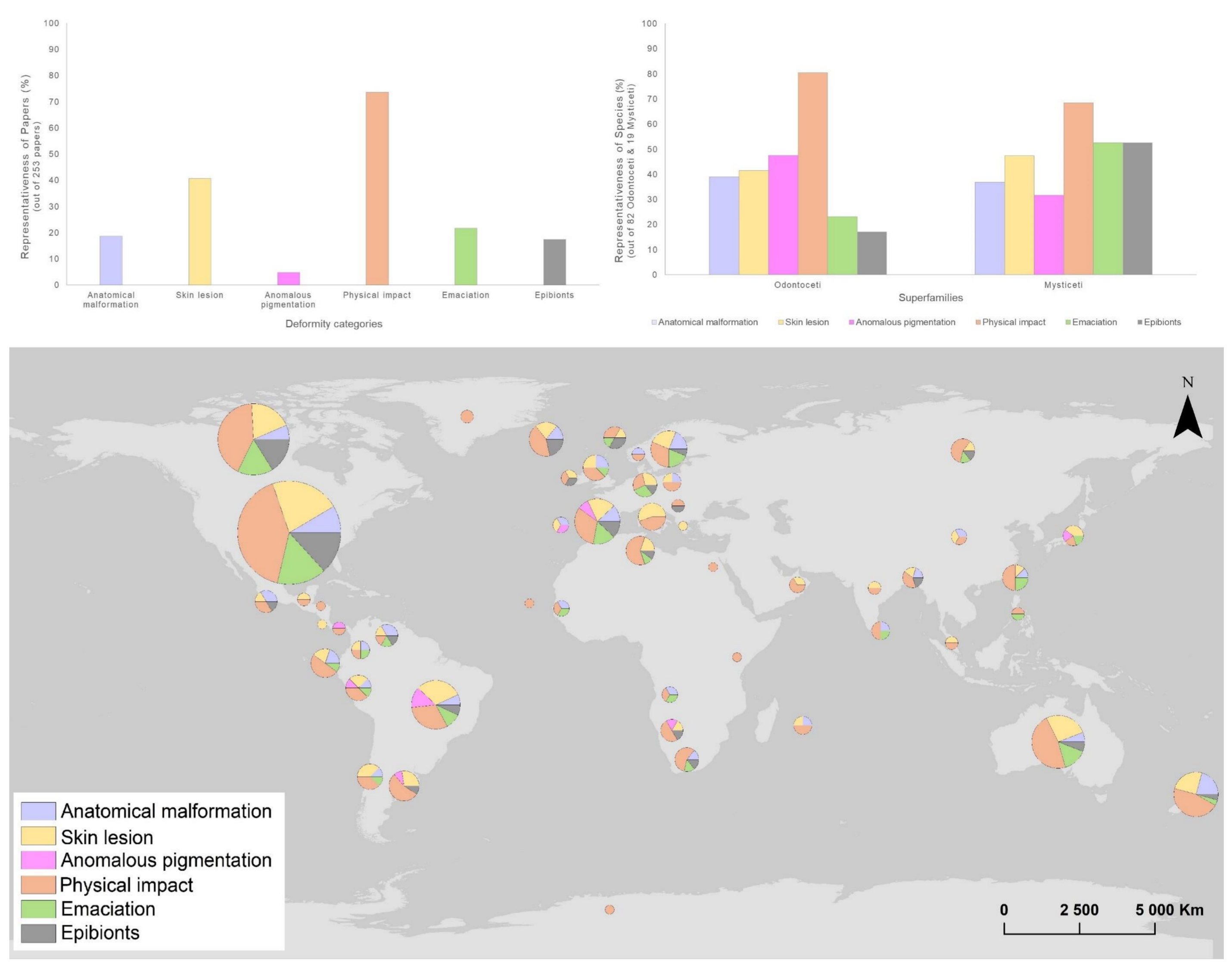
