LIFE REMoPaF Project (Recovery of Endangered Mollusc *Patella ferruginea*)

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LIFE REMoPaF project, led by ACCIONA Ingeniería S.A (AI) as Coordinating Beneficiary and the consortium is also composed of University of Seville (US) and Port Authority of Melilla (APM), was chosen by the European Commission to be part of the LIFE15 program. The LIFE programme is the EU's funding instrument for the environment and climate action created in 1992 and is devoted exclusively to the conservation and protection of the environment.

The project began in 2016 and will run until 2021 and it is located in Spain, specifically in the Autonomous City of Melilla and the Algeciras Bay (Strait of Gibraltar). The project is focused on the repopulation of the ribbed Mediterranean limpet (*Patella ferruginea*), a species in danger of extinction, through the recruitment of small juveniles at the Donor Area (Port of Melilla) where there is currently a large well-preserved population, and the subsequent translocation to the Receiving Area, in Algeciras Bay (La Linea harbour, APBA). Hence, the species can be introduced to an area characterized by relatively low density values, but with the potential to reach a population size that allows it to further development as a breeding population. The aims of this project are design and test new techniques to the conservation of marine mollusk *Patella ferruginea* through the development of a methodology that allows the settlement of the larvae and the metamorphosis in juveniles on mobile substrates. For its recruitment (natural capture of the species in its early stages) the design of small-sized Artificial Inert Mobile Substrates (AIMS) is proposed, designed using 3D technology and conventional methods that may facilitate its translocation from one area to another. These are shaped with a heterogeneity and structural complexity (surface roughness) similar to the rocks of the breakwater where the species naturally is settled. In addition, the adults specimens that established their home scars within the AIMS were also translocated.

The project has been divided into two phases. The first phase has been focused as a pilot experience to correct and improve the designed methodology. During the second phase, a greater number of AIMS will be installed in the donor area in order to obtain the largest number of individuals of the species to be transferred. The first pilot transfer of AIMS with *Patella ferruginea* was carried out with a 100% of survival rate during the transfer (31 specimens distributed over 20 AIMS). Monitoring of the species has been weekly

performed for the first months, and subsequently the monitoring was undertaken monthly. The survival rate was 81%, 77%, 75% and 68% at one, two, three and four months respectively. The survival rate has been higher for juveniles and recruits than for adult specimens (77% survival of recruits vs. 57% survival of adult specimens). Currently, the AIMS corresponding to the second phase have already been installed in the donor area and its transfer is scheduled to take place in October 2019.