

Minutes of the Indocet Meeting World Marine Mammal Conference 8-10am, 10 December 2019, Barcelona

Members of Indocet took the opportunity of the World Marine Mammal Conference to organize an informal meeting to briefly discuss Indocet achievements and future activities.

Attendees: Violaine Dulau, Salvatore Cerchio, Tim Collins, Els Vermeulen, Gill Braulik, Gianna Minton Stephanie Norman, Stephanie Ploen, Laurène Trudelle, Jessica Coulon, Vanessa Estrade, Diana Rocha, Adrian Fajeau, Drew Blount, Howard Rosenbaum, Olaf Meynecke (also representing Ken Findlay), Tess Gridley, Chris Wilkinson (via Skype), and Emma Hatherly (BBC Natural History Unit - Ocean X project)

Background to IndoCet

Violaine Dulau provided a background to IndoCet. The group was founded in 2014, but was officially launched in 2017 at a workshop that took place during the HWWC in Reunion. IndoCet is led by an executive committee which comprises several founding members (Salvatore Cerchio, Anjara Saloma, Claire Garrigue, Ken Findlay, Sabrina Fossette, Alex Zerbini, Violaine Dulau). The membership currently comprises 26 active members and 8 associate members. Although the formation of a NGO was initially considered, it is currently an informal network. This status has implications, particularly the fact that IndoCet can't receive funding directly. The membership MOU more closely resembles a format that is suited to a NGO, so is only considered partly relevant (bridges the needs of a formal NGO and informal network). To date, the membership fees (as mentioned on the website) do not apply.

IndoCet – Recent Accomplishments

For the period 2018-2019, Globice obtained funding to foster Indocet development. This includes website maintenance and updates, the organization of an annual meeting and the development of new features for the Indocet Flukebook platform.

- <u>INDOCET WEBSITE</u>- The IndoCet website (<u>www.indocet.org</u>) was updated to include new facilities:
 - user accounts: Indocet members now have their own user account and can update their profile. Members that do not have a user account yet should click on "Member Access/forgot your password" to initiate their password.
 - User-friendly interface to update publication and metadata: each member can upload their publication directly and provide metadata on photo ID, acoustic data, tagging, biological samples.
 - new tools to better manage membership (back office)

- <u>INDOCET MEETING</u> An Indocet meeting was held in Reunion in July 2019. The meeting report is available for download on the Indocet website. Following the meeting, additional researchers from Mozambique, Kenya and South Africa applied for membership. The meeting allowed for:
 - Flukebook training with Drew Blount (WildMe)
 - o Presentation of on-going work conducted in the region
 - The exchange of ideas, including an opportunity to share perspectives on IndoCet directions and activities

Organizing annual Indocet meetings is likely to be expensive and challenging. To limit this expense the network should try and capitalize on other events (such as WMMC, SMM, WIOMSA). The next regional meeting that could work is the Indian Ocean Cetacean Sanctuary meeting scheduled for the Maldives in July 2020 (assuming participants have funding to attend...).

- **FLUKEBOOK-** Since 2017 we have worked in close collaboration with WildMe to create a customized Flukebook platform for Indocet.
 - Flukebook is a database platform that is useful for reconciling catalogues from different projects.
 - At present it contains mostly humpback whale flukes, but the network has also considered incorporating Tursiops and Sousa catalogues (and other species are considered likely in future).
 - The most recent update of IndoCet Flukebook instance includes:
 - Specific dropdown menus in the user interface this helps to standardize data entry among members (e.g. location, group behaviour, image quality/distinctiveness)
 - Ability to filter and export the data according to image quality, distinctiveness, feature type...
 - The development of a standardised bulk uploader (in Excel)
 - Tool to export to entire dataset
 - Tool to merge individuals when a match is found
 - Drew is developing a way for members of the IndoCet Executive committee to approve and create accounts.
 - New import tool to bulk upload the data directly into Flukebook. Small, single season datasets of 200 or less images can be uploaded using this new import tool. WildMe would like feedback on any errors that occur during the use of this tool. Larger datasets should still go through Drew Blount (WildMe)
 - All changes made in the IndoCet version of Flukebook are propagated across other Flukebook databases. Gianna Minton suggested developing a mailing list as a way for communicating major changes and updates. A "subscribe to updates" button could be included on the website.
 - To create an account, please e-mail Drew (<u>drew@wildme.org</u>), with Cc: <u>info@indocet.org</u>, and mention that you want your account to be linked to Indocet
 - Next phase of updates for Flukebook.

