

## WP 3

***Strengthened institutional capacity for the conservation of cetaceans and sea turtles in the Adriatic through region cooperation.***

NETCET

Network for the Conservation of Cetaceans and Sea Turtles in the Adriatic

**Final Meeting**

**Venice 3-4 December 2015**



The project is co-funded by the European Union,  
Instrument for Pre-Accession Assistance.



Sandro



# University of Padua



*Hic est locus ubi mors gaudet succurrere vitae*



Mediterranean  
Marine  
Mammals  
Tissue Bank

Cetacean  
stranding  
Emergency  
Response  
Team



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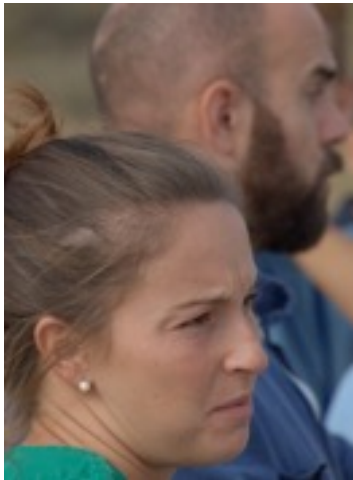


## University of Padua (UPD)

**Dept. BCA:** Dr. Sandro Mazzariol (C), Prof. Bruno Cozzi (C), Dr. Lisa Poppi (ST), Dr. Cinzia Centelleghes (C), Dr. Mattia Panin (C), Giulia Maria Mantovan (Adm)

**Dept. MAPS:** Dr. Federica Marcer (C&ST), Dr. Erica Marchiori (ST)

**University of Bari:** Prof. Antonio Di Bello (ST), Dr. Olimpia Lai (ST)



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## Objectives of the Work package

- Enhance cooperation and strengthen networking following and improving previous network projects
- Enhance Adriatic cities role in the conservation through a City Network
- Establish and implement data collection in a unique database linked with main existing ones
- Develop emergencies responses in case of anomalous mortalities and environmental disasters.



## Objectives of the Work package

### Key action 3.1

1) Established a scientific and technical network among relevant organizations and experts in the Adriatic for sea turtles (CF) and cetaceans (UPD): **more than 30 scientific and technical institutions involved**



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## Objectives of the Work package

Key action 3.1: Scientific networking tools.....mailing lists, forum, two databases



### Cetaceans ([www.marinemammals.eu](http://www.marinemammals.eu))

netcet

HOME MISSION LIST OF SPECIES DATABASE SEARCH NEWS netcet STRANDINGS CONTACTS

Adriatic cetaceans strandings

Free search

Ordered by

Year

Year

Country

Country

### Sea turtles ([www.adriaticseaturtles.eu](http://www.adriaticseaturtles.eu))

netcet ADRIATIC SEA TURTLES DATABASE

ADRIATIC SEA TURTLES DATABASE

Search

Results

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## Objectives of the Work package

### **Key action 3.2**

*Training programme to improve and standardise veterinary practices and stranding management for cetaceans and sea turtles through 3 courses (Padova, Bari and Rijeka) - UPD with SINP*

**> 100 veterinarians/students trained**

**3 common protocols prepared**

**1000 copies of 2 handbooks printed**



Padova (I), May 13th-17th, 2013

29 participants



Rijeka (KR), May, 27th-31st, 2013

17 participants



Bari (I), June, 10th-14th, 2014

59 participants



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# WP3: protocols



**NECROPSY PROTOCOL  
FOR  
STRANDED CETACEANS**



**FIRST AID  
AND  
MANAGEMENT PROCEDURES  
OF SEA TURTLES**

**NECROPSY  
PROTOCOL  
FOR  
STRANDED  
SEA TURTLES**

SEA TURTLES  
STRANDED  
FOR



## WP3: textbooks



**Sandro Mazzariol:** DVM, Assistant Professor of Veterinary Pathology, since 2010 he's the coordinator of the Cetaceans' strandings Emergency Response Team (CERT) established in the University of Padova and he's the author of several papers on marine mammals' pathology and diseases.



