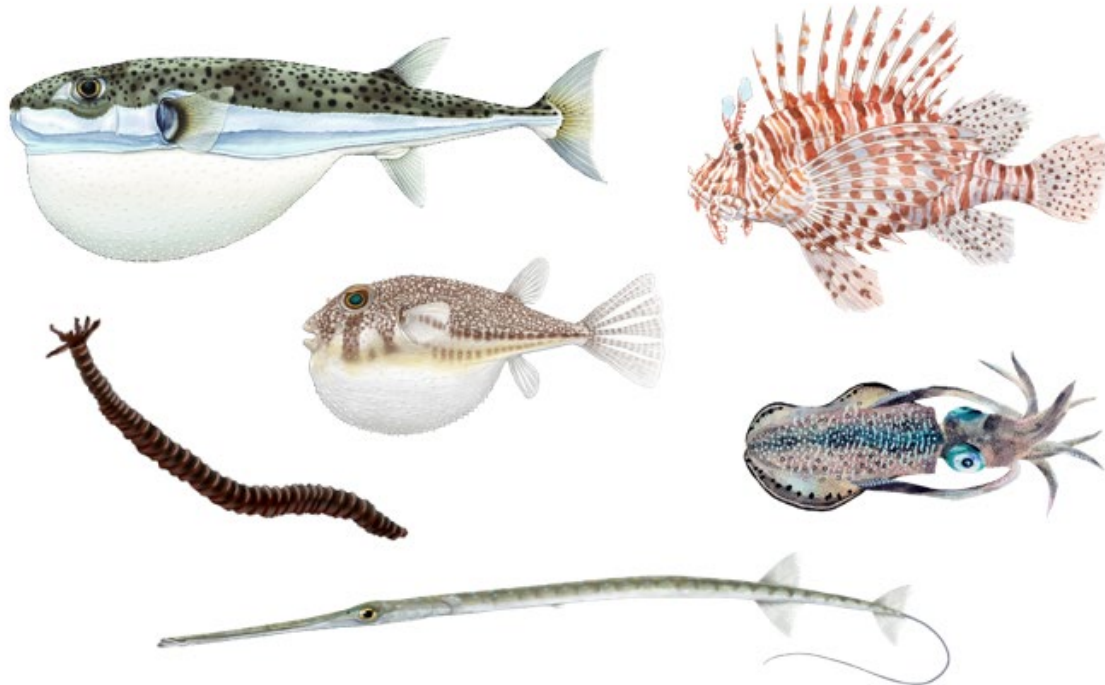
Gerasimos Kondylatos



Research of biological invasions

Study of biological invasions: Past & Present

- HSR is located at Rhodes, framed by two gateways of invasion into the Aegean Sea
- Decades of research on biological invasions, mainly Lessepsian migration
- Numerous publications on NIS and IAS
- Cooperation with research institutes, universities and NGOs



Research of biological invasions

Study of biological invasions: Past & Present



- A variety of research projects focusing on NIS

I AFSEA



LagoMeal

Dressage

Akti

LagoManage



Research of biological invasions

Study of biological invasions: Future



- Acquire funding for continuous monitoring for early detection of biological invasions
- Research on the impacts of biological invasions
- Further work based on the results of previous projects
- Research innovative ideas to control IAS populations
- Research on designation of MPAs and artificial-reef sites in the Dodecanese



