

**REMOTE UNDERWATER VIDEO: A USEFUL TOOL FOR RAPIDLY ASSESS  
ELASMOBRANCH POPULATIONS IN LARGE MARINE PROTECTED  
AREAS**

**Jorge Assis, Diogo Tavares, Krupskaya Narvaez, Ricardo Haroun**

BIOGES, Faculty of marine sciences, Campus de Tafira, University of Las Palmas de G.C., E-35017, Las Palmas, Canary Islands, Spain.

Email:

[jorgeassis@yahoo.com](mailto:jorgeassis@yahoo.com), [diogomrtavares@gmail.com](mailto:diogomrtavares@gmail.com), [krupska@gmail.com](mailto:krupska@gmail.com), [rharon@dbio.ulpgc.es](mailto:rharon@dbio.ulpgc.es)

Elasmobranches census studies are usually made through fisheries surveys data. However, in marine protected areas (MPA) the use of destructive techniques must be dismissed in order to avoid population impacts. Therefore, non destructive methodologies, like visual census (VC) and remote underwater video (RUV) techniques should be applied. The VC method is highly economical and allows safe taxonomical identification to species level. On the other hand, this sampling technique requires taxonomical trained surveyors, is time consuming, samples small areas and is depth limited. In contrast, the RUV is a somewhat expensive method, requires afterward time consuming image analysis and is highly dependent on water visibility. On the contrary, it samples a much larger area and allows data record in imagery format. In 2005, while conducting a marine habitat survey in two marine special areas of conservation (Marine SAC) on the southern coast of Gran Canaria (Canary Islands, Spain), 120 VC transects (overall effort of 14h08m in 10 days) and 78 RUV (overall effort of 25h34m in 9 days) transects were made. Number of specimens, *taxa* and observations per hour was much higher when RUV was applied, demonstrating that this methodology can assess larger areas than VC with a similar effort of sampling time. Conversely, number of observations per hectare was higher with VC, showing that this method has a higher resolution power. RUV proved to be an extremely useful tool for rapidly assess elasmobranch populations in large MPAs in good visibility open underwater environments.