**Bruno Cozzi:** DVM, Full Professor of Veterinary Anatomy, since 2002 he's the coordinator of the Mediterranean Marine Mammals Tissue Bank (MMMTB) established in the University of Padova and he's the author of several papers on marine mammals' anatomy and physiology



**Cinzia Centelleghes:** DVM, PhD student at the University of Padova. She's a member of CERT since 2011.

This handbook should be considered as a useful field tool for people involved in cetaceans' stranding networks along the Mediterranean Sea and, more in detail, along the Adriatic coastlines. Recipients of this book are volunteers without any veterinary skills, biologists with no medical knowledge and veterinarians who have no informations about biology, anatomy and physiology of these very fascinating marine species.



ISBN 978-88-9311-001-1

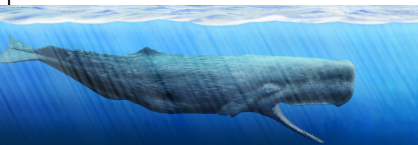


Handbook for Cetaceans' Strandings - K. Sandro Mazzariol, Bruno Cozzi, Cinzia Centelleghes





### Handbook for Cetaceans' Strandings

✂

edited by  
Sandro Mazzariol, Bruno Cozzi  
Cinzia Centelleghes



netcet

Questo manuale è un mezzo per fornire agli operatori dei Centri di Recupero uno strumento per intervenire in maniera competente ed efficace sulle tartarughe marine trovate spiagiate lungo le coste del Mar Adriatico e, in generale, del bacino Mediterraneo. È rivolto, infatti, a tutti gli operatori coinvolti negli eventi di spiaggiamento e quindi sia a volontari che non hanno un'esperienza veterinaria, sia a biologi e naturalisti ai quali manca una specifica conoscenza medica, sia ai medici veterinari a cui mancano le conoscenze anatomiche, fisiologiche e biologiche di queste specie così affascinanti.



**LISA POPPI**

Ricamatore confermato in Patologia Generale ed Anatomia Patologica Veterinaria presso l'Università di Padova. Da diversi anni si occupa di patologia e necropsia dei cheloni, con particolare attenzione alle tartarughe marine del Mare Adriatico.



**ANTONIO DI BELLO**

Professore Associato di Clinica Chirurgica Veterinaria presso l'Università di Bari. Da oltre 15 anni si occupa di clinica e chirurgia delle tartarughe marine e su tali tematiche ha pubblicato diversi articoli scientifici.



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www.genesidesign.com

a cura di Lisa Poppi e Antonio Di Bello

### MANUALE DI GESTIONE DELLE TARTARUGHE MARINE

a cura di Lisa Poppi e Antonio Di Bello

netcet



MANUALE DI GESTIONE  
DELLE TARTARUGHE MARINE



Questo progetto è co-finanziato  
dall'Unione Europea.  
Sistema di assistenza pre-adesione



The project is co-funded by the European Union,  
Instrument for Pre-Accession Assistance.



- act. 3.2 - workshop on rescue centers in Riccione (Febr 2013): 30 persons
- act. 3.4 - workshop on monitoring and surveys STs and Cs in Losinj (Febr 2014): 15 persons
- act. 3.5 - trainings on handling and releasing of STs and Cs (Sept-Dec 2014, 4 1-day courses): 180 participants (biologists, coast guards, students, NGO's personnel, etc.)



### Sea turtles handling and first aid

#### STRANDED TURTLES:

- Put the turtle in a plastic container, with a soft surface under the plastron (mattress, life buoy, folded towel.);
- During summer use a wet towel to cover the carapace and keep head and eyes wet; keep it in shadow to avoid overheating;
- During winter, use a dry towel to cover it and keep it in a warm place.



- Hold the turtle by its carapace as in the images.



- If the turtle has bloody wounds, use a bandage or a clean towel to cover them and minimize handling.

#### DO NOT:

- Hold the turtle from **FLIPPERS**.
- Put the turtle on the **CARAPACE**.
- Get too close to the **MOUTH**: pay attention to bites!
- Remove **EPIBIONTS** by hand.

#### Minimize stress!

- put a wet towel on the head in order to cover the eyes; leave nares free.
- keep people away from the animal, avoid excessive noise.



#### SEA TURTLES ADRIFT:

- Use a dip-net to board the turtle.

#### DO NOT:

- Bring the turtle in by pulling the line



- If the turtle has been hooked:
  - ✓ cut the line as close as possible to the mouth;
  - ✓ take it to the Rescue Center.

