

An innovative illustrated field guide for the observation and monitoring of marine biodiversity by citizen scientists

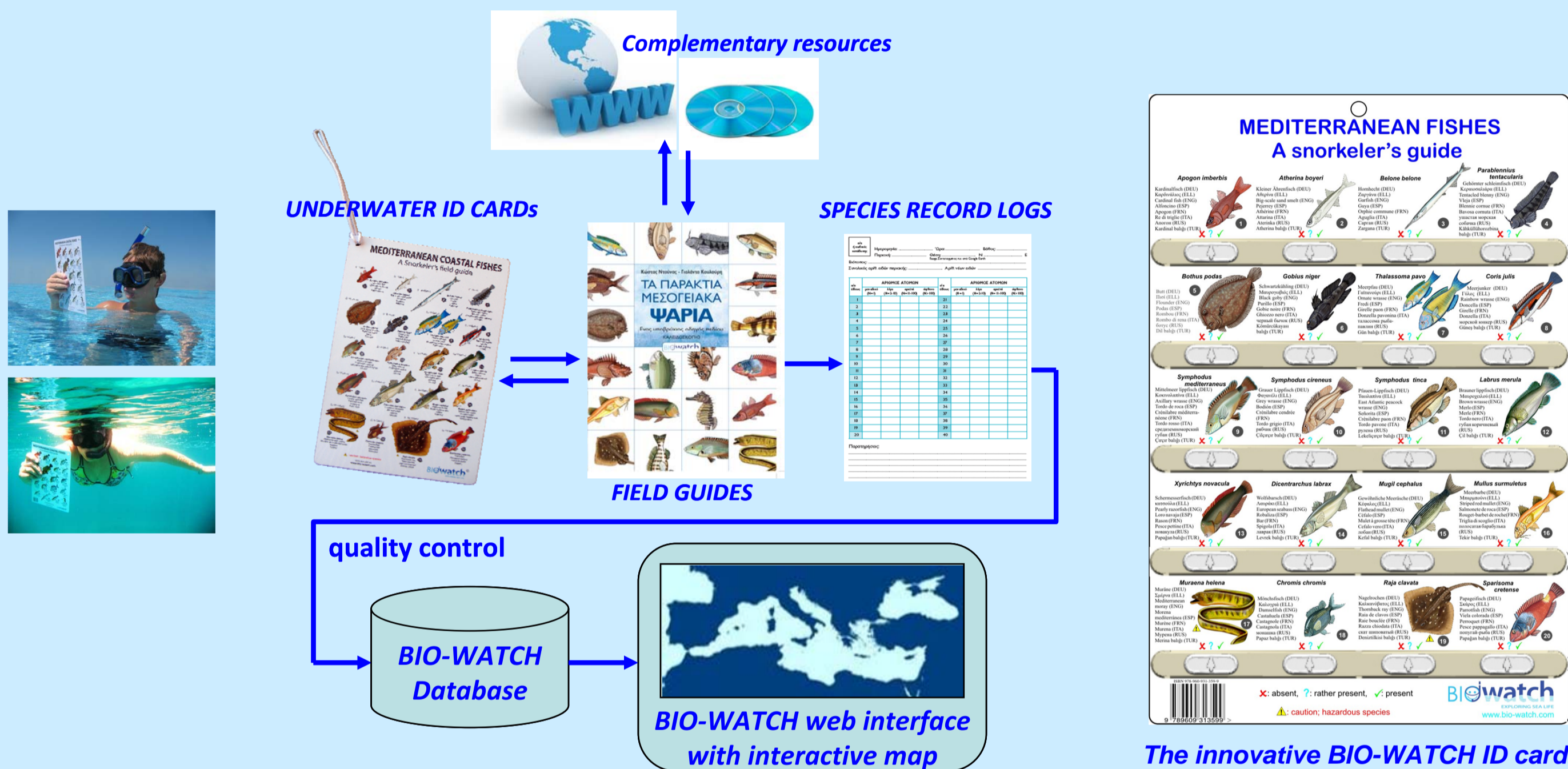
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A popular activity during summer holidays is the discovery and exploration of the sea shore and marine life. Engaging in this recreational activity can have a real educational impact and can even result in lifestyle changes. However, because there are so many interesting marine organisms, for which the newcomers and average swimmers know almost nothing, they can find it difficult to memorize their characteristics.

BIO-WATCH system (<http://www.bio-watch.com>) is a new and innovative method of information, learning and entertainment (Dounas 2009). It includes a set of innovative waterproof field ID cards, with high-quality images of the organisms likely to be encountered, and additional interacting print or electronic resources, such as special editions, CDs and DVDs, websites, databases etc (Dounas and Koulouri 2011).

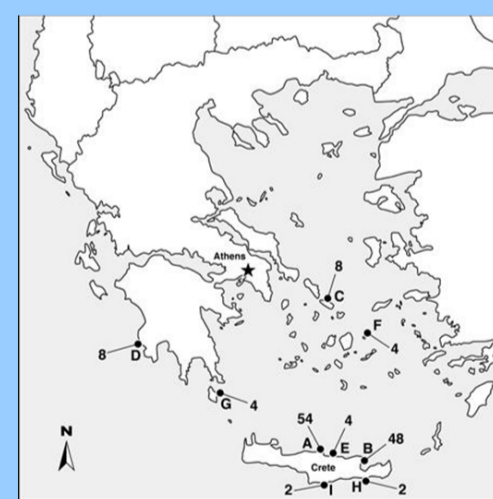
BIO-WATCH system provides a series of interactive tools supporting self-training in the identification of organisms, terrestrial or marine, which live in a certain region. It also gives users interactive control of the information collected from the field as well as the consolidation of this information by incorporating additional knowledge sources. This is not only support for users in the process of learning marine and terrestrial biodiversity but can offer entertainment and also provide environmental awareness.



The BIO-WATCH[®] concept

COMBER: A BIO-WATCH application

COMBER (Citizens' Network for the Observation of Marine BiodivERsity, <http://www.comber.hcmr.gr>), which has been initiated under the European funded FP7 project ViBRANT (2010-2013) and co-ordinated by the IMBBC, aims at engaging citizen scientists – that is, all persons interested in nature – in a coastal marine biodiversity observation network. Within the framework of this project, an illustrated and waterproof BIO-WATCH ID card has been used for the identification of Mediterranean coastal fishes. This specific BIO-WATCH application includes the forty most common fish species of the Mediterranean coastal environment and it differentiates them on the basis of morphological characteristics (e.g. body shape, fin morphology), colour pattern, and habitat. COMBER is currently operating in the Cretan (Greece) coastal environment with the potential to expand to the whole Mediterranean basin or any other European region. Each participant (citizen scientist) is equipped with a BIO-WATCH ID fish card which is used both to identify species and directly note down observations during the dive. Fish species were chosen as a target taxon for the implementation of the pilot project since they are abundant and most frequently attract the attention and interest of the wide audience. A web site has also been developed and functions as the main communication and promotion vehicle of the network, offering data-entry tools for collecting information which, at a later stage, are channelled to large data aggregators (e.g. GBIF) and publication media (e.g. PENSOFT).



Map of COMBER observation sites. Numbers refer to dives or snorkel trips.



References

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