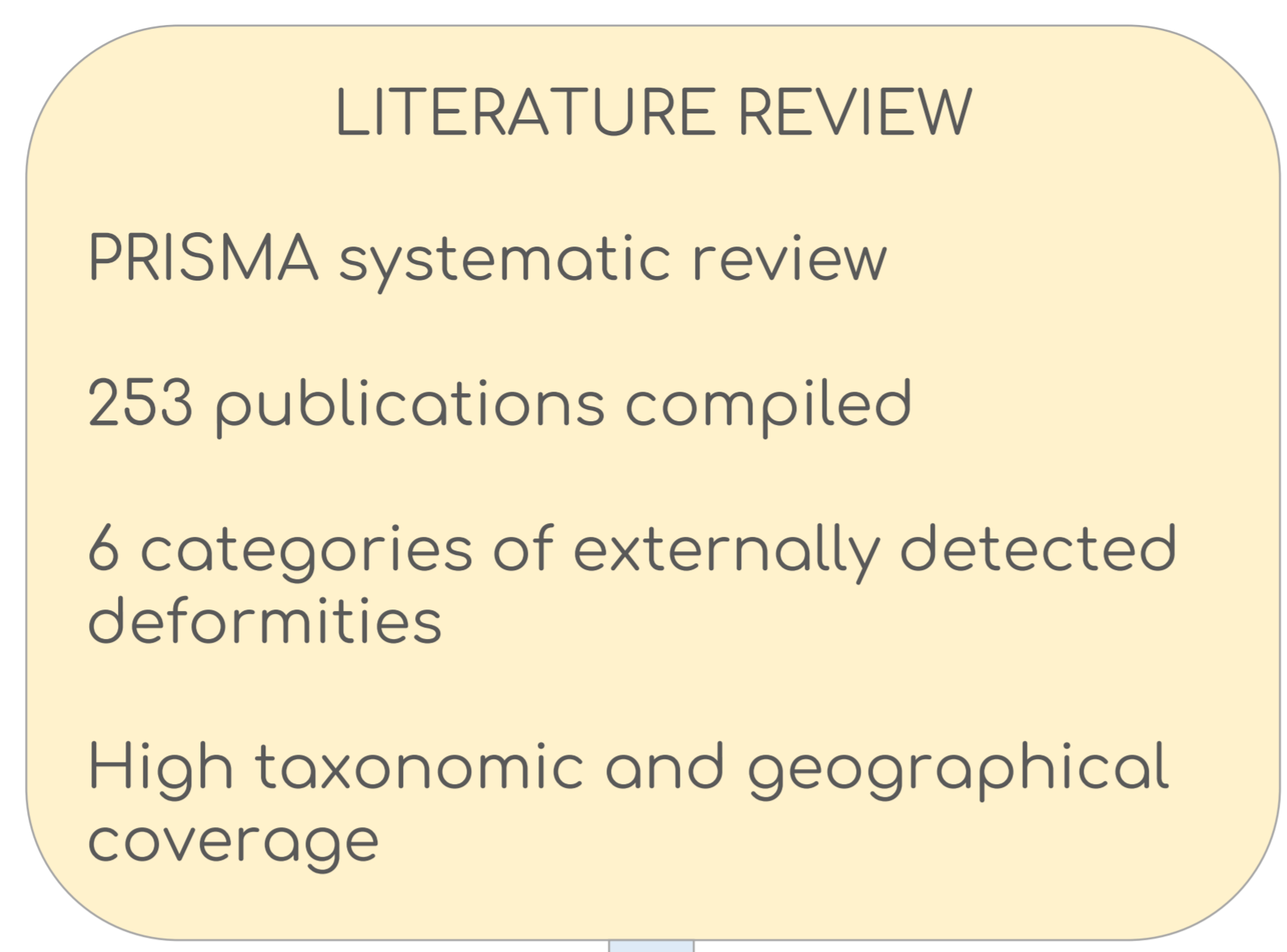