Research & Conservation

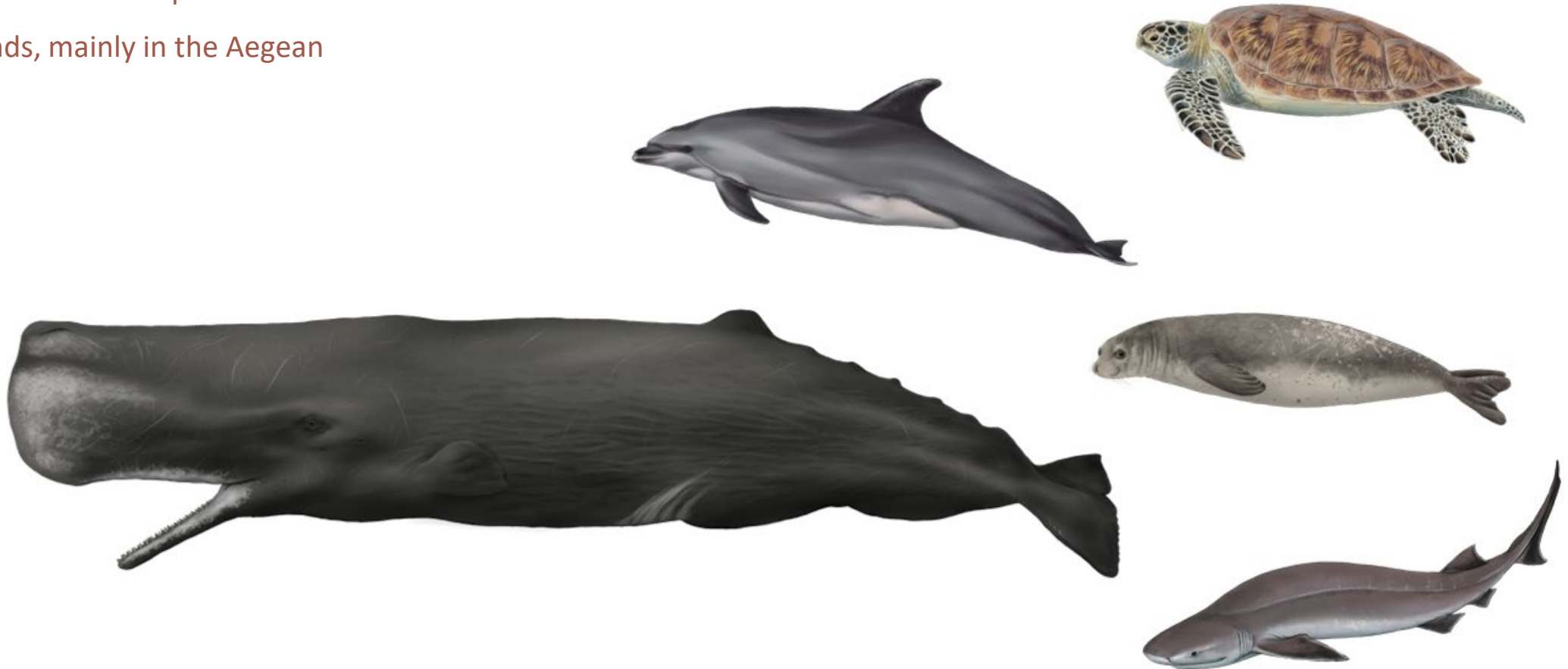
Konstantinos Kalaentzis



Research & Conservation

Marine megafauna

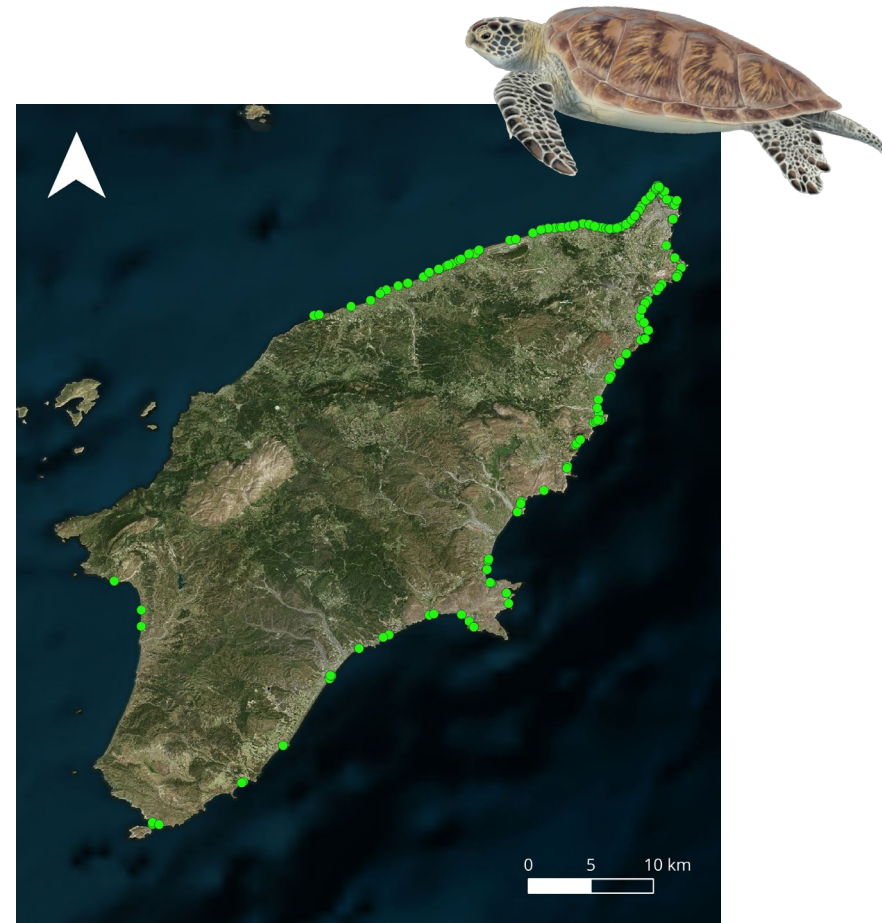
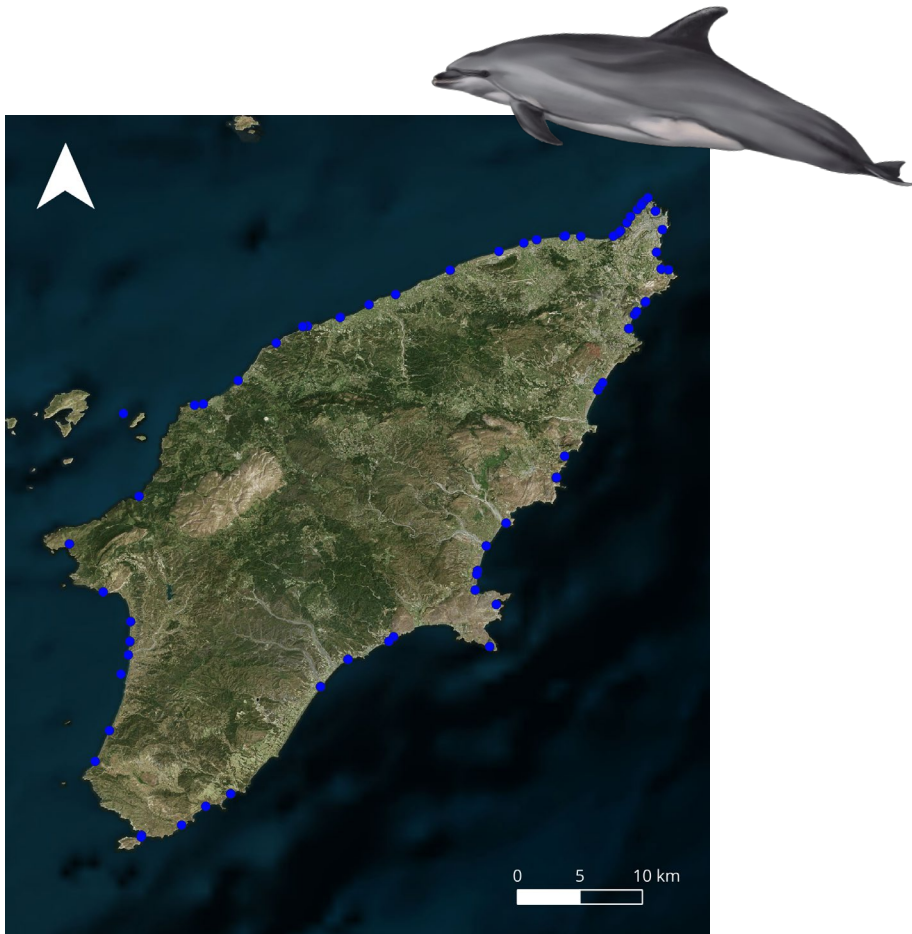
- Documenting marine megafauna (cetaceans, marine turtles, monk seal, sharks) since 1948
- Stranded, injured, killed and trapped individuals or sightings
- More than 660 records of 21 species
- Spanning 17 islands, mainly in the Aegean



Research & Conservation

Marine megafauna

- Approx. 120 records of **cetaceans** and 460 records of **marine turtles** only for the island of Rhodes



Research & Conservation

Marine megafauna

- Immediate response in case of injured, disoriented or trapped animals
- Cooperation with wildlife protection organisations
- First aid provision on the field or in the premises of HSR
- In the process of becoming a certified station for first-aid provision to marine animals



