

ALASKA LEGISLATIVE COMMITTEE
8672 FILE SUBJECT
1901 SCORM FISH FARMING, 1987-1990

barrier to participation then the ultimate goal of administrative fairness may be defeated; meritorious projects may be abandoned because the proponents cannot afford to risk inordinate expense in an application procedure, the results of which might be uncertain. Alternatively, opponents wishing to raise legitimate concerns and establish their case might not be able to finance the investigation necessary to produce the required evidence, and a potentially damaging development might proceed unchallenged.

P A R T I I I

INITIATIVES IN BRITISH COLUMBIA: A REVIEW AND
COMMENTARY ON CERTAIN RECOMMENDATIONS AND ACTIONS
RESULTING FROM "AN INQUIRY INTO FINFISH
AQUACULTURE IN BRITISH COLUMBIA".
(THE GILLESPIE REPORT)

THE GILLESPIE REPORT AND RESULTING INITIATIVES.

On October 31, 1986, a moratorium was imposed by the Honourable Jack J. Kempf, Minister of Forests and Lands, on the issuance of finfish aquaculture tenures. Six days later an inquiry into finfish aquaculture was established under the chairmanship of David Gillespie. Gillespie's mandate was to consult with government agencies, obtain public submissions from interested parties, and issue a report with recommendations to the Ministry of Forests and Lands within just 30 days. The moratorium was a result of concerns raised by the B.C. Fisherman and Allied Workers Union (UFAWU). The UFAWU called for a moratorium to allow for a full review of the impacts of the salmon farming industry, given the rapid increase in Crown land applications for finfish aquaculture during 1986. Four public meetings were held and 258 submissions (letters, formal briefs, and oral presentations at public meetings) were received.

The result of the enquiry was 52 recommendations. Recommendations touching on matters within the jurisdiction of this office are listed below, followed by a brief comment on government initiatives which have been effected to date. The sections of Gillespie's Report which have not been commented upon in this Report deal with matters which are exclusively technical or legislative in nature, and hence not appropriate for comment by the Ombudsman's Office.

Gillespie's Recommendations: Excerpts and Commentary

1. (Recommendation No. 4.1.2) "The government should develop a provincial aquaculture policy where it clarifies provincial direction, agency roles, and the responsibilities of both government and the private sector for the industry".

Comment: Gillespie views "...the lack of a strong provincial statement...as detrimental to the orderly and efficient growth of the industry". This observation is accurate and incisive. A strong, clear statement of policy is indeed necessary; however, it is the opinion of this office that it is appropriate for such policy to find expression in legislation. There are virtually no Provincial statutes or regulations which have been created in direct response to the growth of the industry. This has created a situation in which anyone wishing to

establish a fish farm, or object to a fish farm, must contact the appropriate Ministry, which may in fact have control over only one aspect of the farming operation, to find out what the government policy is. No formal and binding appeal system exists to provide a remedy for grievances of any of the parties involved in the process.

2. (Recommendation No. 4.1.3) "The government should establish an Aquaculture Advisory Council from key agencies and interest groups." This advisory council was established in mid-1987. Gillespie proposed that the council be the vehicle for direct involvement of the industry - he believes this is critical for development of aquaculture - as well as providing the opportunity for other interested groups (commercial fisheries, Native Indians, recreational groups and Fisheries Council of B.C.) to participate in the development of government policy.

Comment: This recommendation is an important step in the right direction, and has been fully implemented; the Advisory Council has been established and meets periodically to discuss issues of concern to its members, who represent a varied cross-section of coastal society, from fish farmers to local government to environmentalists. However, the non-binding recommendations of the Council will likely be inadequate to achieve the same degree of administrative fairness as an Act which is the product of public debate with specialized submissions, published regulations, and a binding appeal mechanism such as an aquaculture appeal board. An Aquaculture Steering Committee has been in existence since 1985, and exists to coordinate aquaculture policy, research priorities, planning and procedures among the various interested Ministries. Further comment on the Steering Committee is contained in Part V of this Report.

3. (Recommendation No. 4.1.6) "The government should support greater cooperation with local government in promotion, planning and approval of finfish aquaculture."

Comment: Gillespie notes that some local governments, caught in the middle between the industry and local residents who object to the presence of a fish farm, are unable to direct the proposal to more socially acceptable locations, while some other local governments are eager to attract the economic benefits of fish farming. Gillespie suggests that such provincial cooperation should include funding for promotion and planning of aquaculture, provision of model by-laws, and participation by provincial resource agencies in local planning. The mechanisms of zoning by-laws are only effective in providing a significant measure of involvement and local government control in the referral and approval process if they precede aquaculture development. This is because aquaculture operations will qualify as non-conforming uses if they are granted tenure before such local regulations are in place. Many operations were established before local controls were in effect.

4. (Recommendation No. 4.2.1) "The government should expand its public information programs to provide a broader range of services and information access."

Comment: This is an important proposal. However, this would be most effective in promoting administrative fairness if it was combined with a published Act and regulations to which individuals, industry members, and interested parties could be directed in response to their question, "Isn't there a law governing this?"

5. (Recommendation No. 4.5.2) "The provincial government should establish a mandatory environmental monitoring and data gathering system for each aquaculture site and surrounding area, the results of which should be submitted on a regular basis for review of changes in environmental quality."

Comment: Gillespie states, "Environmental monitoring represents a major deficiency in the regulation of finfish aquaculture". The government has taken steps to initiate such a program which will likely be established some time in 1988 under new regulations passed pursuant to the Waste Management Act. In the

interim, voluntary monitoring is being encouraged. Draft regulations were circulated in July, 1987 which exempt aquaculture operations from having to obtain a permit or approval under the Waste Management Act as long as requirements of the regulations for disposal of waste and provision of information to the Ministry of Environment are met. However, the onus is apparently on the Ministry to make investigations and demand samples to determine whether the aquaculture operation is causing pollution. There is a duty on the fish farm operator to report "a deposit of a substance causing pollution at the site of the operation" and to take appropriate action. This vaguely worded section would provide a doubtful basis upon which to initiate a prosecution or terminate an aquaculture lease or licence.

More recently, "Draft Environmental Guidelines for Marine Fish Farms and Ancillary Operations" were produced by the Ministry of Environment through the joint efforts of personnel in Waste Management, Water Management, and Planning and Assessment branches. These guidelines form the framework within which amendments to the Waste Management Regulation will be produced. The guidelines are being assessed and refined through an inter-ministerial referral process. This office notes the potential concerns in commenting upon internal documents not yet intended for public distribution, and which have a complex technical component. Therefore, it is appropriate at this time to limit any observations to a review of the elements which this office would consider useful as components of the Waste Management Regulation. Of necessity, some of these elements are presented in the form of questions, due to their inherently technical nature. They include:

- (a) What is the fairest and most effective method for determining which aquaculture facilities should require a Waste Management permit? If a numerical limit such as fish inventory, number of net-pens, or feed tonnage is used to establish a permit requirement, can the limit be avoided through restructuring of facilities or operations?

- (b) How will enforcement be effected? If termination of tenure is to employed as a sanction, will a determination by one Ministry (e.g. Environment) be binding on another Ministry (e.g. Crown Lands) which holds the effective power to carry out the sanction? What mechanism can be employed to resolve multi-party disagreements over technical issues? It is conceivable that two or more Ministries, the net-pen operator, and neighbouring landowners could all be at odds over the nature and impact of an alleged discharge from a fish farm.
- (c) If a waste management permit is not issued (i.e. not required) for a specific facility, what avenue will be available to adjoining or downstream shore residents to prevent a net-pen operator from causing, in the residents' view, fouling or pollution of the water surface or shoreline? An appeal to the Environmental Appeal Board is available at present only in instances where a waste management permit has been applied for or issued to the net-pen operator. While the Waste Management Act affords branch personnel wide powers to investigate and control activities causing pollution, any action to be taken remains solely within administrative discretion; no impartial review of the circumstances is available to affected parties, other than the rather costly and lengthy alternative of a court action.
- (d) What level of analysis is appropriate when impacts of proposed aquaculture developments are being assessed? Is review of the Marine Fish Farm Development Plan adequate? Is the assessment of a proposed site for "biophysical suitability" equivalent to performing an evaluation of probable environmental impact, or is it aimed simply at determining capacity of the site to sustain net-pen facilities over the long term? Can environmental impact assessment mechanisms be created and applied without inordinate expense or delay? (i.e. can assessments be carried out within the normal time frame required for approval of tenure, or within a reasonable period beyond?) Will public participation be recognized in an impact assessment process?

