

THE RIGHT TO BE RESPONSIBLE

A Framework for the Rebuilding and Conservation of Inshore Rockfish and Lingcod on the BC Coast

A Submission from

**Sierra Club of British Columbia
Canadian Parks and Wilderness Society
David Suzuki Foundation
World Wildlife Fund
Watershed Watch**

Prepared by Terry Glavin, February 27, 2002

Contents: _____ page

I. Background	2
II. Necessary Measures: Analysis	4
III. Implications for the Fisheries	8
IV. Aboriginal Fishing Rights	17



David Suzuki Foundation
Finding solutions



Sierra Club of British Columbia,
Tel: 1-250-386-5255 fax: 386-4453

576 Johnson Street,
info@sierraclubbc.org

Victoria, BC V8W 1M3
www.sierraclub.ca/bc

I. Background:

On December 14, 2001, the Minister of Fisheries and Oceans, Herb Dhaliwal, announced his intention to address serious conservation concerns with respect to B.C.'s inshore rockfish stocks,¹ as well as Strait of Georgia lingcod.

He described his objective as "the essential protection and rebuilding of rockfish stocks" and providing the "needed protection" of the Strait of Georgia's lingcod stocks. The purpose of these objectives was to "protect and rebuild these species of concern in order to provide sustainable benefits for Canadians in the future."

Specifically, the minister identified four "fishery management goals" to be used as "guiding principles" to develop conservation measures, in consultation with First Nations, industry, and public-interest conservation groups.

To achieve those goals, the conservation measures to be considered were identified as the closure of directed rockfish fisheries; "drastic" reduction of rockfish catch and "bycatch", which occurs in all inshore net and hook-and-line fisheries, in all sectors, and to varying degrees; the designation of "extensive" rockfish habitat areas that would be closed to "all fishing"; and improvements to catch monitoring and stock assessment.

"I wish to emphasize the importance I attach to rockfish conservation. I am hopeful that the department's consultation process will result in *agreement on a suite of measures, by this April*, which will meet the target of less than two per cent harvest rate. *If this is not the case, I am prepared to unilaterally impose the necessary management measures by April 2002*," the minister added.

By April:

- 1) *Closed areas*: "Significant portions of rockfish habitat will be closed to all fishing to provide a buffer against scientific uncertainty and existing catch data gaps, and for the essential protection and rebuilding of rockfish stocks. To be successful, these closed areas will be extensive in the inside waters (Strait of Georgia, Johnstone Strait) and to a lesser extent in other management regions coastwide. The specific sites will be identified, in cooperation with First Nations, commercial, recreational, environmental and local interests, for the 2002 fishing season."

¹ This document is based on DFO's classification of "inshore rockfish," which, for the purposes of these conservation measures, are considered to be quillback, copper, tiger, china, black, and yelloweye (red snapper). Harvest rates anticipated by these measures are meant to mean harvest rates applied on a species by species basis, on an area-by-area basis.

- 2) *“Drastic” reductions in fishing mortality*: “Initial management measures will be both to reverse the trend of increasing total mortality rates and to reduce a harvest rate to less than two per cent. As harvest rates are currently estimated to be significantly above that level, and because of the intrinsically low productivity of inshore rockfish, fundamental change to fishing for a prolonged period of time is needed.”

By December:

- 3) *Verifiable catch data*: “Comprehensive catch monitoring programs” are required to provide “an accounting of all significant inshore rockfish catch (retained and released)”, and those programs are expected to be developed in a consultation process as well. They are not due by April, however, but rather are intended to be in place “for the 2003 season” and “may be fully implemented” in the following year.

- 4) *A long-term conservation strategy*: By December, 2002, regional fisheries officials are expected to have developed, in consultations with First Nations, industry stakeholders and other interested parties, a “stock assessment framework” for inshore rockfish. This framework will include “complementary stock monitoring programs” involving the collection of abundance and biological data.

In the following synopsis, the Sierra Club of BC will set out what we believe is necessary to meet the April deadlines. We will address matters of effort control, the problems associated with unknown rockfish catch, and a long-term conservation strategy, in greater detail, well before December.

II. Necessary Measures: the analysis

1) **Moratoria:**

The conditions that would allow the continuation of directed rockfish fisheries do not exist, at present, for any of the fisheries management areas of the coast. These conditions include defensible biomass estimates and verifiable catch data. Over the past few years, reductions in catch limits, the establishment of Rockfish Protection Areas, and other such measures have had no significant effect in reducing harvest rates, or in preventing serial depletion of rockfish reefs. A mere continuation of that policy – reduce catch limits, establish small rockfish protection areas – would be an unacceptable continuation of the status quo, and would directly defy the minister’s stated objectives.