Research & Conservation

Marine turtle nesting

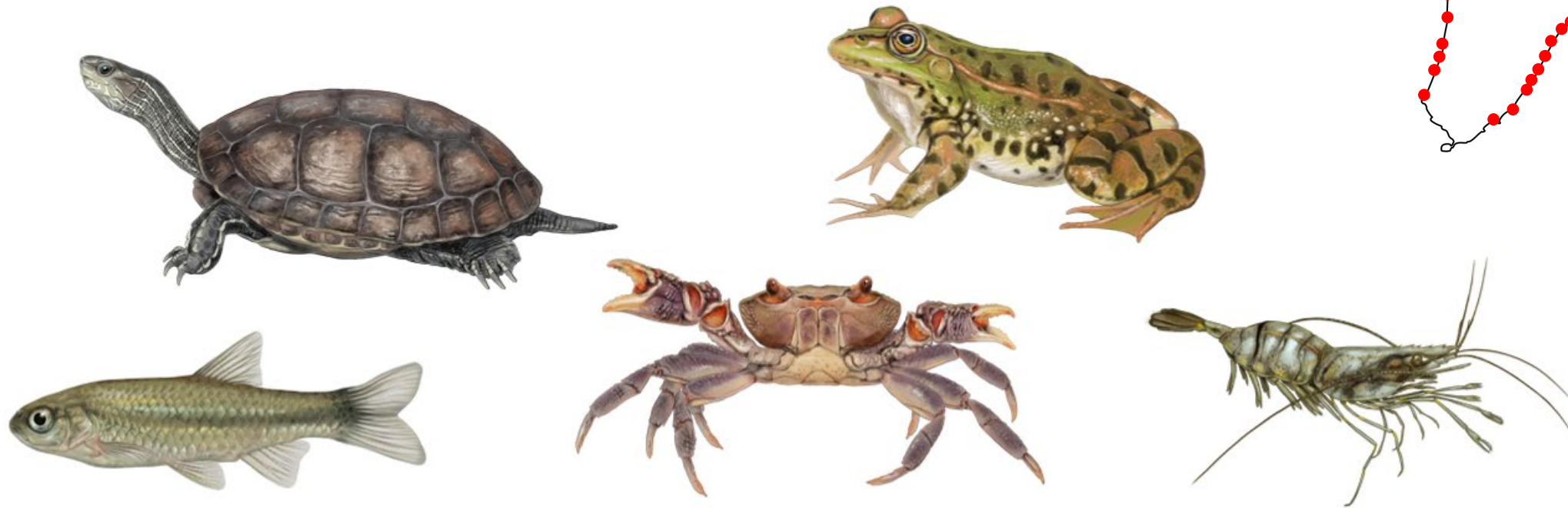
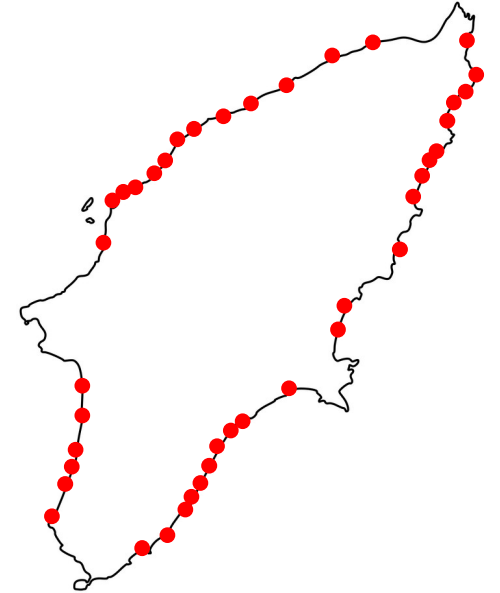
- Nesting season monitoring and beach patrol
- Data collection
- Protection from humans, wild animals, light pollution
- Assessment of nesting success
- Public awareness campaigns, educational seminars and involvement of local communities



Research & Conservation

Freshwater endemics

- Only a few insular natural wetlands threatened by strong hydrological stress
- Several endemic and threatened species
- Seasonal monitoring & assessment on the presence of IAS on estuaries
- Proposal for a small grant to map 7 freshwater endemics - submitted



Research & Conservation

Citizen Science



- Citizen-Science platform for recording IAS on coastal waters of Rhodes - *running*
- Construction of a mirror project for Greek marine IAS - *running*
- Beach Response Network with the cooperation of > 50 hotels - *running*