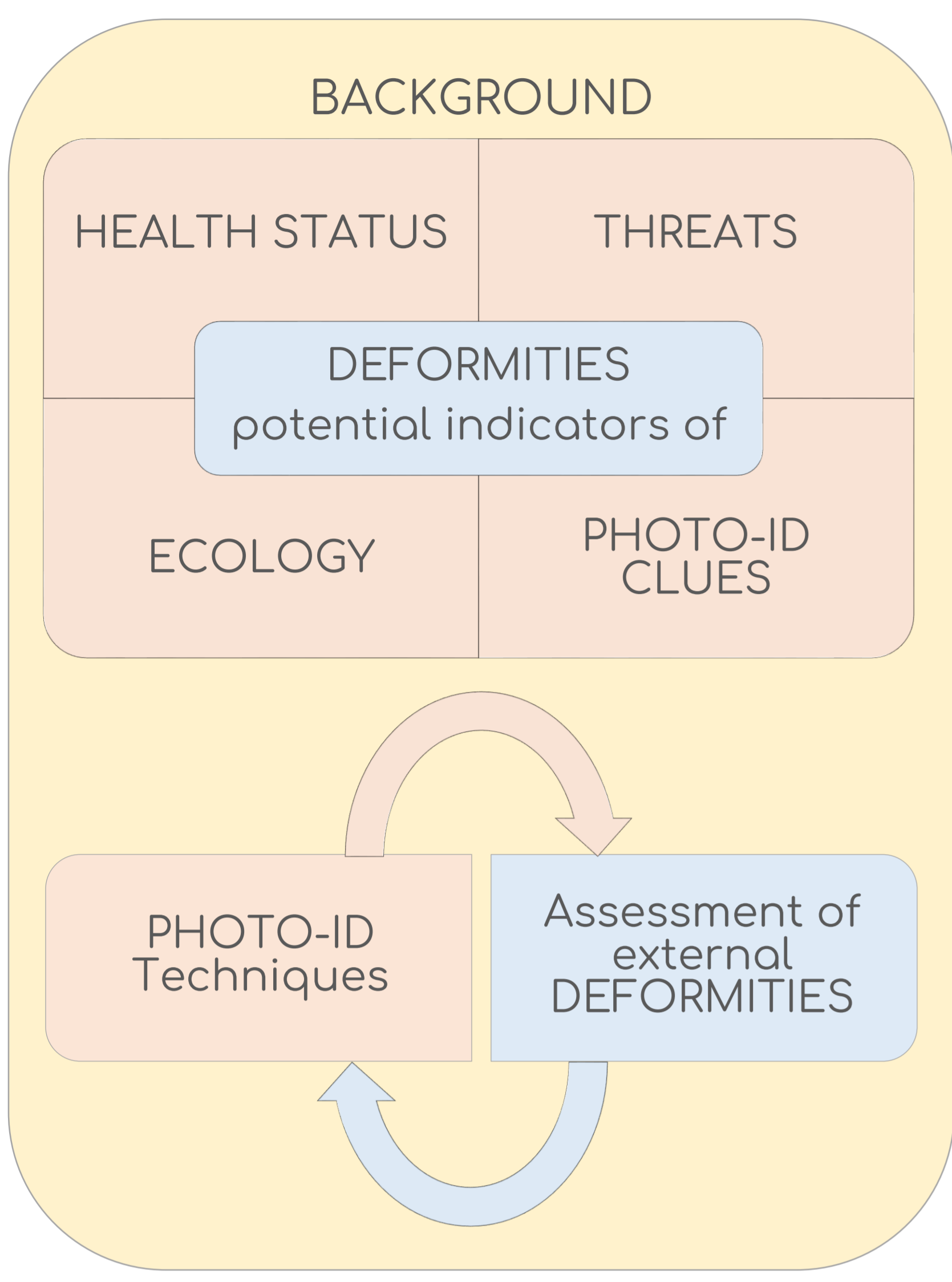