This office notes the thorough and excellent work undertaken by the Ministry of Environment in preparing new waste management regulations for fish farms. The intent of the previous four paragraphs has been to articulate fairness concerns as they relate to matters of public confidence and public involvement in the development of administrative systems for the governance of the aquaculture industry.

It is the opinion of this office that public involvement in environmental impact monitoring or evaluation, through an independent appeal process, promotes high standards of administrative fairness in the management of the shore zone, which may be appropriately regarded as a common public resource. In addition, a cost-effective system for environmental impact assessment benefits not only resource managers but the aquaculture industry as well, through optimum site selection; public opposition to fish farm operations should also decline if the requirements for environmental assessment and monitoring can be seen to be both rigorous and reviewable.

It is worth noting that officials of the Washington State Department of Ecology are nearing completion of a programmatic environmental impact statement which should significantly reduce the time and expense of measuring the potential consequences of proposed fish farm operations. (See Part IV (F) later in this Report)

6. (Recommendation No. 4.5.4) "The government should continue the use of a distance guideline to separate fish farms, and should apply this guideline to separate fish farms from shell fish aquaculture operations."

Comment: This recommendation has been adopted by the government and a distance guideline has been established at 3 kilometres between farms, up from the previous .918 kilometres (.5 nautical miles). Gillespie states that any decision to reduce this distance should be based on specific site factors.

Spacing of fish farms relative to residential settlements or biologically sensitive areas is another matter in which legislated avenues for public or expert involvement, and an independent appeal process, would be useful in securing administrative fairness to the benefit of local governments, land owners, and the aquaculture industry.

7. (Recommendations No. 4.6.1 to No. 4.6.6) Gillespie recommended a coastal resource identification study (CRIS) be carried out in a number of areas with utmost speed. This has been accomplished in the desired time frame, with a commendable and concerted effort by members of the Ministry of Forests and Lands, as it was then known. The Ministry has released its findings in the form of maps with the subheading "Aquaculture Opportunities". A number of agencies, communities, and special interest groups were apparently consulted in the preparation of the CRIS, and invited to submit mapped information with statements outlining their preferences as to locations where aquaculture development should be restricted or prohibited. CRIS was therefore designed primarily to determine where aquaculture should not go; thus, it serves as a conflict avoidance mechanism but cannot provide a comprehensive foundation for aquaculture planning.

In recommendations 4.6.1 to 4.6.6 Gillespie also recommends the discontinuation of issuance of aquaculture tenures adjacent to provincial parks and recreation areas, and further says that local government should be encouraged to develop or refine local zoning by-laws to address finfish aquaculture operations within their boundaries. These recommendations are reasonable; nonetheless one keeps returning to the central theme from the standpoint of administrative fairness, namely, the potentially uncertain nature of government policy, for which exemptions can be created through ministerial prerogative, as compared to a disciplined system of statute-based regulations which would provide a mechanism for case-by-case appeal.

As to the question of aquaculture regulation by local government, the Ministry of Agriculture and Fisheries' pamphlet "Fish Farming: B.C.'s New

Venture on the Coast" states, "...but it is at the local level that public input has its biggest impact...public hearings are required before any official community plan or zoning by-law can be adopted or amended". Persons opposed to fish farms can, "...as with any use of Crown land,...write directly with their concerns to the Ministry of Forests and Lands, Lands Division". Several problems become apparent when one considers this approach to dispute resolution and the powers of local government:

- (a) A public hearing is not the same as an appeal to an independent body; local public hearings address matters of planning and zoning but, as stated earlier, these must precede aquaculture development to be effective. They do not exercise power retroactively, unlike an appeal tribunal;
- (b) One's democratic right of writing to the Minister or to any ministerial official is not the same as a right of appeal. A Ministry cannot be expected to act as arbiter of an appeal of its own decision;
- (c) The Ministry goes on to say in the previously mentioned pamphlet that, "...noise, unsightliness, garbage disposal, and other community nuisance factors that could be associated with a fish farm are matters that may be subject to regulation by local government".

While the local governments may have jurisdiction in these areas, fish farms appear to be operational anomalies over which, because of overlapping jurisdictions by a variety of federal and provincial agencies, it is difficult for any one body to regulate specific impacts.

- 8. (Recommendations No. 4.7.1 to No. 4.7.5) On the subject of referrals and advertising in the aquaculture tenure approval system, Gillespie recommended continued use of the inter-agency referral system as a primary tool for conflict resolution. He also recommended that the government expand its lists of referral groups, increase the time available for response,

establish subsequent notification practices for referrals, establish an agreement with federal agencies respecting siting of tenures, information requirements, documentation of concerns, and importance given to referral comments. Also recommended was that the provincial Lands agency review its practices involving advertising and notification for prospective finfish aquaculture operations, and place greater emphasis on local government involvement to the finfish aquaculture referral process.

Comment: All of these recommendations are logical and would tend, if fully implemented, to increase the prospects for administrative fairness within the present system. The primary question is, however, whether the present system of an inter-agency referral process is inherently fair.

There is the risk that, by the time a user conflict surfaces, the parties who effectively possess either the influence or the power will be committed to a certain course of action. Indeed, Gillespie states (Recommendation No. 4.7.1), "...within areas where coastal resource identification studies are in place, it will be more appropriate to give greater weight to referral comments dealing with environmental characteristics of proposed sites and special management considerations rather than user conflicts". Such a statement presumes that identification studies and conflict resolution mechanisms will be utilized in a manner which reflect high standards of administrative fairness. This may be an unwarranted assumption given that good intentions and honest, competent efforts by Ministry personnel are sometimes inadequate in producing a decision-making process which is demonstrably fair.

9. (Recommendation No. 4.9.4) The provincial government should review and expand its legal tenure documents for finfish aquaculture.

Comment: Gillespie suggests that such items as mandatory site monitoring and reporting, aesthetic and visual standards and demarkation of tenure area be incorporated into the legal tenure

documents. This is an excellent and logical recommendation. However, by Ministerial directive any requirement can be deleted from a form; likewise, even if the requirements remain standardized, by Ministerial prerogative an application can be allowed, notwithstanding that certain established criteria may not be met in that specific instance. Greater certainty is provided when forms are prescribed by regulations created pursuant to statute; the process itself requires publication, and, in the case of statutes, an opportunity for public debate.

10. (Recommendation No. 4.10.1) "The present provincial agency approval framework should be maintained." Gillespie goes on to say that "...establishment of a 'single window' agency [which is apparently desired by the industry] would, unless accompanied by a major legislative overhaul, result in one additional level of contact, further time requirements, and major staff reallocation. "To be effective, the single window agency would have to be a neutral, rather than an advocate agency." The consolidation of legislative requirements affecting aquaculture siting and approval (e.g. an Aquaculture Act) would create anomalies and inconsistencies among remaining programs of the affected agencies". (emphasis added).

Comment: Mr. Gillespie's arguments against a single window agency may also be treated as eloquent arguments in favour of statutory regulation. Such a framework is necessary to maintain public confidence in an area where it may be seen that individuals with influence might be ignoring the rights of certain individuals or communities with legitimate interests. As the industry grows it is conceivable that the situation might worsen, given the economic advantages of utilizing economies of scale (large or multiple sites) near populated areas, which are often the scenes of greater user conflicts.

