

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

The Netcet Project is financed by the IPA Adriatic CBC Programme and more specifically within the Priority 2 “Natural and Cultural Resources and Risk Prevention”.

The general aim of this Cross-border Cooperation Programme is strengthening sustainable development capabilities of the Adriatic region through a concerted strategy of action among the partners of the eligible territories.

Web site: www.adriaticipacbc.org

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1. Where are our turtles going: satellite tracking of sea turtles in the Adriatic Sea



Our turtles are transmitting! But what does that mean? It means that they are moving

around the Adriatic Sea, while the satellite transmitters on them are sending their

locations on a regular basis, together with other interesting and important data. But let's take it from the beginning: as some of you may recall, one specific activity within the NETCET project has to do with satellite tracking of sea turtles in the Adriatic. This particular activity is coordinated by researchers at the University of Primorska, Slovenia. Satellite transmitters are little devices that can be attached to animals such as sea turtles. They then transmit information on turtles' locations via satellites orbiting the Earth. They can provide very important information that

could not be obtained otherwise.

We know that the northern Adriatic Sea is an important foraging ground for loggerhead sea turtles (*Caretta caretta*), particularly juveniles. We also know that 95% of these turtles originate from nesting populations in Greece, while the rest come from Turkey, Cyprus and Libya. Moreover, we know that when temperatures drop in winter, turtles need to move away, as they cannot survive in such cold water. **But what we do not know is where these turtles go during cold winter, where they spend their time while being juveniles, whether they come back to the same foraging places in spring, and so on.**

The NETCET project is particularly interested to know which areas are important wintering habitats, which are the main migration pathways and whether the same turtles come back to the same places year after year. These questions are important for being able to devise effective conservation strategies for these animals, which NETCET is all about. Hence, during the

summer of 2014, we spent a lot of time working with turtles. Fishermen often catch them in their nets and many turtles are still alive when fishermen pull them onboard.

We asked fishermen in Slovenia and Croatia to bring any caught turtles back to us. Thanks to their cooperation, quite a few turtles were brought to us. Some of them were too big, others too small for our specific questions. But many were of the right size, meaning they were still juveniles (for which we need this information), but large enough for the satellite transmitters not to be a problem for them. All of the turtles were first brought into rehabilitation centres in Piran (Slovenia) and Pula (Croatia), for their health to be observed and to make sure they were not injured. We then fitted these turtles with special satellite transmitters that collect information on the location, time, diving data and depth and water temperature. **The transmitters are hydrodynamic in shape**, so they do not represent any problems for the turtles, or prevent them from swimming or diving normally. We first

tested the transmitters and the turtles' swimming performance in a controlled setting before releasing them. During this process, we needed to make a few adjustments to the settings and the design of the transmitters to optimise their performance. All of the turtles seemed to act perfectly normally and the transmitters did not appear to bother them at all. Swimming, diving and feeding behaviours all appeared normal.

In October 2014, we released 6 loggerhead sea turtles from Slovenia and then 4 from Croatia. Most of these turtles stayed in the same general area where they were captured but then started moving south at the end of November as the water temperatures started to drop. However, the most important and interesting question will be what happens in the following months. You can follow the movements of these turtles at the following link:

http://www.seaturtle.org/tracking/?project_id=1021

In addition to loggerhead turtles in the northern Adriatic, we also fitted satellite transmitters to **3 green turtles** (*Chelonia mydas*) in Albania and Montenegro. Some of them are now already along the Libyan coast.

During winter of 2014-15, another 10 loggerhead turtles will be equipped with transmitters. However, these will be turtles from an over-wintering habitat, using a different type of transmitters. But that is already another story...

Tilen Genov - University of Primorska



2. The first First-Aid Centre for sea turtles on the Venetian Coast is ready!



The construction works of the City of Venice First-Aid Centre for sea turtles, funded by the NETCET project, were finally concluded last October 2014. This emergency facility is kindly hosted within the Residency Centre "F. Morosini", a summer accommodation facility for elderly and children, run by the City's Institution of Residency Centres, on the Lido di Venezia island, between Malamocco and Alberoni.

It is a small structure **designed to provide first aid to marine turtles found stranded or in difficulty along the Venetian coast** and in the lagoon (but also in other parts of the Veneto coast, if needed). It was conceived primarily to provide logistical support to those groups who have been already working locally for several years on the conservation of these species, primarily the "Coordinamento Tartarughe marine del Litorale Veneto" (CTLV, the sea turtles rescue network of Veneto), the Coast Guard and the

State Forestry Corps. The Centre will be co-managed by the Natural History Museum and the City of Venice, with the support of qualified veterinarians and volunteers of the CTLV.

Animals taken to the Centre will be immediately examined by a veterinarian who, if necessary, will provide them with first aid, before they are transferred (within about 48 hours) to a qualified structure for more extensive care, or they are released into the sea if in healthy conditions.