2) **“Sustainable” Rate:**

Confused and contradictory interpretations of the “sustainable” rate of inshore rockfish were commonplace within DFO’s fisheries-management branch immediately prior to the minister’s December 14th announcement. Conflicting interpretations persisted after the minister’s December 14th announcement, and have compromised the ability of participants in the “consultation” process to make well-informed contributions. The stated objective of a harvest rate of “less than two per cent” for inshore rockfish must be understood accurately, in the context of its origin, which is a finding articulated in the Canadian Science Advisory Secretariat (CSAS) Research Document 2001/139. That document proposes a natural mortality rate for inshore rockfish of less than two per cent, and stipulated that fishing-induced mortalities must be kept below the natural mortality rate. Specifically, the document stated: “ Given natural mortality rates in the range of 2%, harvest rates of less than 1% may be sustainable. Within the TAC management scheme, TACs must be set at a level where the catch is less than 1% of the population. The smaller the area or number of populations targeted, the greater the reduction in fishing mortality required to ensure that the entire TAC does not exceed 1% of each local reef population.” Importantly, the authors of that document have noted, “Since we have no method to estimate biomass over the entire coast of B.C., we cannot recommend sustainable TACs.”

3) **Harvest Rate:**

Harvest rates of less than one per cent², must be DFO’s objective for inshore rockfish stocks of unknown stock status, and must be applied on a species-by-species and local area-by-area basis. To set out harvest rate objectives that serve mere administrative and management convenience would pose the risk of subjecting fishermen whose livelihoods are at stake to measures that serve no defensible conservation objective, and would also run the risk of restraining aboriginal fisheries unlawfully. We accept that actual “sustainable” rates of inshore-rockfish harvest may vary from year to year, from species to

² Baker, S.J., Berkeley, S.A. et al: “AFS Policy Statement #31d, Management of Pacific Rockfish.

species, and from stock to stock. Research into these questions should be a high priority of the long-term stock-assessment initiatives Pacific region officials are preparing to develop in consultation with First Nations, stakeholders, and public-interest groups.

4) Total Allowable Catch:

Because scientists concede that it is impossible, at present, to assign total-allowable-catch limits which would allow continued directed fishing for inshore rockfish, and because so many First Nations fisheries, commercial fisheries and recreational fisheries produce harvests of inshore rockfish that are largely unregulated and unmonitored, both in directed and non-directed fisheries, it is currently impossible to assign coastwide catch-limits, or catch limits by groundfish-quota management area, in the form of “bycatch” allowances for inshore rockfish.

5) Strait of Georgia Lingcod:

Conservation measures to come into effect by April must, as the minister promised, provide the “needed protection” for the Strait of Georgia’s lingcod stocks, which generally share the same habitat and are vulnerable to the same gear as inshore rockfish. The most recent formal advice of the Pacific Scientific Advice Review Committee (PSARC) groundfish subcommittee has identified the “needed protection” of the Strait’s lingcod populations as a harvest-rate target “as close to zero as possible,” beginning in 2002.

6) Closed Areas:

As advised by PSARC scientists, and as set out in CSAS Research Document 2001/139, the targets for the large-scale closed areas the minister stated were necessary must include: i) a “network” of harvest refugia in Fisheries Management Area 4B - which takes in Johnstone Straits, the Strait of Georgia and adjacent areas – to encompass roughly 50 per cent of the known rockfish habitat types in the area, and ii) a similarly-designed network of harvest refugia to encompass a minimum of 20 per cent of the known rockfish habitat types elsewhere on the coast. These areas must be closed to “all fishing” by all gear associated with both directed rockfish fishing and incidental rockfish encounters. The closed areas must be Fisheries Act closed areas, which will come into effect in advance of the summer fishing season of 2002. While First Nations interests, bathymetric mapping and other considerations will be addressed, the closed-area targets should be considered permanent. The Fisheries Act closed areas should be used as an interim blueprint for that permanent, coastwide network of harvest refugia.

These Fisheries Act closed areas should also be used as an interim blueprint for establishing a network of marine reserves (i.e. fully protected "marine protected areas") for the conservation of overall biodiversity and as a hedge

against fisheries management uncertainty. We refer to rising and irrefutable evidence worldwide pointing to the practical benefits of fully protected marine reserves. We recognize that identifying potential marine reserves within the harvest refugia areas requires a longer-term process and extensive consultation with interest groups, including First Nations, whose Constitutional and treaty rights must be recognized. Nor should such a process delay the establishment of the Fisheries Act closed areas. However, we urge DFO to use the opportunity provided by the rockfish closed areas to implement, in a coordinated manner, a process for advancing broader MPA objectives as mandated by the department's policy framework on MPAs and as guided by the joint federal-provincial MPA Strategy.