EL.N.A.I.S
ELLENIC NETWORK ON AQUATIC INVASIVE SPECIES



Research & Conservation

Future initiatives



- Setting up HSR Biological Sample Database for genetic analyses (marine megafauna and rare fish)
- Digitalisation of HSR archive & specimen collection
- Expand the Beach Response Network to more coasts
- Plan a second round of educational seminars for Hotel staff (stranding, nesting and other incidents) in other islands
- Acquire funding for monthly beach patrols during nesting season



Research & Public Awareness

Vivian Louizidou



Ecological Quality Status through the MSFD

Novelty: the use of biological indices as criteria to assess the ecological quality status of an area

Use of BENTIX Index – Classification

BENTIX INDEX (Simboura & Zenetos, 2002) classification scheme

$$\text{Bentix} = \{ 6 \times (\% \text{GS}) + 2 \times (\% \text{GT}) \} / 100$$

GS=sensitive species GT=tolerant species

Ecological Status class	range of Bentix	Boundary limits	EQR	
High	$4,5 \leq \text{Bentix} < 6$	6	1	>60% GS <40% GT
Good	$3,5 \leq \text{Bentix} < 4,5$	4,5	0,75	
Moderate	$2,5 \leq \text{Bentix} < 3,5$	3,5	0,58	>60% GT <40% GS
Poor	$2,0 \leq \text{Bentix} < 2,5$	2,5	0,42	
Bad	0	0	0	

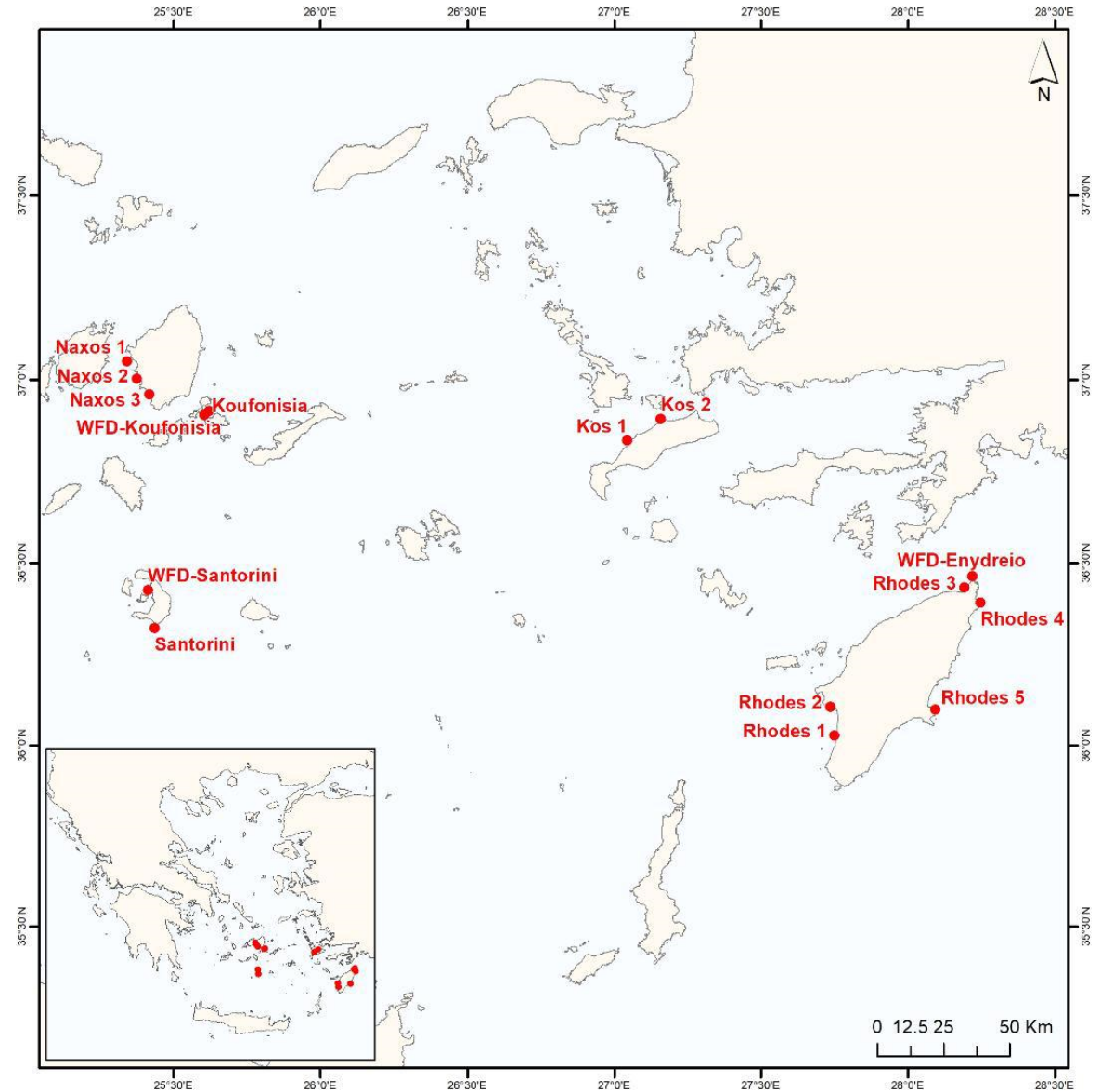
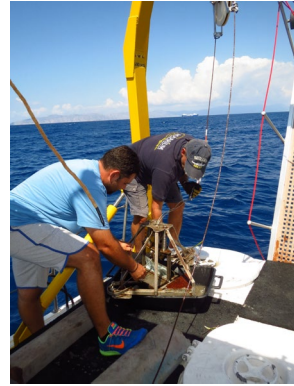
*recommended boundaries' modification only for muddy bottoms (over 90% fines) as: 3,5=3, 4,5=4