Gillespie is correct when he says that the single window agency would have to be a neutral rather than an advocate agency, as it would have the formidable task of being the "central switchboard" for a number of conflicting or competing interests. However, this would not

prevent Ministries such as Agriculture and Fisheries, or Regional Development, from engaging in promotional efforts and programs. A neutral agency, with published statutory standards, and an appeal mechanism would provide the authority that is needed for government to administer tenures and be held accountable on a case-by-case basis, as well as provide the flexibility that will be needed, given the reality that no two aquaculture operations and environmental circumstances are ever entirely the same. If such a system were to be put in place, then recommendation 4.10.2, that the role of the Ministry of Agriculture and Fisheries as lead provincial agency be clarified and focused, may become redundant. The only "lead agency" would be the Ministry or Board designated by statute.

Implementation of the recommendations of the Gillespie inquiry has been swift and comprehensive. Indeed, for the most part, the recommendations have been accepted without resistance and applied verbatim, resulting in significant improvements to the process. Policies of the Ministry of Crown Lands respecting applications for tenure, and the tenure documents themselves, have been reviewed, revised and expanded to incorporate the Gillespie recommendations. However, this cooperative action by various Ministries, undertaken in the utmost good faith, does not alter or alleviate the additional concerns of this office expressed both in the foregoing commentary on the Gillespie recommendations, and in the recommendations contained in this paper.

P A R T I V

AQUACULTURE IN OTHER JURISDICTIONS -
A BRIEF REVIEW WITH OBSERVATIONS
RELATIVE TO THE BRITISH COLUMBIA EXPERIENCE:

NOVA SCOTIA

NEWFOUNDLAND

NEW BRUNSWICK

SWEDEN

NORWAY

WASHINGTON STATE

ALASKA

OREGON

HAWAII

COMMENTARY ON THE U.S. EXPERIENCE

A SUMMARY REVIEW OF THE REGULATION OF AQUACULTURE IN OTHER JURISDICTIONS

To appreciate the challenge facing Ministry personnel in their task of regulating a new industry with complex social and environmental conflicts, it is appropriate and useful to look to other provinces and countries to review their unique responses to marine aquaculture.

The Maritime provinces have taken the lead in the creation of legislation to govern the industry as far as their jurisdiction will permit. On the other side of the Atlantic, Norway and Sweden have proclaimed the importance of aquaculture as a commercial component of the social fabric of their coastal communities. On the Pacific side, the States of Alaska, Washington, and Oregon have all established coastal management systems worthy of study, especially for the manner in which local communities are given a powerful role in the planning and regulation of shorezone development. The presentation which follows is cursory; references for further inquiry are provided in the bibliography.

A. Nova Scotia: SUMMARY AND ANALYSIS OF THE NOVA SCOTIA AQUACULTURE ACT (1983)

The following commentary contains verbatim excerpts which are for the most part self-explanatory. Only the major components of the Act are addressed, in order to provide a foundation for comparison with other regulatory regimes.

The primary function of the Act is to protect aquaculture operations from harmful pollutants. This is set out in plain language in the objects and purposes section of the Act, which purports to encourage and promote aquaculture by:

- i) Providing an environment in which aquaculture may flourish;
- ii) establishing the quality of water so that maximum aquacultural produce may be harvested; and
- iii) providing those persons engaged in aquaculture with a property right in the area licensed or leased and in the aquacultural produce being cultivated.

The Governor in Council may make regulations which include designating aquaculture development areas, imposing conditions and restrictions on the conduct of aquaculture or other activities in an aquaculture development area, and establishing water quality standards for water shed areas draining into an aquaculture development area.

Consultation with five related and relevant ministries is required before the Minister establishes an aquaculture development area; consultation with boards, agencies and commissions is required as prescribed. In addition, notice of the intended action is to be given and provision made for public hearings, advisory committees, or other vehicles for the expression of public opinion regarding the proposed designation.

The Ministry of Fisheries is the lead agency, and the official who conducts the public hearings is an appointee of the Minister of Fisheries.

Notice of the intended action and details on the public hearing are required to be published in a daily and weekly newspaper, if any, circulating in the municipality containing or adjacent to the area affected.

The Act requires the Minister to do a baseline study of deleterious substances in watershed and adjacent marine or brackish waters. A certificate of such substance levels is then produced and becomes prima facie evidence under the Act of the levels of such substances; the lease holder receives a copy of the certificate. The study forms the basis for later analysis of any pollution of the water, and for assembling the necessary evidence to invoke sanctions against the polluter.

An aquaculture licence from the Minister is the basic requirement; on Crown Land, an aquaculture lease is additionally required. The licence in an aquaculture development area carries with it the exclusive right to the use, for aquacultural purposes, of the water column and sub-aquatic land described in the licence. The licence or lease application requires all basic information to be disclosed concerning the nature of the operation and its technical requirements, as well as information on the quantity and source of fresh water, if any, required for the proposed operation, and the nature and extent of any deleterious substance expected to be deposited from the proposed operation, if any, and details of what measures are expected to be taken to reduce the deposit of these substances.

Aquaculture licences for private land are issued only to the owner or lessee of the land. In other words, there has to be a registrable interest in the land.

It should be noted that the Minister is not required to grant a licence. The licence may be terminated by the Minister at any time if false representations have been made in the application, or the holder of the licence does not show due diligence in fulfilling the terms and conditions of the licence.

The species of the aquatic flora and fauna for cultivation, its introduction, and feed stock flora and fauna are all subject to preliminary inspection by the aquaculture inspector, who has the authority to deny permission for use.

Escaping aquatic fauna remain the exclusive property of the licence or leasemaker while they are within 100 metres of the licenced or leased area boundaries.

The aquaculture inspector appointed by the Minister has full powers to enter and search aquaculture operations (except a dwelling) and make such tests and inquiries as may be relevant to the investigation. Every person responsible for an aquaculture operation is required to furnish information as requested by the inspector. Inspectors may also quarantine and destroy aquatic flora and fauna, seed stock or feed stock if it is infected with disease or parasites, or not authorized for introduction by an aquaculture licence or lease.

A registrar of aquaculture is also appointed, who is required to keep records and documents, which are open to public inspection, with the exception of such information as is provided to the registrar by the licensee or lessee, and in respect of which the licensee or lessee has asked the registrar to maintain confidentiality. (e.g. financial statements)

Comprehensive regulations may be promulgated pursuant to the Act.

With the emphasis of the Act on protection and promotion of aquaculture, and the water quality on which the fish farming operations depend, a question emerges: Could a fish farm degrade other waters or shorelines without suffering harm itself? This is a technical question within the jurisdiction - insofar as the question arises

in B.C. - of the Waste Management Branch of the Ministry of Environment. It is the opinion of this office that legislation which purports to protect water quality should provide that aquaculture operations be either protected or regulated, as appropriate, such that a farm fortunate enough to benefit from strong tidal flushing is not able to produce waste discharges with impunity, if the potential problem is simply transferred to another point on the shoreline. By the same principle, commercial fish farmers should be able to rely on timely administrative intervention to protect their operations from activities causing pollution damage.

B. Newfoundland

The Newfoundland Aquaculture Act, came into force on June 19, 1987. It is similar in substance to the Nova Scotia Act, with some significant differences:

1. The objects of the Act are slightly broader and more balanced in focus, in that reference is made to minimization of resource use conflicts and maximization of cooperative opportunities. The purposes of the Act are given as governing the conduct of aquaculture in Newfoundland in such a manner as to:
 - (a) Promote, in consultation with the private sector, the prudent and orderly development of an aquaculture industry;
 - (b) Secure the property rights of those carrying on aquaculture;
 - (c) Minimize conflicts with competing interests and uses; and
 - (d) Assist in consultative and cooperative decision making within the province and between the government of the province and the government of Canada.
2. The Minister has broad authority to incorporate into the licence terms of a development plan, standards relating to the utilization, stocking investment in, or production of, the aquaculture facility, and provision for access by continuous land owners through a site. Measures may also be directed to prevent the escape of aquatic animals and development and spread of disease and parasites, to minimize the risk of damage to the environment or other aquaculture facilities.