7) **Aboriginal Rights of Access:**

Future total-allowable catches of inshore rockfish, based on demonstrably sustainable rates of harvest on rockfish species and stocks, must be derived from population levels of rockfish associated with “open” areas only, and must be assigned with direct and specific reference to the priority rights of access described by the Supreme Court of Canada in the 1990 Sparrow decision.

8) **April 2002 Deadline:**

Consultations prior to April, 2002 should focus on the immediate measures necessary to ensure that the B.C. coast's fisheries will be conducted within the groundrules set out in the minister's objectives, by this summer. No “reprieve” from this deadline is justified. Consultations should turn as quickly as possible to the objective of re-establishing fisheries, within a sustainable and publicly-defensible management regime, and within the specific context of the measures to be developed by December, 2002. These measures must address the long-term rebuilding and conservation of inshore rockfish stocks. Well-informed First Nations, stakeholder and public-interest involvement in the development of a long-term rockfish conservation and rebuilding strategy is the best approach. The full engagement of First Nations, fishermen and a variety of public interests must be relied upon to develop an effective stock-assessment framework and other elements of that long-term strategy.

9) **Depleted Area Measures:**

Where evidence exists for depletion of inshore rockfish stocks, the immediate conservation target for fisheries associated with rockfish catch and bycatch should be considered a “zero” harvest rate.

10) **Research Fisheries:**

Small-scale, closely scrutinized experimental fisheries should be considered for areas of unknown rockfish stock status, and where no evidence for

depletion exists. The only exception in the matter of where such research fisheries might be considered is Area 4B, Sub-area 12, where there is much dispute over the status of rockfish stocks. Such research fisheries must produce harvests that fall within the sustainable rate identified in CSAS 2001/139. Such fisheries should be authorized only where there is optimal certainty that stock status will not be compromised. Such fisheries should also contribute to long-term stock-status information, and must provide accurate, verifiable catch information.

11) Bycatch:

Fisheries associated with inshore rockfish “bycatch” must be subjected to the utmost scrutiny to ensure that the minister’s standard of “drastic” reductions in bycatch is met in the most transparent way possible. Similar scrutiny must be applied to selective-fishing proposals. For “bycatch” fisheries where no verifiable catch data exists, the harvest rate target must be stipulated as being as close to zero as possible. A “zero” harvest rate objective is the only publicly-defensible alternative to closing such fisheries. This is particularly true for the Strait of Georgia, where lingcod stocks, despite anecdotal evidence of localized revivals, are considered to be at a level of abundance only a fraction of their 1950s’ levels, and have already been identified by PSARC as requiring a conservation target of “zero” harvest.

12) Transparent Process:

The conservation sector must be fully engaged in a process of evaluating the fisheries-management regime Pacific region officials proposes to comply with the minister’s goals. The conservation sector must have a full opportunity to review that proposed regime and all of its supporting materials, and a full opportunity to provide detailed commentary, before any new regime is submitted for the minister’s consideration in April.

III. Implications for the Fisheries

An essential element of making this framework work is the necessity of implementing fishing moratoria. The duration of these moratoria would depend directly on DFO's ability, in consultation with First Nations, stakeholders, and public-interest conservation groups, to design sustainable fisheries in ways consistent with the minister's longer-term objectives, which must be considered prior to December. Opportunities may also exist for interim fisheries, as described elsewhere in this document, some of which may be eligible to proceed before the end of the 2002 calendar year.

Our organizations do not take lightly the consequences of what we propose. The assessment that follows is based on consultations with industry participants, DFO managers and biologists. It is an effort to fully evaluate, in detail, the implications of adopting the necessary measures we have outlined above.