#### DO NOT:

- Try to pull out the hook
- Pull the line from the mouth or from the cloaca

- If the turtle has been caught during fishing operations and it looks comatose or dead:

- ✓ put it in a slope position (lift hindquarters of about 20-30 cm) until it get active again (at least 4 hours);
- ✓ take it to the Rescue Center.



#### DO NOT:

- Put the turtle in the water if it still looks comatose



### Stranded cetaceans handling and first aid

AIM: reduce stress, give relief from hot, sun and wind until the arrival of first aid group

#### Approaching to the animal

- ✓ **Approach the animal quietly and slowly** from one side or in front. **Avoid noise, lights and movements.**
- ✓ **Be careful to mouth and tail.** Mouth, body and tail should be blocked simultaneously by personnel.
- ✓ Social and pelagic species are subject to stress.
- ✓ Assess the presence of **skin wounds** and look for **fishing nets** around the animal or in the mouth.
- ✓ Monitor:
  - Respiratory rate: 4-8 breaths/minute
  - Interaction with the external environment
  - Abnormal behavior: → **In the water:** the animal is swimming rotated on circle, shows abnormal diving, etc.
  - **On the shore:** tremors, convulsions, unusual sounds, etc.

#### Alive cetaceans close to the shore

With no evident injuries or physical and behavioural changes:

- Constant monitoring with **no intervention**
- Try to approach the animal in order to assess if it runs away
- ✓ **if environmental condition could be dangerous** → Try to **push the animal toward the high sea**
  - if it is possible, use inflatable rafts
  - if using motorboats take care of the propeller
  - Approach the animal slowly from one side
  - Maintain safe distances
  - Try to make noise between the animal and coastline (for example: create a human chain making noise with metal objects). If unsuccessful after short time, stop it and try after some time
  - Note any altered behavior
- ✓ **if the animal is injured/sick** → **any resuscitating effort could delay stranding**
  - Evaluate the option to **take the animal close to the shore for medical evaluation**
  - Contact an expert veterinarian or a first aid team



#### Stranded cetaceans

- ✓ Reduce manipulation and stressful condition, in particular in pelagic species.
- ✓ Maintain people at safe distance.
- ✓ Approach the animal from one side or in front.
- ✓ Do not touch eyes, blowhole and genital area (protect blowhole and eyes with saline solution or lubricant).
- ✓ Do not use fins to move the animal.
- ✓ Dig holes under pectoral fins.
- ✓ If it is possible use inflatable of foamy mattress on rocky beaches.
- ✓ The animal must be positioned on its belly.
- ✓ **Avoid overheating** (also in cloudy days) by:
  - Wet towels
  - Shading the animal
  - Suntan or hydrating creams (doxibetone)
- ✓ **Avoid cooling** (especially during winter):
  - Use mineral oil or cream on fins in small and emaciated animals to avoid thermic dispersion

#### Moving the animal

- ✓ **Do not use ropes.**
- ✓ **Do not pull an animal without towels or in presence of rocks**
- ✓ **Do not pull from fins and/or tail.**



# WP3.6: Adriatic Emergency Task Force



The project is co-funded by the European Union, Instrument for Pre-Accession Assistance.



## WP3.6: Adriatic Emergency Task Force

- ACCOBAMS Res. 4.16
- Barcelona Convention (art. 9) and its Prevention and Emergency Protocol
- Sub-Regional Contingency Plan for Prevention of, Preparedness for and Response to Major Marine Pollution Incidents in the Adriatic Sea (between Croatia, Italy and Slovenia) (OGRC-T no. 7/2008)



## ***Act. 3.6: proposal and creation of an Adriatic Emergency Task Force***

### Accobams resolution 4.16: guidelines for a coordinated cetaceans stranding response

Urges the Scientific Committee, in collaboration with the Secretariat and the Sub-Regional Coordination Units:

- to update the roster of contact persons and experts from the scientific and conservation communities and from governmental environment and natural resource agencies who could contribute in appropriate fields of expertise, such as pathology, epidemiology, toxicology, biology, ecology, acoustics, and to strengthen the two emergency task forces on:
  - (i) —mass mortality, to address unusual mortality events, including epizootics and atypical mass strandings; and
  - (ii) —maritime disaster, to address oil or chemical spills affecting critical habitats of cetaceans;
- to use existing experience to prepare contingency plans for each task force, including descriptions of administrative procedures and modalities for interventions, the decision-making processes and the management of information, communication and relations with the media;
- to update the studies and the contingency plans periodically on the basis of past experience and new techniques and technologies



Sub-Regional Contingency Plan for Prevention of, Preparedness for and Response to Major Marine Pollution Incidents in the Adriatic Sea (between Croatia, Italy and Slovenia) (OGRC-T no. 7/2008)

- Mutual assistance plan in case of environmental emergencies
- Establish communication, command and liaisons
- Conservation of biodiversity is considered a related interest within the Barcelona Convention.
- Within the Contingency Plan there is support teams which operate from national emergency centers and have an advisory role.



## September, 12th, 2014: sperm whales mass stranding



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# SW mass strandings 2014: WP 3.1 and WP3.4



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# WP 3.1 and 3.6: scientific networking and AETF



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## WP 3.2 training and common protocols



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## Why they stranded?



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Why they turn  
Westward suddenly?



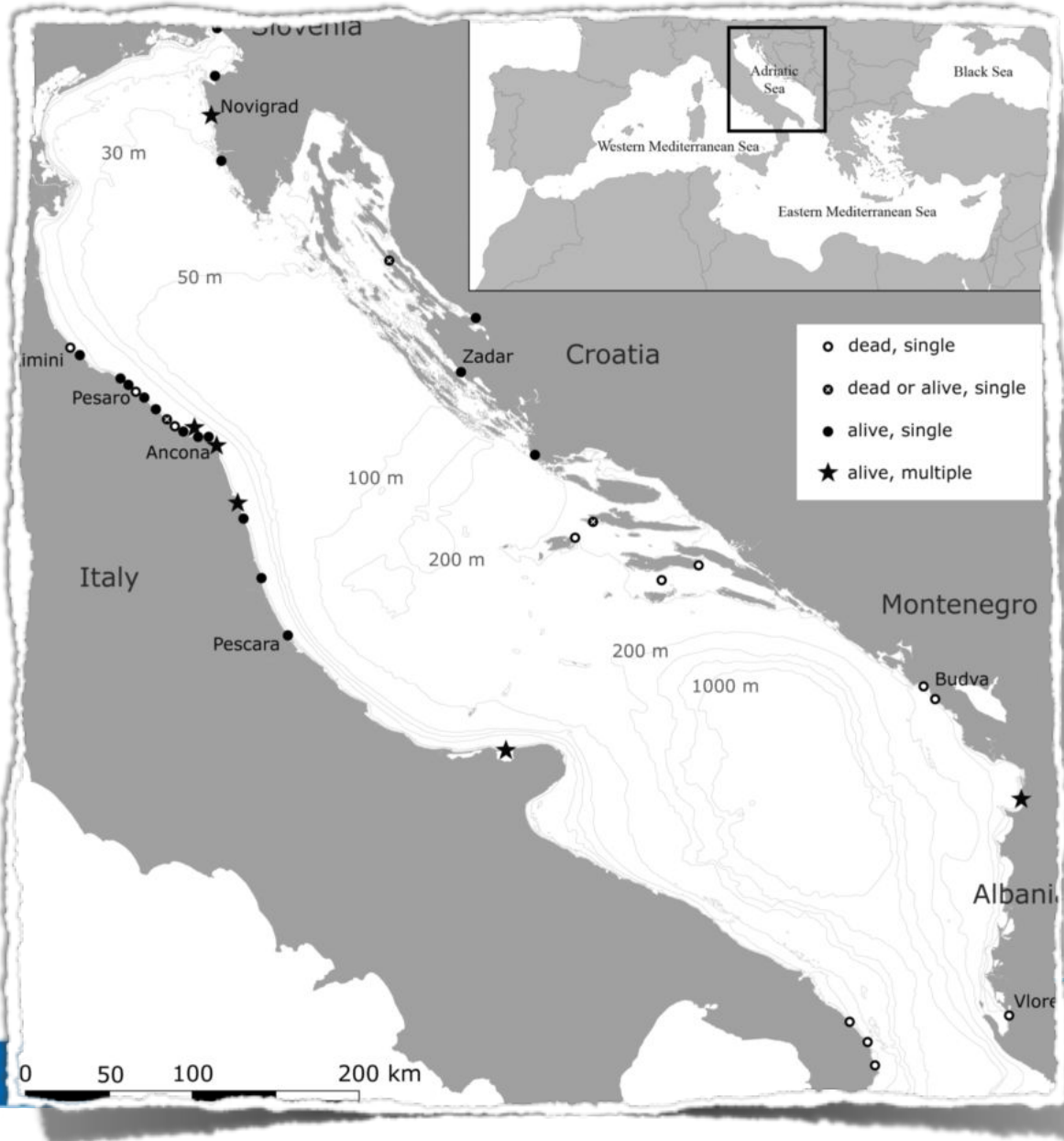
Why did they strand?