3. No aquatic plants or animals may be introduced into or transferred to a body of water or aquaculture facility unless the provisions of the Environmental Assessment Act have been complied with, meaning that the impact of introduction has been assessed in accordance with the Act. It should be noted that this provision may be bypassed if the Minister responsible for the Environmental Assessment Act determines that no risk is posed to the environment or natural stocks of aquatic plants or animals as a result of the introduction to the certain body of water or aquaculture facility. The Aquaculture Act requires that such a determination by the Minister responsible for the Environmental Assessment Act be based on an assumption that the plants or animals will escape into the surrounding environment.

Like the Nova Scotia Act, the Newfoundland Aquaculture Act provides for the establishment of an aquaculture registrar and registry, and an Aquaculture Inspector with broad powers of investigation and quarantine or destruction of stocks. Broad powers are given to the Minister for establishing regulations to govern effectively the conduct of the industry. These regulations may be established "respecting methods of handling, buying, selling, holding in possession, offering or advertising for sale, processing and maintaining the quality of aquatic plants or animals". This regulation would presumably allow the Minister to require farmed fish to be designated as such for the information of consumers at the point of sale.

Section 7 of the Aquaculture Act requires every licensee to report forthwith to the Minister or an aquaculture inspector any outbreak of disease or parasites. Like the Nova Scotia Act, the Newfoundland Aquaculture Act clearly establishes property rights in the cultured plant or animal product while it is in the possession of the licensee, and as well if the fish escape to within 100 metres of the leased site boundaries.

The manner in which any public input shall be received by the Minister for the purpose of assisting in decisions as to whether to grant an aquaculture licence may be determined by regulation. This does not require the Minister to engage in public consultation or hold public hearings unless the Minister deems such a procedure to be advisable and institutes the procedure by way of regulation.

Due to the fact that the legal framework for aquatic lands in Newfoundland is similar to that for aquatic lands on the coast of British Columbia, a lease of the water column and the seabed for the purpose of laying down anchors for the netpen facilities is required from the Department of Forest Resources and Lands. Because of the overlapping jurisdiction in coastal lands (as previously described), the Department of Forest Resources and Lands sends applications to the Aquaculture Registrar of the Department of Fisheries. The registrar then initiates a referral process to the Federal Department of Fisheries, Federal Ministry of the Environment, and the Coast Guard.

It should be noted that one apparent deficiency of the land allocation and aquaculture licence scheme in Newfoundland is reflected in the lack of an effective independent appeal system in either legislation, regulations, or official policy.

C. New Brunswick

On May 17, 1988, the Honourable Douglas Young, Minister of Fisheries and Aquaculture, introduced for first reading Bill 63, the Aquaculture Act, in the New Brunswick legislature. Some excerpts from his introductory statement are noted below:

"The Act recognizes that the future of aquaculture development must be orderly so that boom-and-bust expansion does not occur and leave people out of work a few years from now. Failure to approach the industry with a rational development strategy will jeopardize the long-term viability of aquaculture in New Brunswick, as has often been the case in other jurisdictions.

The Act sets down the legal authority of the Minister of Fisheries and Aquaculture to promote, regulate and manage all aspects of the industry from the backyard to the marine culture of salmon, other finfish and shellfish from fresh-water hatcheries to nutrition and harvesting of aquaculture products.

...The Act sets the framework for encouraging an industry where sound management practices ensure minimal losses and minimal interference with traditional fisheries and other affected interest groups.

...The public consultation process which will occur over the summer months is an important opportunity for the public to become involved in the formation of this Act. If the public identifies major changes that are required, those changes will be made before the Act is proclaimed. Those who participate in the public consultation process will be contributing to the final draft of the legislation and will obviously have an impact on its rules and regulations."

It is conceivable that the proposed Aquaculture Act of New Brunswick may undergo significant revision as it moves toward 3rd reading and proclamation. However, in its present form it appears to represent a solid attempt to synthesize the best elements of aquaculture legislation in New Brunswick's neighbouring provinces.

Some of the major elements of the Act are reviewed briefly below:

1. An Aquaculture licence is the basic requirement of the Act; a Registrar is appointed by the Minister of Fisheries and Aquaculture to issue licences in accordance with terms and conditions established by regulations passed pursuant to the Act.
2. The Registrar may impose conditions when issuing, amending, or renewing an aquaculture licence; the conditions mentioned in the proposed Act relate to adherence to aquaculture site development plans, site utilization, stocking densities, production, environmental degradation prevention, prevention of escape of live produce, disease or contaminant transmission prevention, and compliance with health, grade, and genetic standards for produce.
3. Inspectors may be appointed by the Minister to enforce provisions of the Act. An inspector under the Act has the powers of a peace officer.
4. The Registrar may suspend or revoke an Aquaculture licence as a result of false information supplied by an applicant or licensee, violation of provisions of the Act or a condition of the licence, or failure to exercise "due diligence" in fulfilling the terms and conditions of the licence or in complying with the Act.

5. Broad powers are granted to the Registrar to inspect facilities, demand records, take samples, and carry out tests of a licensee's aquaculture operation.
6. The Minister may designate land under his administration and control as aquaculture land and may lease such land for aquaculture for a period not to exceed ten years.

Comment: Such a provision would be difficult to enact in B.C. without binding the Minister of Crown Lands; the reason for this is that the B.C. counterpart of New Brunswick's Minister of Fisheries and Aquaculture, identified here as the Minister of Agriculture and Fisheries, has no direct control over the disposition of land tenures. While the Minister in B.C. may designate certain aquatic lands as suitable or unsuitable for aquaculture, the process by which a lease is acquired remains in B.C. within the jurisdiction of the Ministry of Crown Lands. The maximum lease period in B.C. at present is 30 years.

7. A decision of the Registrar may be appealed to the Minister, whose decision is final "except on the grounds of an excess of jurisdiction or a denial of natural justice". (Emphasis added.)

Comment: From an administrative law viewpoint this is an interesting provision, as one might argue that the Minister would inevitably be biased in favour of the Registrar's decision; bias is one ground upon which it may be asserted that natural justice in an appeal process has been denied. This concern may be alleviated in large measure through a progressive refinement of the appeal process by regulation. The power to establish regulations governing all aspects of the appeal process is specifically provided for in the Act.

8. The power of the Registrar to enforce compliance with key requirements of the Act (acquisition and display of licence, cultivation of specifically authorized plant or animal species, maintenance of records, provision of information, etc.) is bolstered through the penal sanctions of the New Brunswick Summary Convictions Act.

9. The Minister may, but is not required, to undertake public consultation and establish advisory committees with respect to aquaculture.
10. The Act provides for the establishment of regulations in no less than 38 separate situations, ranging from fees to genetic standards for "aquacultural produce". This appears to be a recognition of the fact that more knowledge and experience is required to properly regulate this new industry, and that the flexibility offered by regulations will be the key to progressive adaptation of the requirements set by government.

D. Sweden¹¹

Applications for authorization to conduct an aquaculture operation in Sweden are, in general, considered by two authorities:

- (a) County Administration, in accordance with the Environmental Protection Act, and
- (b) The Swedish National Board of Fisheries (with application made to the Regional Fisheries Office), in accordance with the provisions of the Fisheries Act.

The principal referrals conducted directly by the Regional Fishery Office are to the agency for occupational fishing, and to the agency for recreational fishing. It is apparent that the interests of both traditional fisherman and recreational anglers are accounted for in this referral. In addition, one of the final referrals obtained from the State Veterinary Institute. The principal function of the Swedish State Veterinary Institute is to prevent the spread of serious contagious fish diseases to the Swedish wild fish industry, and between individual fish farm sites.

The system undertaken by county administration in accordance with the provisions of the Environmental Protection Act is in broad form analogous to the referral system as it presently exists in British Columbia. The first referrals are to local government, the Coast Guard, and the shipping and navigation authority. The interests of the Coast Guard and shipping and navigation authority are, presumably, closely aligned and would be concerned

primarily with the preservation of safe navigable waterways. As the attached diagram (Appendix 4) illustrates, there are additional referrals which deal with environmental impact (nature conservation and environmental protection), site development (physical planning and building), surveying, regional economics, defense, and legal matters. The last three categories are perhaps unique to the Swedish situation. The Department of Regional Economics would provide information with reference to the appropriate siting of aquaculture facilities in order to maximize, and equalize, development along the coast of the country. The development and population of the coast is relevant to another unique referral category, defence. It is apparently the view of the Swedish government that a populated coastline which enjoys a degree of economic stability serves the interest of national security.

