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2010 British Columbia Pacific salmon: Better and worse alternatives

SeaChoice has ranked all B.C. Pacific salmon as "yellow." However, given year-to-year variability in salmon productivity and management, SeaChoice provides annual recommendations for some B.C. salmon fisheries. These alternatives do not represent the comprehensive re-scoring of salmon fisheries necessary to identify them as either "green" or "red" under the SeaChoice rankings.

For 2010, SeaChoice has identified in-river, selectively caught Skeena River sockeye and pink salmon, and Barkley Sound (Somass River) seine-caught sockeye salmon as better alternatives. Fraser River sockeye salmon and South Coast chinook and coho salmon have been identified as worse alternatives.

SeaChoice - 2010 Salmon Rankings		
Better Alternatives		
Region	**Species**	**Gear Type**
Skeena River	sockeye salmon	beach seine, dip net, weir
Skeena River	pink salmon	beach seine, dip net, weir
Barkley Sound	sockeye salmon	seine
Worse Alternatives		
Region	**Species**	**Gear Type**
Fraser River	sockeye salmon	seine, gill net, troll
South Coast	coho salmon	troll
South Coast	chinook salmon	troll

If the river of origin, species of salmon or capture method is not available on the label we encourage consumers, retailers and chefs to ask where their salmon has come from. Commercial buyers, in particular, should be able to get fairly reliable information on the origin of the salmon they buy from brokers or distributors.

Returns of many salmon stocks across Western Canada are expected to be very poor in 2010. In many cases, these returns mark a continued decline of populations of all five species of salmon caught in commercial fisheries. Habitat loss, fisheries mismanagement, open net-cage salmon farming and poor ocean conditions have all contributed to the current degraded state of Pacific salmon.

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Better Alternatives:

In-river, selectively caught (i.e., beach seine, dip net, weir) Skeena River sockeye and pink salmon

The Skeena in-river beach seine, dip net and weir fisheries for pink and sockeye salmon are the most selective commercial salmon fisheries targeting Skeena sockeye and pink salmon, allowing the release of endangered steelhead trout with the least harm. Although some Skeena River sockeye stocks are at low levels this fishery moves to selective areas and adjusts the time of openings to avoid these stocks.

This fishery is small in scale, but demonstrates the potential for industry reform to protect the full diversity of salmon. Availability of pink or sockeye salmon from this fishery is highly limited so we encourage consumers to let their seafood suppliers know that they would like to buy fish from selective fisheries and support reforms to make these fish more available.

Barkley Sound (Somass River) sockeye salmon (seine-caught)

Returns of sockeye salmon to Barkley Sound are expected to be sufficient to support some commercial fishing. Concerns remain for the depressed status of Henderson Lake sockeye and the inability of commercial fisheries to limit impacts to this population of concern.

Of the three gear types used to catch Somass River sockeye, seine nets have the potential to be the most selective, avoiding impacts to seabirds, marine mammals and co-migrating salmon.

Worse Alternatives:

Fraser River sockeye salmon (seine, troll or gill net)

A range of sockeye stocks throughout the Fraser River are in a threatened or endangered state. Fisheries targeting Fraser sockeye can also affect chinook and coho stocks of concern. Current fisheries practices have limited potential to avoid stocks of concern and continue to permit fisheries that may harm threatened or endangered salmon stocks.

A large proportion of the sockeye returning to the Fraser River this year are expected to be from the Adams River system. Attempts to target these stocks within the mix of sockeye returning could put co-migrating stocks at risk. Efforts are underway to target Fraser sockeye upstream of the point where endangered sockeye may be affected by the fishery, particularly Cultus Lake sockeye. Sockeye caught upstream of the Vedder River would be a more sustainable option although it is unclear whether such fisheries will occur.

South Coast chinook and coho salmon (troll-caught)
There are an increasing number of chinook and coho salmon populations along the South Coast of Canada (e.g. West Coast Vancouver Island, Fraser River, Straight of Georgia) and into Washington and Oregon that are at depressed levels. Although efforts to reduce commercial and recreational fisheries impacts on these populations have increased, the potential for these fisheries to further depress these populations remains a concern. There are also outstanding concerns with the mark-selective retention (e.g. retaining only hatchery-marked fish) of coho and chinook salmon. Hatcheries can have a negative impact on wild salmon and the retention of only marked fish effects the primary assessment tools used in these fisheries (e.g. coded-wire tags).

2010 Synopsis

Forecasted returns for B.C. salmon in 2010 are low across much of the province, with very few strong returns expected and serious concerns remaining for many populations, particularly coho, sockeye, chum and chinook. Salmon returns in 2009 were lower than expected for many stocks, particularly Fraser River sockeye salmon that had one of their poorest overall returns on record.

Wild Pacific salmon are available for purchase as fresh or processed product. Pacific salmon products available in Canada may be from other countries, such as the United States or Russia. For further information on the status of US Pacific salmon fisheries please refer to www.seachoice.org.