Points 1-4, Moratoria:

i) The 71 ZN boats fishing in Area 4B, which is that area known as the "Inside Waters," which stretch from a point in Juan de Fuca Strait near Jordan River to the top end of Queen Charlotte Straits, near Cape Caution. These vessels are at present confined mainly to sub-areas 12 and 13, although the reasons for this are disputed: Some fishermen claim water-temperature anomalies have made southern 4B waters unsuitable for the "live" market fishery, while other fishermen, backed by PSARC evidence, point to the ongoing effects of recreational overfishing combined with serial depletion of commercial quantities of rockfish reefs south of Campbell River.

ii) The rapidly-expanding directed recreational fishery for inshore rockfish, in both Area 4B and in Outside Waters, and the related recreational fishery targeting lingcod in the Strait of Georgia. In Area 4B, a small number of "charter" operations is associated with a rapid expansion of recreational fishing effort directed at bottomfish species. Anglers targeting rockfish comprise a small but growing portion of B.C.'s 240,000 licensed recreational anglers. No "bag limits" for rockfish would exist in the recreational fishery regulations coastwide, and similar regulatory measures would apply to lingcod in the Strait of Georgia. A simple no-catch, no possession rule would apply. Overall impacts would be confined to the emerging bottomfish-angling effort and a small number of charter businesses, and the impact would be concentrated in Area 4B Sub-areas 17-19 (Gulf Islands to Victoria).

iii) Roughly 40 vessels licensed in the Option "A" ZN category, which fish north of Cape Caution and on the West Coast of Vancouver Island.³

³ The implications for the "Option A" fleet are also considered elsewhere in this document, under Points 10 and 11.

iv) The similar-sized Option “B” ZN category, which targets yelloweye for the fresh market, and fishes out of Prince Rupert, the central coast, the Queen Charlotte Islands and the West Coast of Vancouver Island. This fishery is only tentatively identified as subject to moratoria, however. This fishery is considered in greater detail, later in this document, in the context of the implications raised by Point 11.

Point 5, Lingcod conservation:

A ban on directed lingcod fishing in the Strait of Georgia would cause some disruptions in the Strait’s recreational fishery, generally. A ban would temporarily halt the significant directed recreational lingcod fishing effort in the Strait.⁴ A “zero” harvest rate target would also impact salmon anglers where a prohibition on the use of certain types of gear, in areas of known lingcod encounters, was deemed necessary. Regulatory changes would include a prohibition on fishing for lingcod and possessing lingcod. The regulations must be considered in tandem with rockfish prohibitions.

Point 6, Closed areas:

Disruptions should be anticipated by establishing closed areas of this scope and scale. Fully half the rockfish habitat types in Area 4B and 20 per cent of Outside Waters’ rockfish habitat would be off-limits to all sectors.

The sectors most affected by these measures would be:

- i) *Recreational salmon fishermen in Area 4B, and to a lesser extent, recreational salmon fishermen in Outside Waters.* Some anglers may lose favoured fishing spots, and public-education efforts will be required to explain the location and purpose of closed-areas in a network of refugia.
- ii) *Salmon trollers in Outside Waters.* There are significant salmon troll fisheries in the top end of 4B (above Campbell River) depending on the “inside diversion rate” of Fraser-bound sockeye, which occur in waters likely to be closed for the purposes of rockfish harvest refugia.
- iii) *Recreational halibut fishermen coastwide.* Outside Waters refugia will be concentrated in certain areas where known rockfish habitat types are more prevalent, forcing halibut anglers into smaller areas in such regions, and obliging them to fish further from shore.

Crab fishermen and prawn-by-trap fishermen will likely be unaffected by these closed areas, as may other fisheries not associated with rockfish bycatch; It may be necessary to subject prawn trap fisheries to greater scrutiny, but it is not likely to be necessary to exclude such fisheries from closed areas.

4

There is no directed commercial lingcod fishing in the Strait proper.

IV. Implications for Aboriginal Fisheries:

This matter is dealt with separately in this paper.

Point 9, Depleted-area measures:

These measures concern Area 4B, the Inside Waters, where evidence for depletion of rockfish stocks is most persuasive and widely accepted, but may also apply in any management area where DFO scientists consider the evidence to support depletion. Point 9 is intended to confirm that for such areas, only a zero harvest rate objective is defensible.

Recreational impacts:

The implications of Point 9 are that DFO, in implementing a zero harvest rate target for the Strait's lingcod and for rockfish in areas such as Area 4B, must also consider further area closures, outside harvest refugia, where encounters with rockfish during salmon fishing, or during other "bycatch" fisheries, are known to be significant. Such circumstances may be addressed with spot closures, gear restrictions, or other such measures.