Research

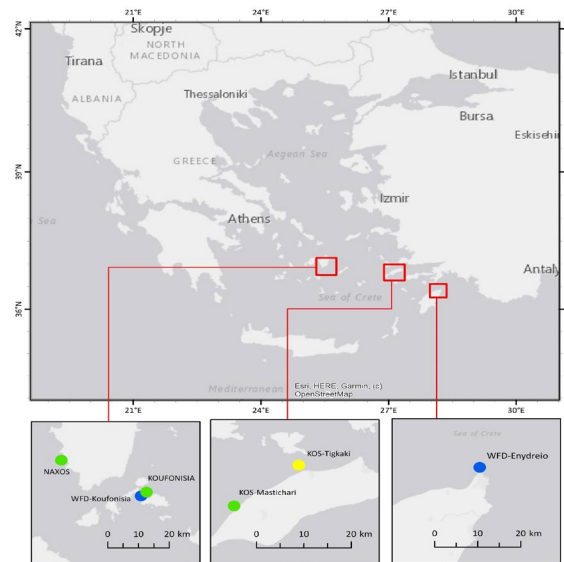
Study Area



S/V ALKYON of HSR/HCMR



		all stations MO results										
Stations	Confidence Level	GS(sensitive)	GT(tolerant)	N.A.(%)	Ign.(%)	No. Species	No. Specimens	Sum GS	Sum GT	Bentix	EQR	Classification
WFD ENYDREIO	☑	63.16%	36.84%	0.00%	0.00%	18	38	24	14	4.53	0.75	HIGH
KOS_1	☑	52.00%	44.00%	4.00%	0.00%	22	50	26	22	4.00	0.67	GOOD
KOS_2	☑	35.32%	58.30%	6.38%	0.00%	51	118	42	69	3.29	0.55	MODERATE
NAXOS	☑	61.80%	20.22%	17.98%	0.00%	34	89	55	18	4.11	0.69	GOOD
KOUFONISIA WFD	☑	68.45%	25.99%	5.57%	0.00%	57	216	148	56	4.63	0.77	HIGH
KOUFONISIA 2	☑	46.91%	47.88%	5.21%	0.00%	53	154	72	74	3.77	0.63	GOOD



Public awareness

Guided Scientific Tours for Students and Visitors

since 2022
> 2000 people



Public awareness

Beach & Underwater Clean ups

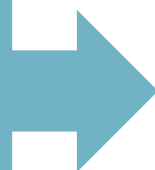


ΔΕΛΤΙΟ ΚΑΤΑΓΡΑΦΗΣ ΑΠΟΡΡΙΜΜΑΤΩΝ ΓΙΑ ΠΑΡΑΚΤΙΟ ΕΘΕΛΟΝΤΙΚΟ ΚΑΘΑΡΙΣΜΟ

Γενικές πληροφορίες

Όνομασία παραλίας	
Περιοχή (Νομός)	
Συντεταγμένες (από Google Maps)	
Ημερομηνία εθελοντικού καθαρισμού	
Εταιρεία / Φορέας	
Αριθμός Εθελοντών	
Μήκος ακτής που καθαρίστηκε (μέτρα)	
Τύπος ακτής (κυκλώστε)	Άμμος Βότσαλο Πέτρα Μεικτή
Θέση ακτής (κυκλώστε)	Εντός οικισμού Εκτός οικισμού
Εκτιμώμενο συνολικό βάρος απορριμμάτων (κιλά)	

