



FORM PER PROGETTI BANDO DOTTORATO XXXIII CICLO

1. Project title

Baseline monitoring of marine fouling: colonization success of non-indigenous species across habitats with different propagule pressure

2. Proposer

Surname	Occhipinti
Name	Anna

3. Research Unit

Surname	Name	Institution
Lombardi	Chiara	ENEA Santa Teresa – La Spezia
Ruiz	Gregory	Smithsonian Environmental Research Center
Ferrario	Jasmine	Dept. of Earth & Environmental Sciences, University of Pavia

4. Key words

(Max. 5 – at least 2)

Biological invasions; vectors of introduction; long-term monitoring; Ligurian Sea

5. Abstract

(Max. 1.500 characters with spaces)

Marine biological invasions are considered a major threat at global scale for biodiversity and ecosystems, and their investigation in the Mediterranean Sea have revealed some gaps in the assessment of non-indigenous species (NIS) distribution. Baseline monitoring programmes, aimed at promptly assess changes in community composition and early detect new NIS introductions, are still scattered and not yet standardized in the Mediterranean Sea. For this reason, this PhD project will contribute to establish a long-term monitoring programme in the Gulf of La Spezia (Ligurian Sea, Italy), by assessing the fouling communities growing on PVC plates dislocated in the entire Gulf, following a standardized protocol by the Smithsonian's Environmental Research Center and adopted by the international network MarineGEO. PVC plates will be immersed in areas differently affected by anthropogenic activities, considered important vector of introduction and spreading of NIS, as for example mariculture facilities and ports. A comparison among fouling communities in the different areas within the Gulf will be carried out, in order to assess the most powerful vectors, in terms of higher propagule pressure. To complete the experimental set up, fouling communities grown in non-disturbed natural habitats will be transplanted to areas with high propagule pressure, in order to test the resistance to invasions of more structured and diverse communities.