Commercial impacts

i) *Salmon trollers:* The main rockfish species salmon trollers encounter in Area 4B is considered to be black rockfish. One way to avoid such encounters, and comply with a "zero tolerance" bycatch rule for rockfish, would be the establishment of "ribbon boundaries" around both refugia areas and rockfish habitat types in open areas. Limited disruption is anticipated.

ii) *Schedule II lingcod fisheries.* A relatively small number of Schedule II lingcod boats currently fish for lingcod by jig and gang-troll in 4B subareas 12 and 20 (Johnstone Straits to Cape Scott, roughly; Esquimalt to Bonilla Point, roughly). These lingcod fisheries are associated with rockfish bycatch, and do not provide verifiable catch data, and would consequently be subjected to a "zero harvest rate" bycatch objective.⁵

iii) *Schedule II dogfish longlining.* An immediate implication of Point 9 would be the repeal of "bycatch allowance" provisions that permit dogfish longliners, in areas of depleted rockfish stocks, to retain an amount of rockfish equal to one per

⁵ The November, 2001 "Nanaimo consensus statement" identifies this fishery as appropriately subject to moratoria. With verifiable catch data and effort controls, this fishery is likely capable of redesign, to achieve a zero harvest-rate target for rockfish, such that it might be eligible to proceed prior to 2003, so long as DFO scientists first consider the specific status of the lingcod stocks this fishery targets.

cent of their dogfish catch. There are close to 600 “C” licensed Schedule II boats on the coast, and all other licensed vessels – about 4,000 – are entitled to Schedule II privileges. The number of Schedule II dogfish boats operating in Area 4B, however, is unknown.⁶ In some sub-areas of Area 4B, particularly the northern portions of the Strait of Georgia and the Johnstone Straits area, rockfish encounters are believed to be high; in the southern areas of the Strait, however, rockfish encounters are believed to be low. A “zero tolerance” encounters policy would foreclose immediate opportunities for fishing in both areas. However, opportunities exist for negotiated verifiable-catch-data arrangements between the fleet and DFO.

iv) *Option B trawl fishing.* This fleet, which consists of 17 active vessels out of 36 “Option B” licences, prosecutes fisheries in Area 4B, mainly in the southern Strait, upon a suite of species, mainly soles and flounders, for which there are no catch limits. Because of this, the Sierra Club of B.C. and several other conservation groups, through their 2001 “Oceans Day” statement, have called for a moratorium on this fishery until appropriate controls are in place.⁷ However, in the strict context of an effective rockfish conservation regime, and to be consistent with the fishery management goals that are to be in place by April, Point 9 reaffirms the urgency of closing the Option B trawl fishery until verifiable catch data arrangements are negotiated between the fleet and DFO, and the Option B trawl catch can be shown to produce encounters with rockfish that are as close to zero as possible. Because these conditions are achievable within a short period of time, possibly before the 2003 season, Point 9’s implications for the Option B trawl fishery may be considered “substantial,” but only in the short term.

Point 10: “Research” fisheries.

“Small-scale, closely scrutinized experimental fisheries” should not only be considered, but encouraged, in those areas “where no evidence for depletion exists.” The only exception is Area 4B sub-area 12, where such fisheries should be considered because of conflicting evidence about stock status.⁸ Elsewhere in Area 4B, a more precautionary approach is necessary. It is only in Sub-area 12 that the Inside ZN fleet might be able to design defensible fisheries, as described

⁶ The Nanaimo consensus statement called for a moratorium on this fishery, with effort controls identified as one condition that would have to be met for it can resume.

⁷ The Nanaimo consensus – which was tentatively supported by the Option B trawl leadership, importantly – called for a moratorium on this fishery, for similar reasons. Verifiable catch-data and effort controls were specifically identified as conditions for resuming this fishery.

⁸ Such fisheries were identified in the Nanaimo consensus statement, which reads, in part: “A two-year ‘pilot project’ of experimental fisheries in 4B Area 12, developed by DFO science branch, Inside ZN fishermen, First Nations and public-interest conservation groups. Inside ZN fishermen will also develop a rationalization plan, to be supported by the conservation sector, which may include buy-backs, division of unfished TACs into individually transferable quotas, or other such measures developed by the Inside ZN fishermen.”

in the Nanaimo consensus statement, on a “scientific permit” basis. The conditions for such fisheries must include a harvest rate target of less than one per cent, and must provide “optimal certainty that stock status will not be compromised.” These fisheries must also contribute to long-term stock-status information, and must provide accurate, verifiable catch information.

Point 10 anticipates a basis for developing this sort of approach coastwide. It offers the best available hope to Outside Waters ZN fishermen. It raises the possibility that moratoria might be immediately followed by a variety of smaller-scale, closely scrutinized research fisheries of this type. Such fisheries could serve as interim fisheries in advance of the conditions the minister identified as subject to consultation, after April, which would form the basis of longer-term sustainable fisheries.