Lastly, a referral which deals with "legal matters" would ostensibly concern itself with the resolution of conflicts having to do with title or tenure to upland or aquatic lands needed for, or impacted by, a proposed aquaculture facility. These referrals are also provided for the Swedish National Board of Fisheries in its decision-making process.

Where there is "a risk that proposed aquaculture will transgress public or private rights", one of six Water Rights Courts in Sweden will conduct consultation with various administrative authorities including local, county administration, the Crown Land Judiciary Board, the Swedish National Board of Fisheries, the Swedish National Administration of Shipping and Navigation, the Swedish National Environmental Protection Board, and other appropriate agencies. In essence, the Water Rights Court is an administrative tribunal which carries out both administrative and quasi-judicial functions. It is an interesting model for dispute resolution or adjudication, and is preventative in that certain rights need not be transgressed before the jurisdiction of the Water Rights Court is invoked; a risk of transgression apparently is all that is required. Its efficacy may also be a product of Sweden's unitary system of government, in which the Canadian challenge of federal-provincial separation of powers is not an issue.

Appeals against decisions of the National Board of Fisheries, as well as county administrative boards, can be presented to the Swedish government. The precise details of the appeal procedure and the appellant body have not been researched by this office.

E. Norway

FISH FARMING, AND THE REGULATION OF THE INDUSTRY¹²

i) The Statutory Environment

The following comments relate to the provisions of Act No. 68 relating to the breeding of fish, shell fish, etc.

Section 1 sets out the purpose and rationale of the Act, which is economic in its orientation: "The Act is to contribute towards the balanced development of the fish breeding industry and to help it become a profitable and viable regional industry." The word regional is noteworthy because the allocation of licenses, dealt with later in the Act, is based in part upon regional considerations. The desire of the Norwegian government is apparently to promote a well-dispersed economic base for the development of coastal communities. This would maximize employment benefits, minimize localized environmental impact, and, as in Sweden, serve the security interests of the country through maintenance of a coastline with relatively equal population distribution.

Section 2 defines the scope of the Act; it is quite broad, encompassing the feeding and handling of fish and shellfish with a view to consumption, feed production, reproduction, release, research or education. Section 3 sets out the basic requirements: such activities are only to be done through benefit of a licence with specific restrictions as stated by the licence which would include the size of the operation, the species of fish or shell fish, and by certain ownership conditions. It is apparent by Section 6 that the government desires that the majority interest in the facility be held by several individuals or a juristic person [Company] with a local connection. This is consistent with the administrative requirements of the Land Act in British Columbia; it would not prevent offshore ownership but would require the creation of a legal entity on a local basis for the administration of the enterprise.

Section 5 sets out the "absolute conditions" for the granting of a licence, and these are divided into three categories:

- (a) Possibility of disease outbreak among neighbouring fish or shell fish;
- (b) pollution risk;

- (c) "unfortunate location" in relation to the "surrounding environment, lawful traffic or other exploitation of the area."

There are a number of noteworthy miscellaneous provisions in the Act. Among these is the right to re-catch fish which were formerly penned in but escape "in a free state in the vicinity of the facility." This right to re-catch may be exercised up to fourteen days after escape and may be effected with the assistance of equipment fastened on land.

The obligation to provide information is spelled out and is imposed on anyone who has or who applies for a licence: all information is to be provided as necessary to allow authorities to be able to perform their duties under the Act. The authorities have full access to the facilities at the place to which the Act applies, and have full investigative authority.

Section 11 allows authorities to withdraw a licence in the event that the aquaculture facility "causes or involves risk of causing substantial damage of the nature" (environmental impact).

In an attached commentary to the Act a number of observations are worth noting. First, the "absolute conditions" under which a licence is issued also put the onus on the facility to comply with provisions of the Fish Diseases Act, the Pollution Act, and the Harbours Act. The expression "distinctly unfortunate localization" is also identified as meaning not only harbour and navigational considerations administered by the National Coastal Administration, but reflects a process by which "due consideration shall also be shown to other established activity. In this connection, the term "established activity" may also include "fishing and gathering of seaweed." Environmental emphasis and "outdoor life" (presumably recreational, or tourism) must not suffer.

A recent amendment to the Act allows the government to make exceptions to statutory requirements in "extraordinary circumstances", and allows for the moving and temporary relocation of facilities.

The regional nature of the industry is emphasized in the commentary, and it is made evident that the granting of licences annually is performed by the Ministry of Fisheries to "help to ensure a reasonable geographical

distribution of the facilities throughout the country." Presumably, each coastal community is reasonably well served by an established road network. An absence of a road network serving the north coast of British Columbia would indicate that the wholesale importation of such a regional development concept would not be feasible, except through some form of incentive by which water or air transportation facilities could be established at reasonable cost.

ii) Administrative Issues Related to Licencing in Norway

It is noted that "the decision making process connected with each round of issues of licences is extremely cumbersome and takes a long time." The fact that licences are issued periodically in "rounds" (to allow for assessment of industry and community development as at a given date, and control numbers and dispersion of fish farms) reflects the Norwegian government's approach to aquaculture as an economic and social matter of national importance. Efforts are currently being undertaken to increase the effectiveness and rationality of the licence issuing procedure; in conjunction with this will be amendments to the Fish Breeding Act, with greater compliance being the chief goal.

The Norwegian Ministry of Environment has advised this office that, as at November of 1988, the government is preparing for the issuance of an "extraordinary round" of licences in the two northernmost counties in Norway, and special enabling regulations are being drafted with the purpose of encouraging economic activity and employment in that part of the country. In addition, regulations have been passed to streamline the licence issuing process and provide a greater role for the counties.

iii) Resource Use Conflicts, and Resource Planning in Norway, With Observations on the B.C. Experience

In Norway, the Planning and Building Act is seen as a potential avenue to resolve user conflicts "since the municipality is given the authority to reserve specific areas for different purposes, including aquaculture." However, recent experience has shown that this Act does not allow for extensive planning in the coastal zone. This office has been advised that there is now a proposal before the Norwegian Parliament suggesting an expansion of jurisdiction of the Act to provide for this type of planning.

Comment: This is analogous to the situation which currently exists in British Columbia although with less tightly defined legislative authority. In B.C., municipalities and regional districts have the right to zone the foreshore, including the water surface within their boundaries, for particular activities. While the province has the authority to override the expressed desires of local government and issue a licence, the licence is always issued subject to the requirements imposed by local governments. It is worth noting that the provincial ministries associated with aquaculture administration, particularly the Ministry of Crown Lands, respect the established desires of local governments expressed either through zoning or through the creation of an adopted official community plan, established pursuant to the provisions of Sections 944 to 949 of the Municipal Act. The problem which has existed and continues to challenge local governments is that issuance of licences may well occur within a time frame such that the regional district, Islands Trust, or municipality cannot produce an organized response. For the local government, such challenges require planning and foresight, and most often must be undertaken independent of any provincial initiative. By the time a licence is issued and an aquaculture netpen facility is floated into place, the creation of an official community plan or the designation through zoning of a specific area as not suited for aquaculture, is, with respect to that facility, of no practical effect. The commercial aquaculture facility is entitled by law to enjoy the use of its tenure, and to obtain such renewals of tenure as it is able, as a "non-conforming use" (Section 970, Municipal Act). In this respect, zoning and planning are effective only to control future development and can do little to affect development which has occurred previously.

Some communities in British Columbia have initiated or are participating in planning exercises aimed at effective and rational control of aquaculture siting and development. For example, residents of Cortes Island have developed a comprehensive set of policies dealing with coastal protection, economic development, public access, private property interests, and public participation in consideration and approval of applications for aquatic land tenures. These policies were submitted, pursuant to Section 951 of the Municipal Act to the Board of the Comox-Strathcona Regional District for consideration earlier this year. The process is ongoing at the time of publication of this Report.

