



# Climatic change



It is highly anticipated that the climate change, in particular, global warming affects mobility and dispersal of organisms leading to shift in their distribution ranges. As a consequence, it will redistribute biodiversity and ecosystem services. The climate change, in turn, will pose severe direct and indirect threats on the primary sector of the society, such as agriculture, forestry, and fishery that rely largely on natural conditions and biological processes. In addition, increased typhoon frequency and its intensity due to warming sea surface cause physical disturbances in ecosystems and affect population dynamics of organisms to the unprecedented extent. Furthermore, increasing extreme climatic events will bring natural disaster more frequently and will inflict more devastating impacts on human society. We as a society have to prepare adequate actions to cope with upcoming future risks and shifts that might alternate biodiversity, ecosystem services, and human society.

In this viewpoint, J-BMP provides geographic maps of changing temperature and typhoon hits.

## ■ Reference ■

**Shiono T., Kusumoto B., Yasuhara M., Kubota Y. (2018)** Roles of climate niche conservatism and range dynamics in woody plant diversity patterns through the Cenozoic. *Global Ecology and Biogeography* 27: 865-874.

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