Point 11:

Recreational impacts:

Disruptions to coastwide recreational fisheries are an unavoidable implication of Point 11. While we have shown that a “zero harvest rate” rule is necessary for the Strait of Georgia’s recreational fisheries to protect the Strait’s depleted rockfish and lingcod stocks, a “zero per cent” objective is also necessarily applied, coastwide, to recreational fisheries that produce “bycatch” of rockfish, such as the salmon and halibut fisheries. This is because the management of those recreational fisheries, at present, allow for no verifiable catch data.

In Outside Waters and in Area 4B sub-area 12, arrangements might be made with certain fishing lodges, or between anglers’ groups and local fisheries offices, that might account for the “bycatch” of rockfish in recreational fisheries for salmon, halibut, lingcod and other finfish. Any such arrangements which exempt such fisheries from a no-catch, no-possession rockfish policy must provide optimal certainty about the actual rockfish catch such fisheries produce. Importantly, such arrangements for fisheries for non-rockfish species that feature “rockfish bycatch allowances” must be integrated with arrangements governing the kind of small-scale commercial “research” fisheries anticipated under Point 10, and any other fisheries that produce known rockfish bycatch. The combined fishing mortality of these fisheries must result in harvest rates of “<1%” on each of the six rockfish species, on a species-by-species basis, and on a local-area basis.

Otherwise, a simple zero harvest-rate policy, with no bycatch allowances, must be clearly identified as the target harvest rate. This will imply close monitoring of recreational fisheries in “open areas” outside refugia to ensure the lowest possible rate of encounters with inshore rockfish. The minister has already made it clear that all non-rockfish fisheries must demonstrate “drastic” reductions in rockfish bycatch. Achieving this goal in the recreational fisheries will require immediate internal deliberations, and transparent consultations with recreational stakeholders, to ensure that the standard of “drastic” reductions is met, and to

ensure that the prosecution of fisheries will produce a “bycatch” of rockfish that results in a rockfish harvest rate that is as close to zero as possible.

Commercial impacts:

Dogfish and lingcod fisheries: The fisheries that would likely face the greatest disruptions under the policy proposed specifically in Point 11 are the Schedule II hook-and-line fisheries for lingcod and dogfish in Outside Waters, because of the absence of verifiable catch-data in those fisheries, as currently managed.

However, the scale of disruption is extremely difficult to assess because of the absence of effort-controls, such as limited-entry rules. Regulations that allow for verifiable catch-data may be the only way to exempt these fisheries from a “zero” harvest rate target for rockfish, along with area restrictions ensuring that these fisheries are not prosecuted in areas of known rockfish-habitat types. Changes to gear-type regulations, such as a restriction of lingcod hook-and-line gear to gang-troll gear, may also provide an opportunity reduce disruptions to Schedule II lingcod fisheries.

The Halibut (L) and ZN Options C, D and B fisheries.

The halibut fleet: The halibut fleet without “ZN” (rockfish) options is a fleet that nonetheless produces significant rockfish bycatch. The size of the fleet varies from year to year because of the fleet’s ability to lease vessel quotas. There are 436 halibut “L” licences, about 85 of which have ZN Option D licences, leaving the maximum possible number of non-ZN halibut boats fishing coastwide at about 350 boats.

The “bycatch” of inshore rockfish by this fleet consists almost exclusively of yelloweye, and is generally less than five per cent of the fleet’s catch by weight. “Drastic” reductions in rockfish bycatch should be expected of this fleet. However, it is difficult to assess the actual disruptions this standard would imply, because of the fleet’s capacity to lease vessel-quota, and because of the opportunities presented by time-and-area restrictions. Also, for the purposes of considering the implications of a “zero” harvest-rate target, this fleet should be considered exempt, and subject only to a “<1%” harvest-rate objective for the combined effects of all fisheries. This is because the fleet is quickly moving towards compliance with the standard of verifiable catch-data. On-board observer coverage is not complete, but it is improving. At a minimum, observer coverage should be applied strategically, and cover at least 25 per cent of the fleet.

The ZN Option C fleet: Like other options in the Outside ZN fisheries, this fleet varies in size from year to year. Targeting mainly rougheye, shortraker and red-banded rockfish (“shelf” species) by hook and line, the fleet usually comprises fewer than 30 vessels. Its inshore rockfish bycatch allowance is 18 per cent of the landed weight of aggregates 3, 5, 6 and 7 (canary, silvergrey, Pacific Ocean perch, yellowmouth, redstripe, and certain “other” shelf and slope rockfish species). The

inshore rockfish bycatch allowance should be repealed, to conform with a “zero” harvest target for inshore rockfish in fisheries incapable of demonstrating verifiable catch data. Monitored landings are insufficient to meet the threshold of verifiable catch; the fleet is not subject to on-board observer coverage.