Why they did not  
exit the Adriatic?



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**SW3:**

- . 7 yo male
- . DMV positive

**SW2:**

- . 14 yo female
- . DMV positive

**SW1:**

- . 35 yo female
- . pregnant
- . renal failure due to stone and pregnancy
- . mother and fetus positive to DMV



Under investigations  
but airguns are  
reasonably excluded

Geographical and  
meteorological factors

Starvation and  
dehydration

“Follow me” stranding

They do not find the  
way due to DMV related  
diseases



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## Act. 3.1, 3.6 & 4.1

### 1 Sea Turtles UME in september/october 2013, between Veneto and Abruzzo:

- . 290 loggerhead ST between October and December in the Northern Adriatic
- . badly preserved carcasses
- . necropsies in 30%: 80% females; 49% subadults and 27% juveniles.
- . main post-mortem findings:
  - endotoxemia
  - “strange” bodies in the intestine (negative for ESEM)
  - sterile intestine (13%)
  - other analyses...running!

When	Where	How many
Oct 3rd-23rd	Emilia Romagna	38
Oct 26th- Nov 11th	Friuli Venezia Giulia	36
Nov 7th-14th	Emilia Romagna	70
Nov 12th-20th	Marche	21



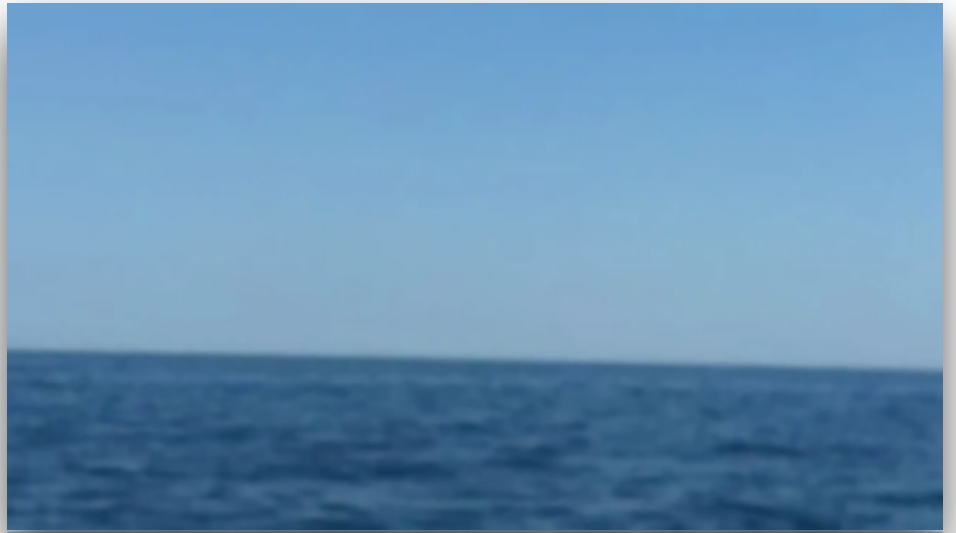
## Conclusion

NETCET project is underlining the importance of a multidisciplinary, integrated and basin-based approach in studying and monitoring aquatic animals populations.

The actions carried out in this period gave the opportunity to exchange knowledge and create technical networks aimed to enhance all efforts for large marine vertebrates conservations

NETCET project highlight the necessity to spread common knowledge and practices considering local approaches and necessities (for instance with “train the trainers approach”).





Thank you for the attention!

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