Supplementary Table 1: Technical specifications of the oceanographic cruises used in this work and online references to cruise reports.

| **Zone** | **Cruise** | **Year** | **Research Vessel** | **Chief of Cruise** | **Multibeam echosounders****(MBEs) types** | **Sub-bottom profiler****(SBP)** | **Multichannel seismic****(MCS)** | **Cruise reference**  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **GALICIA**  | **Spanish EEZ Mapping Programme** | ZEE-2001ZEE-2002ZEE-2003 | *Hespérides* |  | Simrad EM-12S13 kHzAngular coverage=120º81 beams per pingCoverage 2.5 times the water depth  | TOPAS  |  |  |
| ZEE-2006ZEE-2007ZEE-2008 | *Hespérides* |  | Simrad EM-12S13 kHzAngular coverage=120º81 beams per pingCoverage 2.5 times the water depth | TOPAS  |  |  |
| **BREOGHAM** | 2005 | *Hespérides* | Luis Somoza | Konsberg EM-12012 kHzAngular coverage=150º 191 beams per pingCoverage 3-4 times the water depth | TOPAS PS18 | Seismic source: six BOLT™ guns (1500 LL model) and two SLEEVE™ guns. Total capacity of 22.85 L.Receiving system: analogical TELEDYNE™ (40508 model) streamer, 7.5 cm in diameter, composed of 24 active sections of 100 m length, with a toatal length of 2400 m. | Somoza et al., 2005  |
| **GULF OF CÁDIZ** | **MOUNDFORCE** | 2007 | *L´Atalante* | Luis Somoza | KONSBERG EM-12 dual13 kHzAngular coverage=150º162 pings per pingCoverage 7.3 time the water deprh  | 3.5 kHz CHEOPS | Seismic source: Array of 14-16 guns G.I. GUN and BOLT. Total volume= 56.5 L (3449 cubic inches). Shooting interval=50-75 m.Streamer: SERCEL 360 channels. 7.5 cm diameter. Active sections= 4,000 m. Total length5,000 m. Depth=15 m.Recording: Recording length=15-20 s. SEG\_D. DLT magnetic tapes | Somoza et al., 2007 |
|  | **MVSEIS** | 2008 | *Hespérides* | Luis Somoza | Konsberg EM-12012 kHzAngular coverage=150º 191 beams per pingCoverage 3-4 times the water depth | TOPAS PS18 |  | Somoza et al., 2008 |
|  | **SUBVENT-2**  | 2014 | *Sarmiento de Gamboa* | Luis Somoza | Atlas DS 1x114-16 kHzAngular coverage= 140º 360 beams per pingCoverage 5.5 times the water depth | ATLAS PARASOUNDP-35 |  | Somoza et al., 2014 |

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