Disruptions caused by the policy outlined in Point 11 should be considered minimal to moderate, however, because the Option C fleet’s actual encounters of inshore rockfish are considered to be very low, and time-and-area closure opportunities exist such that a “zero” target for inshore rockfish encounters is eminently achievable.

The ZN Option D fleet: This fleet consists of about 80 vessels, but because Option D privileges are available to all “L” licence holders with ZN licences, the fleet may potentially number about 140 vessels. The ZN Option D fishery is in effect a “halibut” fishery which is allowed a significant bycatch allocation of inshore rockfish species, mainly yelloweye. A “reasonably verifiable catch data” threshold is achievable for this fleet (a minimum of 25 per cent on-board-observer coverage), and bycatch allowances can be traded. As a consequence, this fleet is not necessarily subject to a “zero” harvest target for inshore rockfish. However, as with other fisheries, the Option D fishery would have to demonstrate “drastic” reductions in its inshore-rockfish bycatch, and its bycatch allowance would have to be considered in light of other fisheries associated with the bycatch of inshore rockfish. The Option D inshore rockfish bycatch must remain within a total harvest rate of the combined effects of bycatch amounting to a “<1 %” harvest rate.

A “moderate” disruption assessment for the Option D fleet should be anticipated. Nonetheless, some halibut fishermen with ZN – D licences might find the threshold of drastic reductions impossible to meet. There are alternatives available to them, however, because “integrated groundfish management” discussions in this fleet are well advanced.

The ZN Option B fleet: This fleet consists of about 35 vessels that directly target yelloweye rockfish, and although it is currently granted a significant bycatch allowance for other inshore rockfish species, regulatory measures have ensured a low incentive for discards, and limited on-board observer coverage suggests that its actual catch likely reflects, quite closely, its landings. Yelloweye comprise an estimated 90 per cent of its actual catch.

For this reason, and because opportunities exist for making this fleet far more “selective” (by reducing its rate of encounters with other inshore rockfish species through such measures as time and area closures), this fleet was only tentatively identified as necessarily subject to moratoria as a result of the implications of Points 1-4.

However, the fleet should be considered subject to “drastic” reductions in its yelloweye catch. A minimum threshold of 25-per-cent observer coverage for this

fishery would be required in order to exempt it from moratoria. Also, its catch, combined with other fisheries, must result in area-by-area harvest rates for yelloweye at a “<1%” level. This fleet is also a prime candidate for the kind of “interim” fisheries arrangements contemplated under Point 10 of this document. In such arrangements, opportunities exist for transferring allowable yelloweye catch to other ZN options, the “L” halibut fishery, and so on.

(The Option A fleet: While we have said this fishery must be subject to moratoria, we have also identified opportunities for “interim” directed inshore rockfish fisheries for ZN Option A vessels. A further possibility for reducing disruptions to ZN Option A licence holders may arise in the context of measures contemplated above, under Point 11’s implications. It may be possible for the Option A Outside Waters fleet to assign or “lease” portions of a substantially-reduced allocation, which would have to conform with a “<1%” harvest rate objective, to other ZN options, and “L” licence fisheries.)

Implications for other fisheries in combined effects of Points 1-12.

- i) Moderate disruptions would result from the implications of Points 1-12 for the 142-vessel “Option A” trawl fleet, which is currently allowed small portions of the coastwide total-allowable-catch for inshore rockfish. For the purposes of this document, the offshore trawl fishery is considered a “bycatch” fishery. “Drastic” reductions of this bycatch should be demonstrated to the greatest extent possible. Apart from harvest-refugia measures, it might also be appropriate to require the Option A fleet to specifically avoid other areas of known inshore rockfish abundance in the offshore areas.
- ii) Moderate disruptions should be anticipated for the 48-vessel (K-licence) sablefish fleet. While mainly thought of as a trap fishery, this fleet is also permitted to deploy longlines for sablefish. Retention of rockfish is not permitted except in the offshore seamount fishery. Specific area closures, beyond the refugia network that would apply to all hook-and-line and net fisheries, may be necessary to avoid more significant disruptions to fisheries practices. Unless this fleet can demonstrate both “drastic” reductions in inshore rockfish, and meet a threshold of verifiable bycatch data, it should be subject to a “zero” encounter-rate policy for inshore rockfish. Regulatory changes would have to be considered, regardless, in the seamount fishery, where “inshore” rockfish species are encountered, and where the fleet is permitted a rockfish bycatch allowance of ten per cent of landed sablefish weight in the trap fishery, and up to 40 per cent of the landed sablefish weight in the hook-and-line fishery.

