

Unraveling death of Caspian seals

From illegal hunting to disease outbreaks



IRNA

ANALYSIS

Among the living creatures of the Caspian Sea, the Caspian seal stands out as the only mammal and one of the most familiar inhabitants of this inland sea. However, these days, it is facing severe challenges, with the deaths of several seals along the northern coastal provinces of Iran raising alarm bells among environmentalists. The threat of extinction looms larger than ever for this marine species.

The vast expanse of the Caspian Sea boasts a unique biodiversity, but this breathtaking ecosystem is grappling with numerous threats — from declining aquatic populations and rising biological pollution to the perilous status of the Caspian seal population. Currently, only about 70,000 individuals of this sole marine mammal remain in the northern sea, marked as an endangered species.

According to the International Union for Conservation of Nature (IUCN), the Caspian seal is classified as vulnerable and in dire need of protection. Yet, this responsibility cannot fall on Iran alone; Russia, Turkmenistan, Kazakhstan, and Azerbaijan must also chip in to preserve this species.

Challenges facing Caspian seals

Experts point out that violations of the Caspian Sea's coastal boundaries, land-use changes and construction activities, commercial ship traffic, and military exercises in the northern Caspian are all taking a toll on the seals. The breaking up of ice sheets, which can cause seal pups to become separated from their mothers or fall into the water, alongside illegal hunting and the spread of an invasive comb jelly species, have all been called out as deadly threats to this marine mammal.

Because Caspian seals carry about 12% body fat, they have historically been attractive targets for hunting, especially in Russia, where their skin and meat are valued. Fortunately, thanks to the efforts of seal conservation advocates, all Caspian littoral countries and Russia have since banned hunting this precious mammal. Nevertheless, many seals still end up caught and suffocated in fishermen's nets as some fishermen believe they have landed a valuable commodity for trade and therefore kill them.

The trade in Caspian seal pelts has caused some to continue hunting despite bans. Although global warming and the melting of

northern Caspian ice have wiped out much of the seals' habitat on their own, environmental pollution, declining populations of Kilka fish, and diseases transmitted by canids cannot be written off as contributing factors to seal mortality.

Another significant and destructive factor is the proliferation of an invasive comb jelly species called Mnemiopsis, which entered the Caspian Sea via the Volga River and has become a major threat to the region's ecosystem. These invaders feed on plankton and small fish eggs, rapidly multiplying and throwing a wrench into the food chain. Since plankton is the main food source for Kilka fish — and both Caspian seals and sturgeon feed on Kilka — the disruption of this food web could ultimately drive the Caspian seals to the brink of extinction.

Amid various hypotheses including avian influenza, military operations, and viral and bacterial diseases as causes of seal deaths, the most plausible explanation appears to be military exercises, which are common among Caspian coastal states.

Canine distemper virus

The canine distemper virus is a highly contagious pathogen af-

fecting canids. It is believed that seals contract this virus through contact with infected canids such as jackals while resting on land. Symptoms, predominantly seen in older seals, include eye discharge, weight loss, miscarriage, inability to dive, and lack of response to humans. Fortunately, this virus poses no threat to humans.

Until 2000, the main threats to Caspian seals were ranked as hunting, overfishing, habitat destruction, pollution, and disease. Today, with available data, entanglement in fishing nets appears to carry more weight than other factors. It is also predicted that with the expansion of oil industries and ongoing global warming, these impacts will ramp up, collectively speeding up the decline of this valuable species.

Conservation efforts, milestones

The year 2010 marked the official launch of the Caspian Seal Conservation Center on the Caspian coast, thanks to the dedication of Dutch philanthropist and nature lover Lenie't Hart, along with researchers and experts like Amir Sayyad Shirazi and Mostafa Shahi Ferdous. Over the past eight years, the center has rolled out effective programs aimed at preserving

and saving the only marine mammal of the Caspian Sea. Noteworthy achievements include rescuing 89 seals along Iran's shores and holding conferences with officials from the Commonwealth of Independent (CIS) states.

Iran proudly stepped up as the first among Caspian littoral states to establish this center on Ashuradeh Island in Mazandaran, one of the few relatively pristine and untouched islands in the region. The center's primary goals include rescuing injured seals, raising environmental awareness, educating fishermen, and branching out conservation activities to neighboring Caspian countries.

Population trends, protection plans

A 2008 census estimated the Caspian seal population at around 100,000, but unfortunately, that number has since dropped off to approximately 70,000.

In response to the sharp decline, a project titled "Ecology and Pollution Study of the Caspian Sea" was launched in 2000 with support from the Caspian Environment Program, spanning all five bordering countries. Since 2006, this initiative has evolved into the "Caspian Seal Conservation Project," backed by the

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Journalists and employees of Russia's Interdistrict Environmental Prosecutor's Office walk near the bodies of dead seals on the shore of the Caspian Sea, Dagestan, on December 4, 2022.
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