***Sockeye salmon**:* Of the 29 different sockeye management units in the 2010 fishing plan, 14 are identified as “low” or “stock of concern.” Two sockeye stocks (Sakinaw Lake and Cultus Lake) have been officially listed as endangered by a federal scientific body, but are not given legal protection under Canada’s Species at Risk Act (SARA). Under the federal Pacific Wild Salmon Policy the current draft number of “conservation units” of sockeye salmon that the government has committed to protecting is 242, which is considerably more than the 29 management units considered in the fishing plan.

***Pink salmon**:* Of the nine different pink management units in the 2010 fishing plan, six are identified as “low” or “stock of concern” and three have insufficient data to assess. Pink salmon usually live for two years and the populations that return in odd years are separated from those that return in even years. Under the federal Pacific Wild Salmon Policy the current draft number of “conservation units” of even-year pink salmon that the government has committed to protecting is 13, which is higher than the nine management units considered in the fishing plan.

***Chum salmon**:* Of the 11 different chum management units in the 2010 fishing plan six are identified as “low” or “stock of concern.” Under the federal Pacific Wild Salmon Policy the current draft number of “conservation units” (CUs) of chum salmon that the government has committed to protecting is 38, which is more than the 11 management units considered in the fishing plan. These 38 CUs include over 1200 separate chum spawning systems.

***Coho salmon**:* Of the 19 different coho management units in the 2010 fishing plan, 11 are identified as "low" or "stock of concern" and six have insufficient data. One coho stock (Interior Fraser) has been officially listed as endangered by a federal scientific body, but is not given legal protection under SARA. Under the federal Pacific Wild Salmon Policy the current draft number of "conservation units" of coho salmon that the government has committed to protecting is 43, which is more than the 19 management units considered in the fishing plan. These 43 CUs include over 1400 separate coho spawning systems.

***Chinook salmon**:* Of the 25 different chinook management units in the 2010 fishing plan 19 are identified as "low" or "stock of concern." One chinook stock (Okanagan) has been officially listed as endangered by a federal scientific body, but not given legal protection under SARA. Under the federal Pacific Wild Salmon Policy the current draft number of "conservation units" of chinook salmon that the government has committed to protecting is 68, which is more than the 24 management units considered in the fishing plan. These 68 CUs include over 500 separate chinook spawning systems.

Background for Yearly Salmon Recommendations

There are five species of Pacific salmon consisting of several hundred unique conservation units found in B.C. waters. The marketplace usually identifies Pacific salmon by species (e.g. pink, sockeye, etc.) and sometimes country of origin, but does not recognize the various distinct spawning populations. While it is not possible to give a seafood recommendation for all the possible runs of salmon, SeaChoice does provide general species-based recommendations.

SeaChoice evaluates all fisheries based on five main criteria: inherent vulnerability, stock status, bycatch, habitat/ecosystem impacts, and management regime (www.seachoice.org/page/markets).

Inherent vulnerability: Pacific salmon are inherently resilient to exploitation because they are relatively short-lived, fast growing and have high reproductive potential.

***Stock status**:* Individual stocks and populations of Pacific salmon vary considerably year to year. Of the 5,358 assessed Pacific salmon stocks in B.C. and the Yukon, 5.1 per cent are of special concern, 11.4 per cent are at high risk of extinction and 2.1 per cent are extinct (Slaney et al. 1996).

***Bycatch**:* The capture of birds and weak stocks of salmon along with stronger stocks are the main bycatch concern surrounding Pacific salmon fisheries in Canadian waters. There is a general management failure to take initiatives to control this problem. Consequently, several smaller endangered stocks are at risk of further decline due to commercial fisheries. It is estimated that each year the salmon gillnet fishery captures approximately 12,000 seabirds based on extrapolations from observed test fisheries. The most frequent caught bird species are common murres, rhinoceros auklets, and marbled murrelets. Less than five per cent of the birds caught are returned alive. The marbled murrelet is a 'threatened' species under SARA.

Habitat/ecosystem considerations: Salmon are caught commercially by seine (~50 per cent), gillnet (~25 per cent) and trolling (~25 per cent). These gears operate in mid-water, so habitat damage from fishing practices is considered minimal. Spawning Pacific salmon provide far ranging ecosystem values resulting from the transfer of nutrients to marine and terrestrial plants and animals. Salmon fisheries management has not yet accounted for the broader ecosystem values of salmon. Many freshwater habitats have been degraded or lost through forestry, agriculture, or development which, when combined with narrow geographic areas for unique stocks, is cause for concern.

Management regime*:* Commercial salmon fisheries are managed using restricted area, gear, and time openings. Harvest is generally regulated to manage impacts to stock aggregates, but not to component stocks. Enforcement and in-season management adjustments are used to ensure different management measures are met. However, many of these management measures do not yet protect weak stocks or consider the ecosystem role of returning salmon to other organisms. The recreational fishery for salmon is substantial in many areas and is inadequately monitored. Although Fisheries and Oceans Canada (DFO) has a “Wild Salmon Policy” intended to protect salmon diversity and support ecosystem values, it has not yet been effectively implemented. Maintaining genetic diversity is considered necessary to allow salmon to adapt to predicted environmental changes associated with climate change (e.g. increased stream temperatures). Intensive fisheries present an unknown threat to this diversity.