

# Status of the fish fauna in the South Caspian Basin of Iran

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**Abstract:** 80 taxa of fish have been recorded in the Iranian South Caspian Basin (both inland and coastal waters), belonging to 17 families and 53 genera. The two most diverse families are Cyprinidae with 39.7% of all species, followed by Gobiidae with 13.2%. Seven families have only one genus and one species. Alien species with a wide distribution range contribute 18.7% of the total number of fish species. All species were classified according to their IUCN Red List Categories: four species are critically endangered, seven vulnerable, seven conservation dependent, seven near threatened, and 24 least concern species.

**Zusammenfassung:** Im iranischen Bereich des Südkaspischen Beckens (sowohl im Süßwasser wie im Küstenbereich des Meeres) wurden 80 Fischtaxa nachgewiesen, die zu 17 Familien und 53 Gattungen gehören. Die Familien mit der höchsten Artenzahl sind Cyprinidae (39.7%) und Gobiidae (13,2%). Sieben Familien haben nur eine Gattung und eine Art. Eingeführte Arten mit einem großen Verbreitungsgebiet machen 18.7% aller Fischarten der Region aus. Alle Arten wurden gemäß ihrer Gefährdung (IUCN-Kategorien) klassifiziert. Danach sind vier Arten "critically endangered", sieben Arten "vulnerable", sieben Arten "conservation dependent", sieben Arten "near threatened" und 24 Arten "least concern".

**Key words:** Threatened fish species, alien fish species, Caspian Sea, Iran, Middle East.

## Introduction

In recent years many studies have been carried out on the hydrology and hydrobiology of the rivers and coastal waters of the South Caspian basin (HOLCIK & OLAH 1992). The fish fauna, however, was not studied thoroughly, and we can only refer to some special cases involving a few commercially important species.

Quite recently, drastic changes in the Caspian Sea ecosystem have occurred. Some exotic species have been introduced and in recent years have caused deep concern about ecosystem changes (HOLCIK & RAZAVI 1992, COAD & ABDOLI 1993, NASROLLAHZADEH 1999). Other factors causing important faunal changes include stream bed destruction due to sand extraction, overfishing of commercially important species, water pollution, dam construction and increasing water use for irrigation purposes. The first attempt to assess the threats to the South Caspian fish fauna was by COAD (1980), who classified the fish fauna according to the then valid IUCN categories. He identified *Salmo trutta caspius* as the only endangered species of the South Caspian basin.

The aim of this paper is to provide up-dated information on the status of the fish fauna in the South Caspian Basin, and to contribute the information to the revised IUCN Red List Categories adopted in 1994 (IUCN 1994). Although some authors mention that as many as 100 species live in the region, we confined our study to 80 fish taxa for which exact information was available (BERG 1948, COAD 1995).