Correia AM







Categorizing and defining externally detected deformities in free-ranging cetaceans

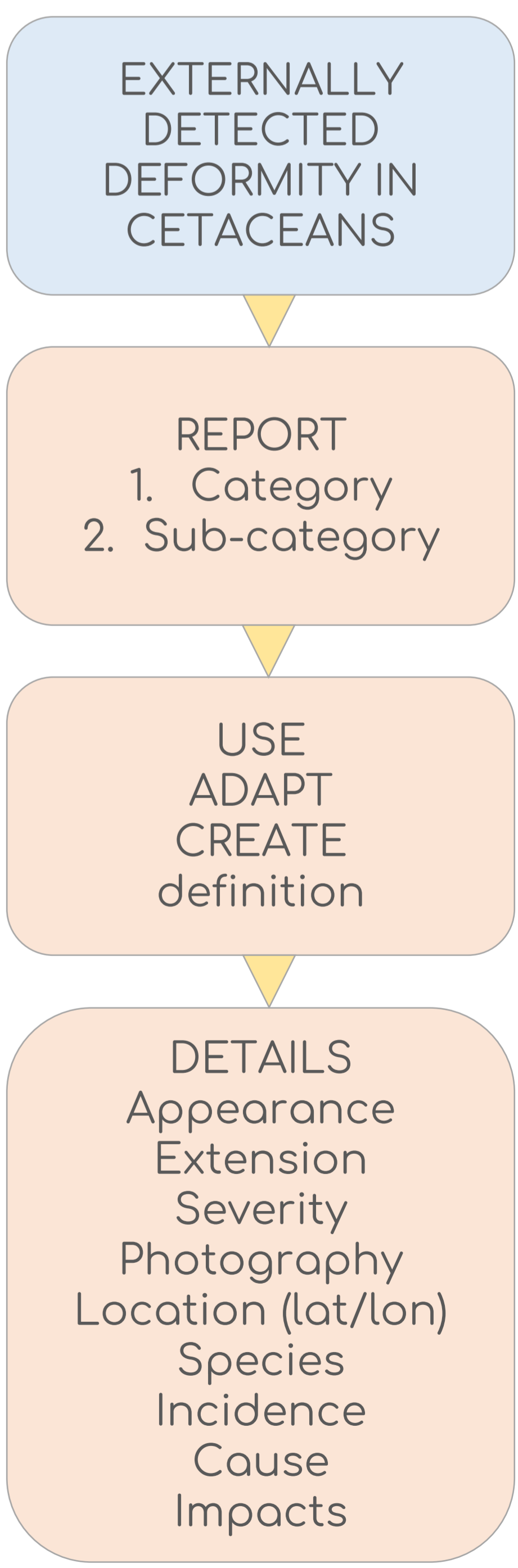
Ana M. Correia^{1,2,*}, Erich Dietterle^{3,4}, Ana Dinis⁵, Filipe Alves⁵
¹CIMAR, ²FCUP, ³University of Malta, ⁴James Madison University, ⁵MARE/ARNET
*anamafaldacorreia@gmail.com



DEFORMITY
[in the context of malformations in cetaceans]

a condition, congenital or acquired during the individual's life, irrespective of the source, in which all or part of the body differs from the shape, colour, or appearance that is naturally expected/typical/characteristic of the species.

 Deformed dorsal	ANATOMICAL MALFORMATION Deviation from the normal formation of a body part's shape and/or structure, with various degrees of severity. 47 publications. 11 sub-categories	PHYSICAL IMPACT Any abnormality in the gross appearance of body tissue, caused by an external physical impact 186 publications. 14 sub-categories	 Fin amputation
 Tattoo-like lesion	SKIN LESION Cutaneous lesion, not caused by mechanical trauma, observed in the body surface of the individual, that alters the aspect of the skin surface. 103 publications. 29 sub-categories	EMACIATION Unnatural thinning, from mildly thin to severely emaciated: post-nuchal fat pad softening, sunken cervical region, concavity along the epaxial profile, bony prominences. 55 publications.	 Emaciation
 Leucism	ANOMALOUS PIGMENTATION Abnormal colour variation, due to an excess or deficit in the production of melanin, from hypo to hyper-pigmented, affecting a large part of or the entire body. 12 publications. 4 sub-categories	EPIBIONTS Organisms on the body surface, commensal or parasitic, often causing visible skin lesions or physical impact. Persistence and area of infection varies between epibionts and hosts. 44 publications.	 <i>Conchoderma</i> sp.



ACKNOWLEDGEMENTS
To the Portuguese Foundation for Science and Technology (FCT) for the support through the strategic projects UIDB/04292/2020 and UIDP/04292/2020 awarded to MARE and the project LA/P/0069/2020 granted to ARNET. To the Oceanic Observatory of Madeira for the support through the strategic project M1420-01-0142-FEDER-000001. To the NORTE2020 for the support through the ATLANTIDA project (NORTE-01-0145-FEDER-000040) under the PORTUGAL 2020 Partnership Agreement and the European Regional Development Fund (ERDF).