- iii) Low levels of disruption should be expected in the salmon net (seine and gillnet) and shrimp trawl fisheries. The salmon net fisheries are not generally associated with rockfish bycatch (low gillnet encounters with black rockfish in the central and north coast, low seine encounters with mainly black rockfish in the central and north coast, Johnstone Straits and occasional WCVI fisheries). The salmon net fisheries would have to be reviewed for their rockfish encounters, and considered for measures to avoid rockfish encounters. While the disruptions are anticipated to be low, their effect would be felt widely, however – there are more than 2,000 salmon net vessels on the coast. In the shrimp trawl fisheries (248 licensed vessels), anticipated disruptions to the small-boat “beam trawl” fleet and the big-boat dragger fleet are difficult to assess, but are presumed to be low to moderate given the general preference by these fleets for mud and sand bottoms, not generally associated with rockfish habitat. These fisheries would have to be similarly reviewed for their rockfish encounters, and because they are poorly monitored at present, they may prove to be necessarily subject to greater disruptions than anticipated at present.

IV. Aboriginal Fishing Rights and the Rockfish Conservation Strategy

In Point 7, we stipulated that “future total-allowable catches of inshore rockfish. . . must be assigned with direct and specific reference to the priority rights of access described by the Supreme Court of Canada in the 1990 Sparrow decision.”

Point 7 was not directly considered in the context of any immediate implications for the coast’s fisheries. It has broader significance that will pose implications across-the-board in the conservation measures contemplated by this document, and in the management and prosecution of fisheries considered in this document.

The contribution of aboriginal fishing effort to rockfish mortalities is believed to be far lower than the commercial or recreational fisheries, at least for most of the coast. That is not to say that aboriginal fisheries should not be subject to conservation measures. The Fisheries Act closed areas we propose would indeed be expected to apply to aboriginal fisheries, because those closed areas serve the purpose of a valid legislative objective – a specific and scientifically-defensible conservation objective. Similarly, aboriginal fisheries, after April, will also be expected to result in catches that do not exceed the harvest rate ceilings identified in this document.

Rockfish species have been identified in archeological sites throughout the B.C. coast, from the 49th parallel to the Alaska border. Carbon-dating of those remains provides irrefutable evidence of aboriginal customs, traditions and practices associated with rockfish harvest stretching back thousands of years. Aboriginal fisheries for rockfish continue. This document accepts that such continuity gives rise to constitutionally-entrenched aboriginal fishing rights.

More importantly, this document accepts the persistence of aboriginal fisheries as a prominent feature of fisheries-management regimes on the British Columbia coast, well into the future.

For aboriginal fisheries, the immediate implications of the conservation measures contemplated in this document must be considered in the context of law.

The present circumstances with respect to rockfish conservation are dire. They give rise to valid conservation concerns - the vulnerability of rockfish to overfishing, evidence for widespread depletion and overfishing, the inadequacies of science, the absence of effective controls on fishing, and so on.

The British Columbia coast is home to some of the oldest fishing cultures on the planet, and the customs, traditions and practices of these peoples are protected by the force of constitutional law. As a consequence, where regulations allow for inshore rockfish to be subjected to fishing effort, to an

extent justified by reasonable and precautionary standards, the fishing mortality associated with that effort must first accommodate the aboriginal catch, before assigning allowable catches to non-aboriginal interests.

Because conservation measures are necessary, the non-aboriginal contribution to fishing mortality must be removed from fisheries-management equations before aboriginal-fishing restraints are considered. Similarly, the restoration and conservation of inshore rockfish stocks and Strait of Georgia lingcod stocks must be accomplished in tandem with the restoration of fishing opportunities to First Nations, according to the allocation priority laid down in the Supreme Court of Canada's 1990 "Sparrow" decision.

To do otherwise would give offence to Section 35 of the Constitution Act, 1982, as it has been consistently interpreted by Canada's courts.

For these reasons, we strongly urge DFO to take particular care to abide by its lawful requirement to engage in honest and meaningful consultations with those First Nations whose opportunities to exercise their fishing rights will be inevitably curtailed by necessary measures for the conservation of the coast's rockfish stocks, and Strait of Georgia lingcod. It is vitally important that only scientifically-defensible conservation objectives are used to justify impairments of aboriginal fishing rights.

Aboriginal fisheries, and aboriginal fishing rights, must not be considered only in the context of the past, or the present.

They must be taken into account in planning for the future, and in the development of any effective long-term conservation strategy for inshore rockfish.