

The Medjelly App: a preventive and mitigation tool against jellyfish blooms involving a citizen science network

JBS-13 / Oral Presentation_03

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Jellyfish blooms in coastal areas usually generate public alarms and socio-economic impacts. Delivering up-to-date information is a strong countermeasure against this problem and developing mitigation tools helps reduce its impact. Considering this, the Medusa research group of the Institute of Marine Science (ICM-CSIC) from Barcelona developed the Medjelly App. The Medjelly mobile application works daily during the summer season providing citizens with real-time information about jellyfish presence in coastal areas. Within the framework of the Med-Jellyrisk Project, this App has also been developed for Malta and Tunisia. Along the Catalan coast (Spain), the App works within a collaborative citizen science approach, involving coastal municipalities and administrations, through a jellyfish observation network formed by trained personnel from the Rescue Services of 260 beaches. Volunteers collect the information about presence of jellyfish, together with beach flag status and some environmental parameters every morning, and after jellyfish experts validate the information, it is posted daily in the application. Results showed that this kind of tools are highly appreciated within society as a way of providing users with a useful tool to address jellyfish outbreaks, and volunteer participation is being rewarded by public information feedback on jellyfish awareness. This App is the first worldwide App that delivers daily updated information about jellyfish presence in coastal areas. Since 2015, the MedJelly App also includes predictive models for the presence of jellyfish blooms in the next 24 and 48 hours.

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