



### **NEWSLETTER # 3**

#### **INDICIT II: Mid-term Progress**

The INDICIT II project is now half way through and we have recently had our Mid-term meeting in Paris where we are grateful to have members from the EAB at the meeting to help advise and discuss our progress.

We would like to welcome the new EAB member Dr Konstantinos Antoniadis from Cyprus. We are very pleased of this acceptance for a better implementation of MSFD indicators such as the indicator (Litter ingested in sea turtles) in Eastern Mediterranean.

For **Activity 2 (Applying the indicator “Litter ingested by sea turtles” to quantify the Programs of Measures at the OSPAR and Barcelona RSCs and MSFD areas):**

- ***6-month progress***

Activity 2 has worked to strengthen the implementation of the indicator and partners have continued to collect data in their respective region. A big effort has been undertaken to involve new stakeholders in order to collect standard data to increase knowledge in poorly prospected areas; although we still encounter difficulties in the OSPAR area. The INDICIT II database now exceeds 1,000 necropsied individuals which information relative to litter ingestion and health status is shared in a private table. Each partner can fill it in as the raw data is collected. Unfortunately, we did not anticipate that so many mistakes had been made while filling this table, which therefore suffered from a lack of harmonization (e.g., units, qualitative parameters, use of biometric variables). Work

took place to clean and re-harmonization of the database; with each partner and stakeholder that provided raw data (it was a hard and time-consuming task). Finally, this database is now (March 2020!) consolidated and we can start the analysis. The main result (e.g. the overall alarming occurrence of ingested litter in sea turtle at the global scale) will not significantly change, but it will be possible now to analyse e.g. spatial distribution and biological co-factors (stages, sex, etc.) with more powerful statistical tests.

The data on litter ingestion, also including expert knowledge obtained thanks to synergies with other representative projects and institutions (e.g. RAC/SPA) will be combined to data on litter distribution in order to 1) refine indicator and GES units, 2) better testing biological constraints relative to factors leading to litter ingestion (e.g., selectivity of polluted areas) and 3) target the risky areas. The dynamics of floating litter across the Mediterranean is now available (synergy with Interreg programme MEDSEALITTER, Mansui et al., 2020). We will also obtain similar raw data for the Atlantic areas (Azores and Canarias islands) thanks to a synergy with CLEAN ATLANTIC programme (results expected in the coming weeks).

All these results also aim at evaluating the performance of the indicator to detect changes after the implementation of Programs of Measures (PoMs) on marine litter. For this, partners have gathered information on PoMs in their respective countries.

The Deliverable 2.7 provides a precise description of the methodology used up to date to propose some pilot areas.

- ***Our solicitation to the EAB***

The selection of these areas is a very important task. We will solicit you (and you can share it with other identified experts) for advice, comments and feedback on this methodology (Deliverable 2.7). We will send you a specific email on this aspect, with more precise information such as planning.

***Working with sea turtles can be challenging!***



*Sizing the turtle...*



*Looking for ingested litter in the digestive track of a leatherback turtle....*

For **Activity 3 (Implementation of the indicator “Entanglement in floating debris by sea turtles, birds and cetaceans at the OSPAR and Barcelona RSCs and MSFD areas):**

- ***6-month progress***

Further networking and involvement of new stakeholders has continued. This is a big task as we are looking for stakeholders involved with sea birds and sea mammals (this networking was achieved for sea turtles during the last INDICIT project and some new stakeholders have been added).

Two standard protocols have been developed:

1. Social Media Review: a protocol to collect a number of images/videos uploaded by members of the general public to fill important knowledge gaps on entanglement (especially types of litter, impacts on body, target species). It is planned to implement this action in April 2020 for a two-month effort of information collection. We will soon launch a new “INDICIT II Challenge” to the general public for searching for pictures/videos in the medias, with both objectives of awareness and data (web links) collection.

2. Standard Protocol: for key (expert) stakeholders to collect standardised data related to entanglement with specific entangling litter categories agreed between INDICIT II consortium and the TG ML (this protocol will be sent to EAB by end March 2020, for proposing discussion during the next TG ML meeting).

The work continues to collect standard data using these protocols in order to have feedbacks from the stakeholders on its applicability, etc. We are also collecting past data on entanglement that were observed and recorded in databases managed by national NGOs involved in the monitoring of sea turtles, sea birds and mammals.

We hope to be able to propose GES scenarios for this indicator (e.g. occurrence of entangled individuals in birds or mammal colonies) at the end of this first data collection.

- ***Our solicitation to the EAB***

We would really appreciate your feedback and comments on the protocols for entanglement, which will be shared soon (March 2020).

