

# **Abstract**

**Mohamed A Abdelfattah Mohamed Omar**

## **Climate Change Impact On Arctic Region**

The life in the Arctic is very vulnerable and resilient because of the short growing season and the small variety of living things, the rapid rate of climate change poses challenges to the resilience of the Arctic life and now a day an extraordinary transformation in the Arctic region is taking place including the natural resources, environment, economy and the Arctic life style, The reason is the demand for the Arctic development, the creation of new shipping access routes, the increased population, the extra exploitation of natural resources and the impacts of several added activities, these factors when combine threatens the adaptive capacity and natural service provided by the Arctic ecosystem and will in return impact the whole planet in the form of global warming, rise of sea level and the protection of biodiversity. The paper is discussing the risks from the Arctic shipping which increased due to the diminishing ice and glacier melt, as well as the exploitation of natural resources and economic development which require actions to face the changes in the Arctic ecosystem by the Arctic states, the paper also discusses the Arctic states role and the assigned Arctic council for promoting cooperation, coordination and interaction between the Arctic States to face the Arctic new challenges, moreover, the convenient approaches to protect and restore the marine environment in parallel with the development requirement, the economic needs, social and cultural demands and the protection of the marine ecosystem by applying MPA network and spatial planning.