>200 people participated
Data collection through
specific Protocols



Public awareness

World Environment Day 2024



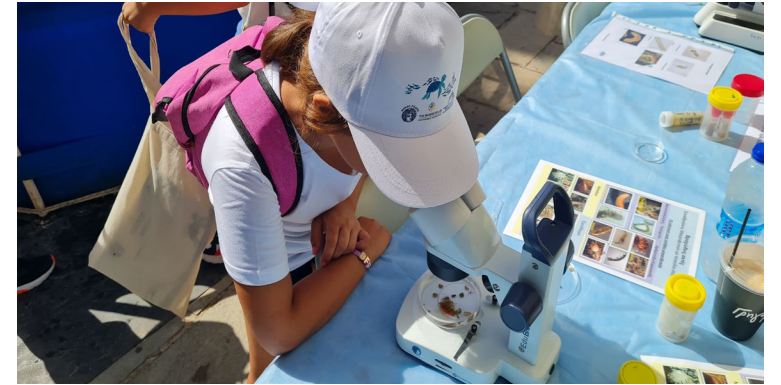
More than 200 students attended



1^η ΜΕΓΑΛΗ ΓΙΟΡΤΗ ΓΙΑ ΤΟ ΠΕΡΙΒΑΛΛΟΝ
Προστατεύουμε τον Πλανήτη

Τετάρτη 5 Ιουνίου 2024
Πλ. Χαρίτου (100 χουμαδιάς) Από τις 09:00 έως τις 13:00
Μουσικές - Παιχνίδια - Γνώσεις, για Μικρούς, και Μεγάλους

Logos: ΔΗΜΟΣ ΡΟΔΟΥ, THE RHODES CO-LAB SUSTAINABLE DESTINATION, AEGEAN ISLANDS, ΕΝΥΔΡΕΙΟ, Φ.Ο.Σ.Α., ΥΠΟΥΡΓΕΙΟ ΠΑΙΔΕΙΑΣ, ΕΡΕΥΝΑΣ & ΘΡΗΣΚΕΥΜΑΤΩΝ, ΕΛΛΗΝΙΚΗ ΔΗΜΟΚΡΑΤΙΑ, ΕΛΛΗΝΙΚΗ ΔΗΜΟΚΡΑΤΙΑ, ΕΛΛΗΝΙΚΗ ΔΗΜΟΚΡΑΤΙΑ, ΕΛΛΗΝΙΚΗ ΔΗΜΟΚΡΑΤΙΑ, ΕΛΛΗΝΙΚΗ ΔΗΜΟΚΡΑΤΙΑ.



Public awareness

Environmental Awareness Programs



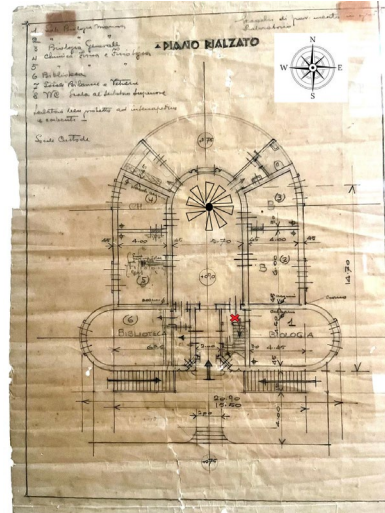
ΘΕΡΙΝΑ ΕΚΠΑΙΔΕΥΤΙΚΑ ΕΡΓΑΣΤΗΡΙΑ
ΓΙΑ ΠΑΙΔΙΑ 3-7 ΕΤΩΝ
27, 28 ΚΑΙ 29 ΑΥΓΟΥΣΤΟΥ
ΥΔΡΟΒΙΟΛΟΓΙΚΟΣ ΣΤΑΘΜΟΣ ΡΟΔΟΥ / ΕΛ.ΚΕ.Θ.Ε.



More than 70 kids
with their parents



Θερινά Εκπαιδευτικά
Εργαστήρια στο
Ενυδρείο
Ρόδου



Thank you for your attention!

