

SARA REVIEW - NORTHERN ABALONE

Importance of Enforcement and Use of Aquaculture in Species Recovery

Introduction

The purpose of this case study is to highlight

- the potential for the use of aquaculture for rebuilding populations of a species at risk, and for furthering its conservation through commercial production; and
- the importance of enforcement in strengthening the effectiveness of protection and recovery measures.

Northern Abalone (Haliotis kamtschatkana)

The Northern Abalone is a bottom-living marine mollusc widely distributed in shallow coastal waters from Alaska to Baja California. Northern Abalone was once a valuable fishery species, exploited for many generations by Aboriginal people on the B.C. coast and by commercial and recreational fisheries since early in the twentieth century. As with other abalone species worldwide, abundance of Northern Abalone in Canada has declined substantially. All fisheries for this species (Aboriginal, commercial, recreational) were closed in 1990. Despite these closures, abalone abundance has continued to decline, likely as a result of illegal harvesting and low adult population density leading to difficulty in producing viable offspring.

SARA Status

Northern Abalone was included on *Species at Risk Act* (SARA) Schedule 1 as Threatened when SARA entered into force, based on a Committee on the Status of Endangered Wildlife in Canada (COSEWIC) assessment in 2000. A recovery strategy was completed in 2007. Recovery activities first initiated in 1999 under a rebuilding strategy have increased since this species was listed under SARA.

Rebuilding Wild Populations Through Aquaculture

The Department of Fisheries and Oceans (DFO) and the government of British Columbia permitted five pilot aquaculture operations to test the feasibility of abalone aquaculture in 2001. The Bamfield Huu-ay-aht Community Abalone Project is still active, and is producing young abalone for outplanting trials to supplement the wild population, as well as for commercial sale on a pilot scale.

Outplanting trials began in 2003 and to date 3.9 million larval abalone and 77,000 juveniles have been released into the wild. Survival of the outplanted larvae and juveniles is still to be determined, as it takes at least three years for these young individuals to grow to a size where survival can be assessed. However, supplementation trials for abalone populations in other countries have shown success using these techniques.

SARA and Commercial Sale of Aquaculture Species

Commercial production of captive-bred individuals of species at risk can support conservation efforts by reducing demand for individuals caught in the wild. For example, captive breeding of crocodilians for skins has had significant positive impacts on conservation of this group in countries where they occur. The recovery efforts for Northern Abalone could also benefit from commercial production of the species: not only would it reduce motivation for poaching, it could also produce profits for re-investment into conservation projects.

However, when SARA's prohibitions came into full force in 2004, possession and sale of Northern Abalone products from aquaculture were prohibited. This prohibition was rooted in the legal definition of "wildlife species," and the fact that a "threatened" listing in Schedule 1, based on assessment by COSEWIC, does not currently distinguish between individuals from aquaculture and those from the wild population.

COSEWIC has recently developed the "Manipulated Populations Guidelines," which will be in force when Northern Abalone is scheduled for reassessment by COSEWIC in 2009. Under these guidelines, "captive and cultivated populations would be excluded from status assessments, provided these populations can be distinguished from wild populations".

This issue is not unique to Northern Abalone, and applies to all species listed on SARA, which, unlike the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES), does not provide a mechanism to permit trade of captive and cultivated individuals of listed species.

Enforcement: Backstop to Protection and Recovery Efforts

To complement the efforts of communities and individuals to support species recovery, a strong enforcement response to illegal activity is a necessary part of species at risk protection. Recent arrests and prosecutions of illegal abalone harvesters under SARA have sent a strong message about the commitment to protection of species at risk.

In February 2006 three men were arrested following a tip from the public and a 72-hour surveillance operation. DFO fishery officers intercepted a pick-up truck carrying 11,000 live Northern Abalone, which were returned to the ocean.

In April 2007 the three men were convicted in Prince Rupert, B.C., of illegally harvesting Northern Abalone, and were subject to the stiffest fisheries-related penalties in history under SARA. As part of the evidence for the prosecution, results of recently developed

forensic genetic tests showed that the confiscated abalone meats were indeed from the Northern Abalone and not from other species whose possession is legal in Canada.

Fines assessed were directed to community abalone groups on Haida Gwaii and to Aboriginal community-based abalone recovery projects.

Conclusions

The abalone aquaculture projects demonstrate that innovative approaches to aquaculture have a strong potential to contribute to rebuilding wild populations, and to reduce demand for illegally harvested wild abalone.

Strong enforcement operations send the right signals about the government's commitment to protection of species at risk and are critical in strengthening the overall effectiveness of protection and recovery efforts, including stewardship-based activities.