The Centre consists of an office, a small biological-veterinary laboratory and an outdoor area with three tanks with a diameter between 150 and 200 cm, protected by a wooden roof. The tanks are connected to a closed water circuit, equipped with filtration and UV sterilizer and fed with artificial seawater (but they can use water from the lagoon as well).

Within the area there are also wide indoor spaces that will be used, in agreement with the host institution, for dissemination and educational activities, whereas the adjacent beach will be the scene of public events to raise awareness on sea turtle conservation.

In mid-October 2014, to mark the end of the works, a small awareness-raising event has already been organized, involving professionals

and schoolchildren of the island and including the return to the sea of a young Caretta caretta, "Luna", rescued last summer by the CTLV, after it was found stranded in the nearby island of Pellestrina. The



centre is now in stand-by during the winter and **the official opening of the centre is scheduled for Spring 2015.**

Venice Natural History Museum

3. Instruments for a joint long term strategy for the conservation of cetaceans and sea turtles in the Adriatic

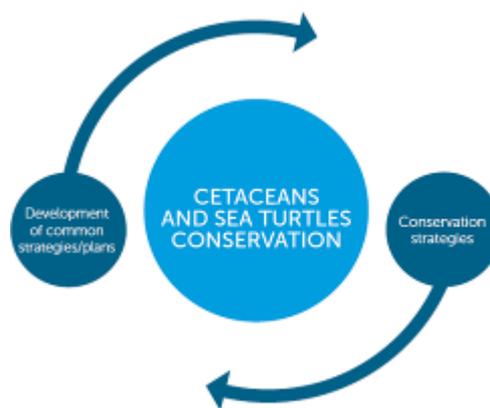
The Italian National Institute for Environmental Protection and Research (ISPRA) and the Croatian State Institute for Nature Protection (SINP) coordinate the cross-cutting activity of NETCET project to define "Instruments for a joint long term strategy for the conservation of cetaceans and sea turtles in the Adriatic".

Its main objective is twofold:

- ❖ to design **common strategies for the conservation of cetaceans and sea turtles in the Adriatic Sea**, based on a thorough examination of the state-of-the-art on cetacean knowledge, of existing threats and international and national legal framework;
- ❖ to effectively support the **drafting or updating of National Action Plans (NAP)** for these species.

The preparation of ad hoc material, in the form of various documents, will help formulating needed actions and measures to ensure long-term conservation of cetaceans and sea turtles in the Adriatic Sea, building up on ongoing existing international and national frameworks. The common strategy for the conservation of cetaceans and sea turtles will focus on a plan of 5 years after the project's end (2020). These purposes will be achieved through a number of actions.

The first action (concluded) is an initial review of the state of the art of cetaceans and sea turtles, including the analysis of their status (e.g. their abundance and distribution) and threats that may affect their populations in the Adriatic Sea. Furthermore, it includes analysis of the national and international institutional and legislation framework pertaining the conservation of these species, as well as existing related initiatives and activities.



Based on previous analysis, ad hoc conservation measures to mitigate the negative impacts of human activities on cetaceans and sea turtles within the Adriatic Sea will be identified. For example, measures will be proposed to mitigate the accidental mortality caused by fishing gears or the disturbance caused by anthropogenic noise generated during specific activities, such as gas and oil surveys and exploitation.

Another fundamental action of this activity is the definition of common strategies for the conservation of cetaceans and sea turtles in the Adriatic Sea. This entails a wide consultation with all project partners, relevant authorities and NETCET network members on what can realistically be organised and coordinated at the Adriatic level in terms of management of human activities that have an impact on the Adriatic populations of cetaceans and sea turtles. This action will greatly benefit from the background analysis (state-of-art) and from the proposed conservation measures outlined at an earlier stage of the work package. It will also benefit from the **consultation with relevant international bodies, such as the Agreement on the Conservation of Cetaceans in the Black Sea Mediterranean Sea and Contiguous Atlantic Area (ACCOBAMS), the Regional Activity Centre for Specially Protected Areas (RAC/SPA), the General Fisheries Commission for the Mediterranean (GFCM), Adriamed and the DG MARE and DG Environment of the European Commission, where appropriate.**

Finally all the work developed will enable the drafting or updating of National Action Plans on conservation of both cetacean and sea turtle in all bordering countries (Albania, Bosnia and Herzegovina, Croatia, Italy, Montenegro and Slovenia), through consultations with national stakeholders and relevant national and regional authorities. **These plans will be presented at the NETCET final conference in December 2015.**

Caterina Fortuna - Italian National Institute for Environmental Protection and Research
Ana Maričević – Croatian State Institute for Nature Protection

4. Sperm whales' mass stranding in Vasto (CH): an update



Sperm whales mass strandings are rare events in the Mediterranean Sea but the Adriatic seem to be a trap for these species. Since 1555, 8 pods of individuals belonging to this species stranded along its coasts, **the last one being in September 2014 involving 7 adult females**. In this case, a specific task force coordinated by the Cetaceans Stranding Emergency Response Team of the University of Padua, was able to intervene and perform post-mortem studies to understand the causes of these events, as happened in December 2009, when other 7 young males, stranded along the Gargano shores.

