**Summary.**

Human dependence on marine resources is beyond any doubt, with fish representing the main source of proteins for over 1,000 million people around the globe. The importance of fish as food and for jobs has resulted in long-term overfishing of global fish stocks. However, fish populations, especially in coastal areas, face multiple threats beyond fishing, such as habitat loss and degradation, climate change, pollution or the introduction of invasive species. Investigating how individuals behave in the wild is key to understanding responses to all these threats and the effectiveness of management measures because behaviour represents the primary interface between individuals and the surrounding environment. Conservation behaviour studies so far have largely focused on average, population-level measures of behaviour. This approach has one major conceptual limitation: individual variation in spatial behaviour is not considered, despite the key role of individual variation in behaviour in explaining processes such as individual fitness, population connectivity and genetic structure, or ecosystem-level nutrient dynamics. Individual variation in behaviour may also drive variation in responses to protection and spatial conservation measures resulting in unanticipated ecological and evolutionary consequences. Besides behaviour is subject to constant change due to environmental or human related effects. The degree to which individuals vary in their responses to those changes and how social structure re-organizes after a perturbation remains largely unexplored, but can determine population resilience in face of climate change.

In this PhD, the candidate will investigate overlooked levels of behavioural variation at the spatial-social interface and explore how they can be used to boost the conservation of fish populations. The candidate will do so using coastal elasmobranchs as a study case. Elasmobranchs are particularly relevant for this purpose because they are one of the most endangered groups of vertebrates on earth but display key roles to sustain healthy ecosystems. Besides, sharks and rays have rich social lives making them excellent model species to explore sociality in the wild. By tracking multiple individuals from several model species at multiple spatial and temporal scales, this PhD thesis will provide unprecedented information on the degree of individual variation in behaviour in natural populations of fish, and its relevance for the ecology of conservation at various levels, ranging from shortscale social interactions to long term movement strategies.

**PhD location.**

Department of Marine Ecology and Resources. Instituto de Investigacións Mariñas de Vigo.

**Applications.**

Please send a motivation letter (1 page; in English), one or two reference letters and CV to dvillegas@iim.csic.es