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## Sasi Laut: history and its role of marine coastal resource management in Maluku Archipelago

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Indonesia is an archipelagic state within which Maluku province is one of the seven archipelagic provinces and has been recognized for its abundant of marine resources covering fish, mollusks, crustaceans, seaweeds and many others. These great diversities are supported by the fact that Maluku province, situated in the Eastern part of Indonesia has such vast sea area of 527 191 km<sup>2</sup> (90%) compared to land area which is only 54 185  $km^2$  (10%) of the overall size of 581 376  $km^2$ . Historically, the resources including various kinds reef fishes, small pelagic fishes, mollusks and seaweed have been long exploited for the need of people throughout villages around Maluku. Along with such activities there have been also a local knowledge practiced by the communities in terms of regulating harvesting the resources. In principal, this knowledge has its counterparts with those practicing in numbers of other coastal island communities worldwide and in particular for the people of Maluku it is called Sasi Laut (marine protection). Numbers of studies have been done however the exact time of its implementation remains unclear although 1600 and 1921 has been indicated as the earliest. Terminologically, Sasi does not just mean prohibit to take but also invitation to solve problems of illegal practice. This community based management of the local resources usage has been practice to close particular coastal areas inhabited by the resources as well as close season within the year. Coastal areas that are closed include estuarine, bays, lagoons and platform of coral reefs. Meanwhile the resources include various kinds of reef fishes like Lutjanids, Lethrinids and Seranids, small pelagic species involve Trisina baelama, mollusk like top shell (Throchus niloticus), green snail (Turbo marmoratus) and seaweed (Eucheuma spinosum). Interestingly, yet the practice is merely based upon the local community knowledge, closed season is also implemented correspond with the areas for as long as six to 12 months periods. In

numbers of coastal villages around Maluku archipelago, Sasi remains as part of their traditional way of managing their marine resources. Up to now this tradition has resulted not just social coherent among the villagers but also economic benefit and biologically support the sustainability of the resources. Despite its current practice, further study is critically required to assess the trend and possibility of its integration with modern science based knowledge on fisheries management. The reason is due to the fact that yet Sasi remains in place, biological characteristics of the resources begun to show significant changes. Up until 1980, production of top shell harvest in the island of Dawelor (South West Maluku) after Sasi was 7-8 ton per season. Currently however, the production has been dropped significantly to only 1 to 1.5 ton per season. It is argued that this approach should be adopted given the fact that local communities living closed by the resources. Thus by empowering our local communities, sustainability usage of coastal resources can be expected.

## North-western European seas: how to restore damaged coastal marine habitats?

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With the launching of the new Directive on the Marine Strategy, the European Union has completed a whole set of legal tools for attaining a better ecological status of the marine environment. The strategy comes as a complement to existing directives such as the Water Framework Directive, the Habitats Directive or the Bird Directive. The objective of this paper is, firstly, to analyse the benefits brought by the older directives in the management of north-western European seas: the English Channel, the Celtic Sea, the North Sea and the Baltic Sea. All these enclosed or semienclosed waters sit on the European coastal shelf and are epi-continental ecosystems. They are subject to various pressures due to human activities and in addition, global warming is affecting coastal habitats. Secondly, the paper will show how these disturbances impinge on goods and services provided by these ecosystems. In particular, it will give examples of how certain estuarine habitats have been damaged by misuse and unwise management.

The main part of the article will be devoted to