

## レジーム・シフト論

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### Regime Shift Theory

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#### Abstract

Structure (regime) of the global environmental system composed of atmosphere, oceans and marine ecosystems has repeatedly shifted from one state to the other on an interdecadal time-scale, which is called “regime shift” (RS). The RS was first discovered in 1983 with synchronous fluctuations in biomass of three distantly separated sardine populations in the Pacific, which were closely linked to the global air temperatures, and the synchronized occurrences of an alternation between the sardine and anchovy in different areas were also observed. Similar synchronized variations have been detected thereafter in a wide range of taxa and ecosystems. Since the late 1980s, the RS has been reported about the ocean climate in the North Pacific Ocean as well as in the Atlantic. Studies in these different areas have been merged, creating a new interdisciplinary study area. The concept of the RS has had an effect on the traditional management regime of marine living resources and the UN Convention on the Law of the Sea has to be re-examined. Global warming and overfishing could disrupt the normal processes of the RS.

**Key words** : regime shift, sardine, marine ecosystem, climate change, UN Convention on the Law of the Sea

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