This time, the collaboration between several institutions, most of them within the Scientific network included in the NETCET project, allowed a successful operation: more in detail, the coast guard and the local stranding network coordinated by Centro Studi Cetacei, the Municipality of Pescara, partner of the NETCET Project, were able to refloat 4 individuals, which did not strand anywhere. This is an unexpected result, as usually, death seems to be the only destiny for stranded whales. The immediate response of the national and local stranding networks was possible also thanks to Blue World Institute that

communicated the presence of a sperm whales pod in the Adriatic.

Necropsies were performed on the three dead whales by more than 50 veterinarians, most of them participants of the trainings ran by University of Padua within the NETCET project. Even if analyses are still running, first results showed interesting outcomes. In particular, thanks to the support of scientists from Canary Islands (Prof. Antonio Fernandez) and from Canada (Dr. Maria Morrell) the presence of gas and fat embolism was excluded. The absence of naval activities using sound sources (i.e. military activities and seismic surveys) officially running in the area during the stranding event, gives to these anthropic activities a minor role between the possible causes of stranding of these animals. Indeed, other findings seem to be more relevant: more in detail, all the females were suffering of a prolonged fasting and the biggest one was pregnant with evidences of severe renal failure. Molecular and immunohistochemical analyses showed also evidences of Morbillivirus infection without severe disease. These findings, along with social and behavioural aspect of sperm whales could be considered as one of the most relevant aspects in determining the cause of stranding.

Sandro Mazzariol - University of Padua

5. The protected area for rehabilitation of the sea turtles in Numana (IT)

Last June - for the second year within the NETCET project lifetime - the Cetacea Foundation set up a protected area for rehabilitation of the sea turtles in the waters of Numana (Italy). Due to the bad sea conditions - that often didn't allow to work underwater, the enclosures' replacement has been very hard but at the end the objective has been reached. This year the fenced area was 1,200 square meters and it was protected by two fences, one external protection from algae and from the curious and one internal, the real fence, with robust network-mesh (4 cm). However the big news didn't consist so much in the improvement of the area in Numana but more in the incredible public success of this pre-release area.



Indeed, the City of Numana launched a project entitled "**City of Numana for Turtles**" and made it the slogan to be offered to tourists and residents. The result was striking! The small sea turtle bay attracted a large percentage of tourists in Numana (20%). Every day many people crowded together in front of the pre-release area to ask information or participate in meetings scheduled with the biologists of Cetacean Foundation. **All the eight release events had a considerable attendance (approximately 3,000 participants).**

Furthermore the use of the bay for scientific purposes was increased: in addition to the normal monitoring of the animals, under the Tartalife project and in collaboration with the CNR of Ancona, a system (called STAR) to avoid the unintentional captures of Sea Turtles with the longlines, was tested. The bad weather conditions limited the tests to one week but we are already programming a new one for next summer. The success of the fenced area was so important for the city of Numana that the Administration has already requested to repeat it in 2015.

Sauro Pari – Cetacea Foundation

NEWS IN BRIEF

Next partner meeting in Pola (Croatia): March 2015

The next partner meeting will be held in Pola, Croatia, 10 -11 March 2015, hosted by the Marine Educational Centre. The event will be a useful occasion for the NETCET partners to evaluate the already achieved results and plan the next steps to realize the project's objectives.



The Final Conference of the NETCET project: December 2015



The NETCET project will hold its final conference on the 3rd and 4th December 2015 in Venice (Italy). The Final Conference will present the results of the project but it will also be a perfect occasion to share lessons learnt and knowledge with key experts and policy makers at local, regional, national, and European level.

The NETCET City Network: update

The NETCET Network - made of cities who commit themselves to inform the general public about the threats for Sea Turtles and Cetaceans and reduce directly the risks for these marine animals – is getting bigger! To this day, 20 cities subscribed the Memorandum of Understanding: Mali Losinj, Pula-Pola, Zadar, Dubrovnik (Croatia), Kotor, Budva, Tivat (Montenegro) Vlora, Patok- Fushe Kuqe (Albania) Manfredonia, Pescara, Numana, San Benedetto del Tronto, Chioggia, Brindisi, Jesolo, Fano, Grado, Venezia (Italy).



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Contact

City of Venice

info@netcet.eu

Economic Development, European
Policies and Strategic Plan Division

+39 041 2747826 / 7830 / 7834

San Marco 4299
30124 Venice - Italy

www.netcet.eu

www.facebook.com/NETCETproject

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