The dramatic state of world fish stock is often attributed to the open-access nature of fishing grounds. In this thesis we investigate the consequences of unrestricted access to fisheries by adopting game theoretic framework. We describe the situation of fish appropriation by dynamic model and find some of its Nash equilibria. We show that one of the possible results of the nonexclusive nature of fisheries is overexploitation. Moreover, we find that other outcomes are possible as well. The tragedy of commons is, thus, not inevitable.