Project

Biological and toxicological contamination of cetaceans in the Pelagos Sanctuary: assessment, origin, monitoring and mitigation

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2° workshop - February 19, 2020
Diano Marina (IM), ITALY
• Cetaceans in the Pelagos Sanctuary face several threats which can affect their individual health and their population conservation status.

• Cetaceans are particularly sensitive to contaminants because they are apex predators with long life spans

• They are considered as sentinels

• Recently emerging terrestrial pathogens have been recorded in stranded cetaceans.

• Previous studies have shown that animals were highly contaminated by chemical pollutants. So far, most research has been focused on PCBs, PBDEs, DDT and some trace elements (Hg).

• The examination of stranded marine mammals conveys a valuable source of biological and scientific data that can be used to assess the impact of human activities and of pathogens on animal health
To contribute to assess and mitigate the impact of biological and chemical pollution on cetaceans in the Pelagos Sanctuary

➢ Evaluating the origin (sources and contamination patterns) and the impact of pathogens and chemical pollutants of terrestrial origin on cetaceans in the Pelagos Sanctuary

➢ Developing a transboundary health monitoring network on cetaceans stranded in the Pelagos Sanctuary

➢ Promoting the mitigation of biological and toxicological contamination of cetaceans in the Pelagos Sanctuary area
**Project Description**

**Funded by** Pelagos Sanctuary

**Thematic concerned**: Land-based biological and chemical pollution

**Species concerned**: All cetacean species in the Pelagos Sanctuary

**Study Area**: Pelagos Sanctuary

**Duration**: 2 years (March 2018 – March 2020)

**Leader**: Groupement d’Intérêt Scientifique pour les Mammifères Marins de Méditerranée et leur environnement (GIS3M)

**Partners**:

- Istituto Zooprofilattico Sperimentale del Piemonte, Liguria e Valle d’Aosta (IZSPLV) - C.Re.Di.Ma. (Italian Reference Center for diagnostic activities in stranded cetaceans)
- Groupe d’Etude des Cétacés en Méditerranée (GECEM)
- Laboratoire Départemental Vétérinaire de l’Hérault
- Vetagro Sup (ENVL)
- Monacology
Objective 1: Evaluating the origin and the impact of terrestrial pathogens and chemical pollutants on cetaceans in the Pelagos Sanctuary

**State of the art on chemical and biological pollution affecting cetaceans in the Pelagos Sanctuary**

**Standardization of protocols for samples collection and analysis**

- 30 stranded dolphin
- 15 in French Pelagos
- 15 in Italian Pelagos

**Samples collection**

- Toxoplasma gondii
- Sarcocystis neurona
- Listeria monocytogenes
- Salmonella spp
- Erysipelotrix rhusiopathiae

**Analysis**

- PCBs
- Pesticides (insecticides, herbicides and fungicides)
- Trace elements: Hg, Cd, Pb
Objective 3: Developing a transboundary health monitoring network on cetaceans stranded in the Pelagos Sanctuary

- Identification and prioritization of cetacean’s biological and toxicological contamination indicators
- Reinforcement of the collaboration between partners and countries through frequent meetings, protocols and results sharing
- Communication of scientific results in peer reviewed journals and conferences
- Organization of two workshops involving partners, stakeholders and experts

1st WORKSHOP
October 4, 2019 - La Londe-les-Maures
Objective 3: Promoting the mitigation of biological and toxicological contamination in the Pelagos Sanctuary

- Realization of an itinerant exhibition on the impact, origin and mitigation of land-based marine pollution on cetaceans in the Pelagos Sanctuary

- Organization of public conferences and exhibiton in Pelagos ambassador cities

- Recommendations to the pelagos TSC

- Recommendations to local authorities

ACTIVITIES

30/11/2019, Nice
01/03/2020, Diano Castello municipality
16/03/2020, Sanremo high school
20/03/2020, Stars 'N' Bars Monaco
24/03/2020, Genova- Natural history museum
27/03/2020, St Jean-Cap-Ferrat
08/06/2020, Cannes
THANK YOU FOR YOUR ATTENTION