- Globice has some outstanding funding that can be used for further development of Flukebook. This will include:
 - Improving the tools needed for the effective management of collaborations (handling requests for collaboration and the ability to manage access, etc.....)
 - Improve the workflow for matching within Indocet
 - Improving the way the results of the match are stored in the database (create a unique Indocet ID for each whale in order to build a common Indocet catalogue)
 - Ability for a local organization to validate opportunistic data submitted through the public interface.
- Development of the platform for other IndoCet species, including Sousa. In order to incorporate Sousa the WildMe team still needs a training dataset (reconciled catalogue that allows training of the matching algorithm).
 - Salvatore Cerchio, Tess Gridley, Gill Braulik and Shannan Atkins have reconciled Sousa databases that can be shared with WildMe for this purpose. Gill Braulik offered to coordinate this initiative. The images provided with the training data should include both cropped and uncropped files in order to improve how the algorithm reads images.
 - Any development work of this kind for matching other species will need funding, especially if deadlines are a concern.
 - The group completed a short discussion on needs for data standardization (as with humpback whales) for other species.
 Projects collect data in different ways, so some consideration is needed for reconciling standard fields etc.
- FinFindR algorithm has now been integrated into Flukebook and other projects are being added for new species or other datasets that are similar.
 - Killer whales (needs retraining)
 - Humpback whale dorsal fins (similar to humpback dolphins) though shapes change depending on the phase of the dive
 - Salvatore Cerchio suggests that Bryde's and Omura's might also be considered (as they have a Tursiops-like fin)
- Flukebook Data commitments following on from the Reunion meeting
 - Not many groups have met the Nov 1 deadline for humpback whale flukes.
 - To date, humpback whale data from Cetamada, Megaptera and Globice has been imported into Flukebook.
- **STRANDINGS** Stephanie Ploen provided an update on progress with her stranding coordination role for the IndoCet region:
 - o Included a brief update on the WMMC 2019 meeting on harmonizing global strandings networks. Africa is acknowledged generally as a major gap for stranding work. Mozambique is considered a candidate area for increased focus, particularly with respect to the consumption of cetacean meat from strandings. This has a major human health aspect to it and was for instance a significant concern during the 2008 Madagascar mass stranding event.

- Stephanie Ploen will start by developing a list of regional capacity (for instance in Mayotte, Reunion, SA).
- It was proposed to include a stranding page on the Indocet website. Globice will enquire about the cost and funding opportunities.
- In discussion of improving regional strandings response the group raised the need for multi-tiered levels of response. This included the compilation of barebones/simple advice that distills the necessary actions from complex protocols and is considerate of language and cultural needs. Suggested options for communicating this advice include
 - Video and whatsapp (bandwidth likely to be an issue)
 - Pdf version of the Geraci and Lounsbury guide (in English)
 - Norbert and dolphin/whale consumption (poster)
 - The live stranding of a humpback whale in Namibia was cited as a good example of how not to respond to strandings – may be some lessons in this event.
- <u>DIS-ENTANGLEMENT TRAINING</u>— there was some consensus that IndoCet should push forward with an entanglement workshop. Some further discussion held with David Mattila at WMMC, who clarified that the likely lead for a workshop would be Mike Meyer (SA) and that the ideal timing for a training workshop would be May/June (ie quite soon if 2020). This timing would maximize practitioner's opportunities to use their training during the following whale season (July-October), which further reinforces the training. The IWC Entanglement training needs to be requested by a relevant government agency. Candidate locations for a WIO training workshop include:
 - Mayotte
 - Reunion (which could also include Crozet)
 - Madagascar
- ON-GOING PROJECTS Feedback on regional collaborative project conducted in the region:
 - Et.Cet.R.A is a project lead by Globice in collaboration with several regional partners (Cetamada, Salvatore Cerchio, Gill Braulik, Nakia Cullain, Kate Sprogis, Shannan Atkins). The project includes a regional analysis of humpback whale song structure. Preliminary results were presented during the WMMC. Globice will raise funds to extend the project in 2020-2021.
 - Southern hemisphere humpback whale satellite tracking study, led by Laurene Trudelle. Several Indocet members are contributing to this study by providing tracking data. Preliminary results were presented during the WMMC. This was further discussed at a separate WMMC workshop.
 - Gianna Minton provided a brief update on the IMMAs, following the IMMA workshop that was held before the WMMC. The western Indian Ocean and Arabian Sea IMMAs have been validated and are now incorporated in the E-Atlas
 - Members are kindly invited to contribute occasionally to IndoCet newsletters. Any and all cetacean related news is considered valuable, and feedback creates a positive cycle for the network.
- BBC Ocean X Ocean Explorer by Emma Hatherly (emma.hatherley@bbc.co.uk)
 - New vessel (Ocean Explorer) and maiden voyage will focus on the SW Indian Ocean.
 Two cast members have already been selected (but not yet announced). The route has been decided and will include:

- South-Africa
- Mayotte
- Aldabra
- Maldives
- Mauritius
- "The deep" (200 km south of Reunion)
- The vessel will have an onboard science team, but there may be a limited number of berths available for local scientists in each destination.
- The production team is interested in supporting and featuring tagging work, projects that use drones, as well as other new technologies. The team are also interested in the 3030 Initiative and work that improves the status/profile of IMMAs
- The IndoCet group suggested that a focus on climate change and the links between migrating/breeding whales and the Antarctic be an area to focus on (Olaf provides an overview).
- o Regional blue whales are also suggested as a possible focus.