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Abstract

Passive acoustic monitoring (PAM) has been widely used as the standard method to observe small cetaceans. Recent drastic improvement of monitoring device makes PAM more convenient, cost-effective monitoring method. Also, improvement of analysis methods of acoustic data enables us to estimate habitat range, density, behavior of animals using PAM. However, most previous studies focus on one species and select the data that the observed species were confirmed visually. In order to extend the application of PAM to the field that several species appear simultaneously, species identification method is essential. Especially, PAM plays a key role of environmental assessment on marine development such as offshore wind farm in recent years. In that case, it is important to observe each species which appear in the construction area separately for effective conservation. This paper reviewed the recently developed species identification methods. Basically, many identification methods focused on one of two types of animal call, whistles used for communications or biosonar signals used for echolocation. We introduce the advantage and disadvantage of the method using whistles or biosonar signals, and discuss the current issues and future works we need to resolve them.