For **Activity 4 (Implementation of the indicator “Micro-litter ingested by fish” at the OSPAR and Barcelona RSCs and MSFD areas)**:

- **6-month progress**

A questionnaire has been sent to INDICIT II Partners, other EU project leaders (e.g. MEDSEALITTER, PLASTIC BUSTERS), MSFD technical groups of RSCs and other stakeholders with technical questions about microplastic sampling and identification, fish species selection, etc. This helped in the generation of a widely applicable and harmonised protocol for assessing microplastics ingestion in fish, from sample collection to data analysis and reporting. The first draft of the “Monitoring Marine Micro-Litter Ingestion in Fish: a harmonized protocol for MSFD and RSCs areas” (Deliverable D4.9) has been created. As for the Entanglement indicator, this protocol will be sent in March 2020 to the expert of the TG ML, for discussion during the next meeting of this group.

- **Our solicitation to the EAB**

Please give us your feedback and comments on the protocol for monitoring microplastics, that will be shared soon (March 2020).



For **Activity 5 (Synergies with other (inter)national programs):**

INDICIT II partners have established a list of international/EU projects relevant for expanding the networks for data collection, collecting expert knowledge/data related to studying marine litter, etc. The list (Deliverable D5.3) was drafted by the partners who are involved in completed and/or ongoing projects (e.g., LIFE EUROTURTLE, CLEAN ATLANTIC) or in projects funded under this call (e.g. MEDREGION, QUIETMED 2), assisted by the EAB and the PO. Furthermore, in order to establish a fruitful collaboration with expert groups (e.g. TG ML, WG GES), experts from ongoing projects and the RSCs, the coordination team of INDICIT II and/or the activities' leaders attended relevant meetings, which were listed in Deliverable D5.3. The Coordination team and each partner are doing their best to keep representatives informed on INDICIT II projects and asking advice for precise points.

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INDICIT II news continues to be communicated through the website and social media platforms. Both have a strong following from the scientific community and general public with the project's online presence growing rapidly (Facebook: 1,029 followers, Twitter: 381 followers, connections with other EU project e.g. Clean Atlantic, Plastic Busters and RAGES and Quiet Med 2). The website is also regularly updated with the latest news from the INDICIT II project.

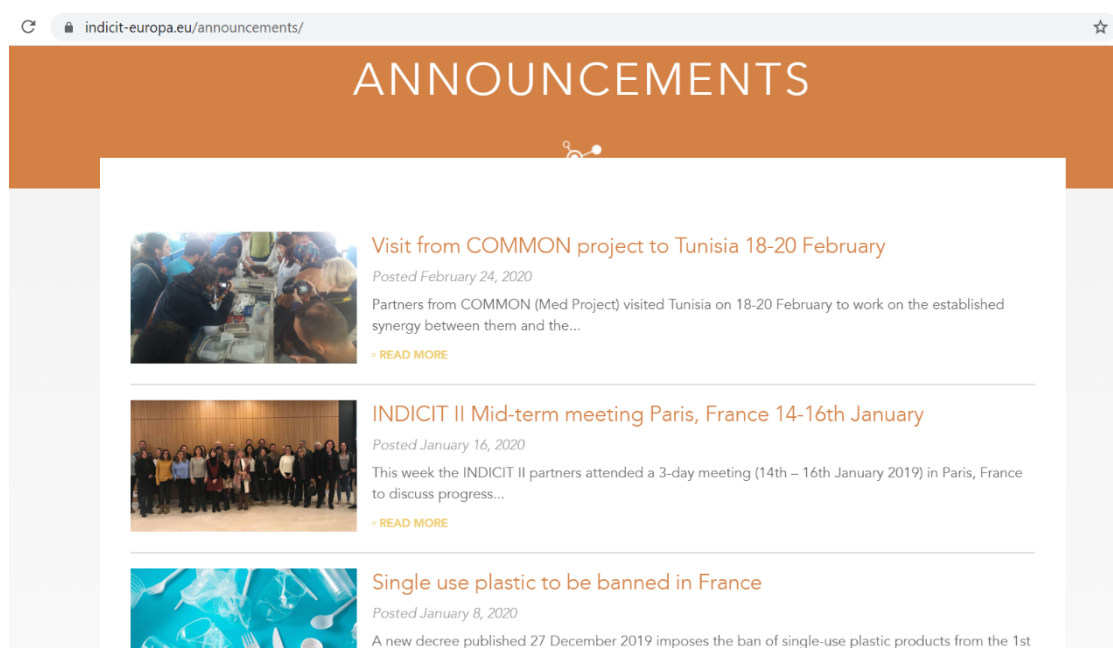


Fig. 1 Announcements page on the INDICIT II website

On behalf the INDICIT-II consortium, we renew our thanks for collaborating with us during this programme. We all hope that you and your relatives are safe in the face of the COVID-19 situation. Most of INDICIT II partners are confined with restrictive access to laboratories and rescue centres; we come back to you soon on this aspect.

Best regards

Emily Duncan, Sarah Nelms, Brendan Godley Annette Broderick, (Communication team)

Claude Miaud, Gaëlle Darmon and Jessica Martin (Coordination team)

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