Another example is the Sechelt Inlet Coastal Strategy Pilot Project, which the Foreshore Advisory Task Force of the Sunshine Coast Regional District has commissioned in order to obtain documented information on land status, land use, and land user and agency patterns of use and interest. This information will in turn lay a foundation for disciplined land use planning within the limits of the Regional District's jurisdiction. Financial support is being provided by a planning grant from the Ministry of Municipal Affairs.

At present there is a project in Norway which is loosely analogous to the coastal zone management schemes which have been developed in Washington and Alaska. The project is known as LENKA, a cooperative effort of the Ministry of Fisheries and the Ministry of Environment. LENKA is the acronym for the title: Nation-Wide Analysis of the Suitability of the Norwegian Coast for Aquaculture. LENKA has as its goal the provision of practical assistance to municipalities in the "planning of the coastal zone and water courses." This would include the development of a body of professional knowledge and advice for aquaculture planning and development in a way that recognizes the inter-relationship of environment, industry, conservation, and other interests such as recreation and public enjoyment. LENKA's first report is scheduled to be introduced in 1989.

It should be noted that the approach utilized in LENKA is not unknown to resource Ministries in British Columbia: Westwater Research Centre at U.B.C. provided a series of reports to the Marine Resources Branch (predecessor to the Aquaculture and Commercial Fisheries Branch of the Ministry of Agriculture and Fisheries) in 1982 and 1983. Resource conflicts in coastal land allocation were foreseen, and mechanisms to plan for conflict avoidance were proposed.

The Norwegian government recognizes that the effective resolution of coastal zone conflicts cannot be achieved in its entirety through "ordinary planning of the use of sea areas", and legislative amendments are being considered to cope effectively with the situation. It is the opinion of this office that a program of rational legislation produced with the assistance of maximum participation from all interested sources reflects an optimum means of achieving fair regulation in a complex area of inter-dependent interests. Regulation through administrative policy alone is inappropriate in that

superior interests can be recognized on an ad hoc basis, and the system itself can become the subject of much suspicion, resentment, and litigation.

F. Washington State

Broadly speaking, governance of the coastal areas of Washington State is carried out under two Acts: the Shoreline Management Act of 1971 (SMA), and the rules of the State Environmental Policy Act (SEPA). These two Acts operate in coordination with Federal legislation, the Coastal Zone Management Act of 1972 (CZMA).

The SMA of 1971 in its opening paragraph sets out clearly the State policy and use preference for shorelines of the State. The SMA provides substantive guidelines for the development of master programs by local governments. These programs are created by local government, with public hearings, in accordance with the criteria set out at the beginning of the SMA, regarding State policy and use preference. The master program is submitted for approval to the Washington State Department of Ecology which then reviews and may approve it in cooperation with the Federal Secretary of Commerce, who administers the grant program under the CZMA. The CZMA states that the Secretary of Commerce "may make grants to any coastal State for the purpose of administering that State's management program...[if]...the State has developed and adopted a management program for its coastal zone in accordance with rules and regulations promulgated by the Secretary, after notice, and with the opportunity of full participation by relevant Federal agencies, State agencies, local governments, regional organizations, port authorities, and other interested parties, public and private, which is adequate to carry out the purposes of this [legislation]." The Secretary may also make grants for the development of management programs, and for resource management improvement.

Once the master program is approved, the effective power shifts to the local government, in order that it may issue development permits and retain control over administration of its master program. Thus, permit decisions are made at the local level. Both the SMA and the SEPA process provide opportunity for public input in the decision making process. Appeals can be made by any interested party, such as local government, a State agency, or a concerned citizen, after the local government makes a permit decision. The State government has veto power over a development proposal only in cases where it strongly

disagrees with a development application which falls within the "Conditional Use or Variance" classification under State law. Approximately one-third of development permits come within this heading.

In addition, about 4% of the "substantial development permits" (the most commonly issued type of permit for shoreline development) granted by local governments are appealed to the Shoreline Hearings Board by the State. Opposition to aquaculture proposals in Washington has been most effective at the local level, where most permits are issued. Obviously, elected officials ignore public opposition at their peril. Some local governments have taken the step of calling moratoriums on net-pen development.

The system employs several elements fundamental to administrative fairness:

- (a) a clearly defined legislative base;
- (b) detailed structure for the exercise of discretion and maximization of public participation (through Shoreline Management Act guidelines for development of master programs, and legislated criteria for issuance of development permits on the shorelines of the State); and
- (c) an independent and binding appeal process, exercised through the Shorelines Hearing Board; in addition, a further appeal on the merits to the Court is available for any decision of the Board.

However, information received by this office suggests that all is not perfect with shoreline management in Washington, and the aquaculture industry in Washington is in a relatively embryonic state as a result. It has been suggested that some of the procedural hurdles built into the Shoreline Management Act, such as the authority of the Shorelines Hearing Board to order the production of an environmental impact statement, can be used effectively to block an aquaculture development proposal. Not only are environmental impact statements expensive for private corporations to procure, there remains the risk at the end of the day that their proposal will still be defeated. In the opinion of this office, if procedural hurdles can be used effectively to prevent an application from being heard on its merits without incurring prohibitive expense, then this may in itself constitute administrative

unfairness. The Department of Ecology in Washington is attempting to overcome this type of potential institutional barrier to development through the creation of a "programmatic environmental impact statement" (E.I.S.), which will streamline the impact prediction process through recognition of critical environmental variables, which can then be applied to standardized formulas for analysis. This office has been advised by officials in Washington State that the programmatic E.I.S. may reduce in scope, or eliminate entirely, the site-specific E.I.S. in cases where the basic site characteristics fall within the parameters of the programmatic model. It is anticipated that the programmatic E.I.S. will be officially adopted in the spring of 1989. (Similar criteria exist and are applied by Ministry personnel in B.C. on a lesser scale for determination of basic "biophysical suitability" of sites.)

A potential deficiency of the Washington regulatory model is the resolution of conflicts through a system which is in essence adversarial. The "litigation model" has so far been employed as the primary mechanism for conflict resolution in many American regulatory systems; only recently have the functional inadequacies of such a system been addressed. A significant and successful application of an alternate dispute resolution process is Washington's Timber, Fish, Wildlife Agreement, which was the culmination of an intense multi-party series of negotiations leading to the reconciliation of the interests of Native people, the forest industry, wildlife conservationists, and environmentalists, without resort to the courts. This process and the structure which underlies it is discussed later in Appendix 13. With respect to aquaculture, it would appear that the Washington coastal management system has so far been unsuccessful in reconciling competing interests. This in turn has given rise to certain initiatives, most notably reflected in an announcement from the office of the Governor, September 28, 1987:

"A State policy designed to promote the growing aquaculture industry in Washington while maintaining environmental safeguards was released today by Governor Booth Gardner. Gardner also announced that the State will hold an aquaculture conference in early 1988 to help "put all the issues on the table" and resolve controversies surrounding aquaculture development. "There has been some misinformation coming from a few people opposed to aquaculture development," Gardner

said. "It's time to get proponents and opponents together, separate fact from fiction and decide what the real issues are. Then we can move forward and manage the growth of this industry wisely with understanding and cooperation."

A senior official in the Washington Department of Ecology has informed this office that, to date, the initiative of the Governor's Office has not succeeded. Apparently the support of citizens and citizen's groups necessary for a consensual agreement to be formed was not forthcoming, as they perceived a bargained agreement to be inconsistent with their best interest. The system as it exists serves their needs more effectively. This makes an interesting contrast with aquaculture development in B.C. as it is perceived by some individuals, their view being that average citizens are powerless to halt an industry which enjoys government support.

Coastal aesthetics have proven to be an area of considerable concern in Washington. Coastal residents have made known their opposition to aquaculture installations which would visually alter in a significant way the character or ambience of the coastline. In an attempt to provide objective criteria to assess an otherwise subjective impact, the Department of Ecology in the State commissioned an "aquaculture siting study". The study utilized rather innovative methodology to predict visual impact and mitigate effects. There were four components to the visual impact analysis:

- (a) Computer simulations to demonstrate how different size facilities appear under a range of offshore distances and viewing heights;
- (b) photo simulations to portray accurately what a completed installation would look like;
- (c) visual impact assessment utilizing the main visual impact variables of landscape, viewer and facility (also included are two categories of mitigation measures, being alternate site selection, and facility layout and design); and,
- (d) a visual assessment workbook with an inventory component for rating the scenic quality of the site, number of viewers, and the visibility of the facility for resulting levels of potential visual impact is presented.

A cumulative impact analysis is also presented which incorporates not only the visual factor but biological, navigational, and access matters, for determining whether a threshold level suggesting alternative site selection has been reached. Some excerpts from the Aquaculture Siting Study and the visual impact analysis inventory and evaluation rating sheets are referred to in Appendix 5.

Selected excerpts from Washington State and federal coastal management statutes are included in Appendix 6.

G. Alaska

The Alaska Coastal Management Act consists of two separate statutory bases; Alaska statute 44.19 provides for the creation of an Alaska Coastal Policy Council and for the authority of the State Office of Management and Budget to render, on behalf of the State, consistency determinations and certifications authorized by the Federal Coastal Zone Management Act of 1972. Alaska statute 46.40 provides for the development of the Alaska Coastal Management Program, and, in a manner similar to the State policy enunciated in Washington's Shoreline Management Act, sets out the objectives of the coastal management program. This Act also gives authority to the Alaska Coastal Policy Council to identify and demarcate coastal resource districts, each of which is responsible for submitting an approvable district coastal management program which is consistent with the objectives outlined in the Act (s. 46.40.020).

Once the district coastal management program has been approved and is in place, the municipalities and state agencies are then obligated to administer land and water use regulations or controls in conformity with the program. An appeal to the council exists by which any district, citizen of the district, or state agency, may seek to enforce compliance with the provisions of the district coastal management program.

The Act also provides for the creation of coastal resource service areas, which are essentially vehicles for the provision of coastal management in sparsely populated areas; this is for the ultimate purpose of ensuring that no area of the coast is excluded from the benefits or protection conferred by the coastal management program.

The Alaska Coastal Management Program represents a model worthy of close scrutiny providing as it does a framework for local and public participation in State decisions, and a mechanism for the resolution of conflicts between government agencies, individuals, and local communities.

At the present time, salmon farming in net-pen facilities by private interests is not permitted in Alaska. The Alaskan State legislature passed a Bill (Chapter 145 SLA 88) which extended the existing finfish mariculture moratorium until mid-1990. However, the bill also legalized "sea vegetable farming" and established a regulatory scheme for this activity. It also established the "Alaska Finfish Farming Task Force".

Considerable controversy over proposals to allow such development continues. The State Legislature is considering the issue and the laws which would be introduced to govern the industry. Opposition to salmon farming in Alaska appears to have come primarily from the established wild salmon fishing industry, which is itself a major contributor to the State economy, and whose participants constitute a significant block of voters.

It is interesting to note that government agencies, academics, and lobbyists on both sides of the continuing debate in Alaska are studying B.C.'s experience with net-pen aquaculture very closely.

This office has reviewed with interest the final report of the "Etolin Island Area Mariculture Pilot Project". This report includes a comprehensive review of the biological and environmental issues associated with the aquatic farming of shellfish and marine plants. Excerpts from Chapter 3 of the report dealing with "Conflicts with other coastal users" and "Guidelines and Mitigating Measures", are attached for reference in Appendix 7.

Selected excerpts from Alaska State statutes are also included in Appendix 7.

H. Oregon

The Oregon State government describes its coastal management program in an explanatory text entitled "Oregon Coastal Management Program". The program summary which begins the text is reproduced in its entirety in Appendix 8 to this paper. Some additional excerpts from the text are useful in providing an overview of the system and the way in which it has been structured:

"The Oregon Coastal Management Program (OCMP) balances the needs for long-term growth, development, and protection of the State's coastal resources. Relying on a partnership among the public, local governments, and state

and federal agencies, the OCMP is based on separate but coordinated sets of planning and regulatory authorities:

- State wide planning goals adopted by the Land Conservation and Development Commission (LCDC);
- acknowledged comprehensive plans which local governments have developed and LCDC has approved; and,
- specified statutory authorities of various state agencies.

Together, these authorities establish policies and procedures for planning and managing the balanced preservation, conservation, use, development and restoration of the natural resources in Oregon's coastal zone.

These authorities are tied together by two requirements in Oregon's Land Use Planning Act and the State wide planning goals. First, the Act requires all units of government to coordinate their actions affecting land use with affected citizens and with local, state, and federal agencies. Second, the Act requires that the plans and actions of all agencies and local governments must comply with the State-wide planning goals and acknowledgement master plans."

Oregon's Coastal Management Program took shape early in the 1960s as economic, environmental and institutional concerns came to light:

"Accelerated growth on the coast was damaging fragile ecosystems; it also was aesthetically displeasing. Problems included the filling of estuaries, strip developments along coastal highways, draining of wetlands for development, and unplanned commercial and residential developments. In addition to private development, several state agencies were proposing or constructing projects which would significantly affect the natural environment of the coast."

The Oregon Coastal Conservation and Development Commission (OCCDC) was created in 1971 by the Oregon State Legislature to study these problems and propose solutions. It is interesting to note that the economic and environmental problems which OCCDC identified as facing the Oregon coast bear close similarities to the challenges which British Columbia now faces:

"The economy of the Oregon coast is characterized by over-specialization, persistent unemployment, low per capita income and a narrow tax base. These economic limitations are compounded by the highly seasonal nature of local employment and economic activities dominated by forestry, fishing, and tourism."

The Commission concluded that the problem was primarily one of inadequate management mechanisms. Again, there is a striking parallel with the situation as it currently exists in British Columbia. While there is no shortage among Provincial Ministries of either expertise, good intention, energy, or dedication, there are nonetheless significant administrative inadequacies which work to perpetuate the possibility of administrative unfairness through failure to reconcile, or put in place a management mechanism for the reconciliation of legitimate competing interests. For example:

OCCDC also found that a solution to these economic and environmental problems had generally been hampered by the fact that the governmental jurisdictions managing the coast did not adequately or effectively coordinate their activities. Limited financial resources and the need for effective citizen participation at all levels of government also required a cooperative and state-coordinated program to achieve wise use of coastal land and water resources.

By assignment from the Oregon State Legislature in 1975, LCDC acquired the task of completing development of the Coastal Management Program which had been initiated by OCCDC. Ultimately, four objectives were distilled for the Coastal Management Program:

1. Create and maintain a balance between conservation and development, and between conflicting public and private interests, that will assure the greatest benefits for this and succeeding generations of Oregonians;

2. Guide public and private uses of natural resources of the coastal zone to avoid irreversible damage;
3. Protect the unique character of life on the coast; and
4. Manage the natural resources and uses of the coast on an evolving and flexible basis so, as experience with and knowledge of the coastal zone increases, the program can be revised accordingly.

An appeal component has been built into the management program to respond to the controversy often accompanying land use decisions. This is the Land Use Board of Appeals (LUBA), which was created in 1979 and has jurisdiction over virtually all land use decisions; it has the authority to uphold, reverse, or remand (send back to authorities for reconsideration) a land use decision.

It is important to note that local governments are a pivotal component of Oregon's Land Use Program. Cities and counties are authorized by statute to adopt and implement comprehensive plans and zoning ordinances and to regulate land use within their jurisdiction; this authority is supplemented by State law which requires cities and counties to adopt or amend their comprehensive plans and implementing ordinances to comply with the State-wide planning goals.

These plans are the primary mechanism for establishing long-term, site-specific land use policies and decisions. They are also central to providing effective coordination among all levels of government. Once comprehensive plans are acknowledged, all land use decisions must be consistent with the plans.

As is the case in Washington, the Oregon Coastal Management Program mechanism for dispute resolution appears to be based on a litigation model rather than a consensual approach.

The OCMP explanatory text states, "An important hallmark of Oregon's Land Use Planning Program is its requirement that land use decisions include findings explaining how applicable ordinance standards have been complied with." This is an expression of the long established administrative law doctrine that, where quasi-judicial decisions are being made, reasons in support of the

decision should be given. The Oregon Supreme Court, in the case of Green vs. Hayward (1976) stated that "findings" to support land use decisions were necessary for the following reasons:

- (a) To facilitate judicial review;
- (b) To ensure more careful administrative consideration;
- (c) To help parties plan their cases for re-hearings and judicial review; and,
- (d) to keep agencies within their jurisdictions.

The Office of the Ombudsman is of the view that such a system is well-suited for the determination and declaration of legal rights or liabilities after a controversy has arisen. However, if various competing yet interdependent interests have not been reconciled in the planning process, it is doubtful that an adversarial appeal process would achieve such resolutions in many cases. A consensual approach in the first instance to the resolution of potential disputes involving the public interest would likely be more appropriate; this is discussed in detail later in Part VI of this report.

As a last note, Oregon has been included for study primarily due to its innovative coastal management systems. Net-pen facilities in Oregon are almost non-existent, due to the lack of sheltered, deep-water sites close to the shoreline. With its various estuaries, however, Oregon is well-suited for ocean ranching (defined earlier in this report) and has chosen to pursue this option for enhancement of fish production.

I. Hawaii

Hawaii is unique in having been the first State to carry out comprehensive resource planning and development for aquaculture. Pursuant to this, a natural resources assessment provided detailed data on potentially suitable sites, and a parallel study was conducted on aspects ancillary to successful industry development: technical resources, legal requirements, financing, marketing, and the like. These were ultimately, through experience, integrated into what authors Corbin and Young refer to as an "holistic conceptual approach, the Aquaculture Development Niche".

It is important to note that at present all aquaculture in Hawaii is land-based, and involves both fresh and saltwater facilities. The concept of ocean leasing, as the authors point out, poses a formidable challenge. Conflicts parallel those which have occurred in British Columbia, as shown by the following excerpt from the authors' paper presented at the Aquaculture International Conference in Vancouver (September, 1988):

"The process of establishing a new regulatory program for leasing of ocean space around the Islands illustrates another set of regulatory conflicts. Ocean leasing is a familiar concept, which allows ownership of ocean space for commercial use, such as mariculture. Examples of leasing abound worldwide; Hawaii is a latecomer to this area. Island interest began with a 1981 report which recommended the state consider ocean leasing for mariculture and other uses. A limited Ocean Leasing Act was promulgated in 1986, amid much controversy. The first test case, a tourist submarine company, was withdrawn.

Conflicts observed during the debate of the law and the recent test, stem from several fundamental issues:

- Private developers want long-term site tenure to justify the capital investment.
- Local interests do not want granting of exclusiveness to what has been traditionally a common property resource and cite aesthetic and environmental concerns.
- Ocean users, e.g. boaters, fishermen, divers, swimmers, and businesses fear interference and cite public safety concerns.

Resolution of these questions will await a future, probably non-mariculture test case. Fundamental problems to be addressed include lack of baseline environmental data, translation of complex environmental ideas to understandable language and strong emotionalism that prevails in these discussions. However, as with the discharge issue, the degree of difficulty in leasing will be very much dependent on the site chosen."

J. COMMENTARY: THE U.S. EXPERIENCE

Shore resource consultant Wolfe Bauer in a paper entitled, "The Geohydraulic system as a basis for shore management", presented to the shore management symposium in Victoria, 1978, made a number of useful observations based on his experiences in Oregon and Washington. A summary of his main points follows:

1. The Oregon legislature, in Bauer's view, properly put "the horse before the cart" in educating itself about coastal resources and priorities and preferences for resource use to control pollution and protect the environmental characteristics of the shore zone prior to creating management legislation and policy.
2. Oregon then conducted an extensive inventory of its coastline to determine the nature and extent of the resources there, to determine the types of physical ["geohydraulic"] processes at work shaping and influencing the shore area, and to classify the various areas of the "shore-process corridor" for management purposes.
3. Washington, in Bauer's opinion put "the cart before the horse" in designing legislation which divided shore areas into four categories (natural, conservancy, rural, and urban), "depending upon the degree of man's intrusion." Bauer's criticism of this approach is that it bears little relation to the natural processes at work in the areas being classified, and the boundaries between zones cannot be so neatly classified.
4. A common deficiency for both Oregon and Washington was noted:

While it was certainly more logical to first examine and define the shore resources as in the Oregon approach, delegation of this task to various unrelated agencies and consultants without insisting on a coordinating language or text proved to be a major weakness in consolidating all this information into a unified and practical management tool. In a similar way, the inability of the designated Washington State agency to provide over 50 local governments

and the citizen committees with a uniform technical language and education background to their riverine and marine shore systems resulted in a mish mash of inventories and classifications that was often more confusing than the Oregon inventory product.

5. In like manner, the systems in Oregon and Washington exhibited common strengths: "...it should be realized that the very act of providing a citizen-involved shore inventory program represents a new and promising direction of resource management in a democratic society. ...such legislation signifies a step in the right direction for, in broad terms, it recognizes the functional, recreational, economic, and aesthetic values of a shrinking resource heritage and addresses itself to the enhancement, preservation, conservation, and more informed and efficient use of all shore-related environments."

In the event that Mr. Bauer's comments with respect to Washington State sound too disparaging, Professor Robert L. Bish of the University of Victoria School of Public Administration notes in his book, "Governing Puget Sound", that by 1980 every local government except one on Puget Sound was operating a system under a state-approved master program. He went on to write (in 1982):

It is too soon and very difficult to evaluate the impact of the SMA on shorelines, but some decisions are notable. San Juan County has used its permit authority to reject proposals for recreational facilities on state owned land by both the Department of Natural Resources and the State Parks and Recreation Commission. In contrast, the City of Seattle has used its authority to encourage more public access to shorelines as a condition of permit issuance. It also appears that non-water dependent uses have been virtually eliminated.

This office does not advocate the wholesale importation of American coastal management structures for application within the B.C. context. Rather, as pointed out in each of the foregoing sections analyzing systems in Washington, Alaska, and Oregon, there are elements useful for analysis and possible incorporation to a model for integrated management of the coastal zone in British Columbia. Optimum fairness in the reconciliation of diverse

interests, all competing for a share of a finite resource, demands that a framework for public participation and goal-creation be established; that a legislative base be provided for the coastal management activities of both local and provincial authorities; and that mechanisms for appeal of adverse administrative decisions be put in place and made available to all affected parties - from small landowners to provincial Ministries.

P A R T V

- A. INTEGRATED RESOURCE MANAGEMENT: INFORMATION
EXCHANGE, PLANNING, AND ADMINISTRATIVE FAIRNESS

- B. SOME BRITISH COLUMBIA EXPERIENCES:
 - 1. GOVERNMENT RESEARCH AND RECOMMENDATIONS
 - 2. CROWN LAND PLANS
 - 3. THE FRASER RIVER ESTUARY STUDY

- C. INTEGRATED RESOURCE MANAGEMENT AND PLANNING:
SUMMARY

A. INTEGRATED RESOURCE MANAGEMENT: INFORMATION EXCHANGE,
PLANNING, AND ADMINISTRATIVE FAIRNESS

1. Aquaculture as a case study

It has been pointed out to this office by some individuals that there is little conceptual difference, insofar as land use planning and competition are concerned, between fish farming and many other coastal activities such as log storage, log booming, marinas, and pulpmill development. To the extent that aquatic land is occupied by a private party for an exclusive purpose, this is true. It is important to keep this fact in mind when reviewing the observations and recommendations of this office relating to planning and management of activities in the coastal zone.

The rapid development of the aquaculture industry over the last several years, and the anticipated continued growth of the industry fuelled by successful harvests and technological refinement, have provided to this office a useful case study in land and resource allocation. The conflicts which have arisen have in large measure been addressed through evolutionary changes in ministry policy; nonetheless, there are no guarantees that such conflicts will not arise again when economic demands for land and resources accelerate suddenly in a given geographic area. Anticipation and accommodation - more appropriately, reconciliation - of conflicting interests requires foresight, and foresight does not necessarily require the talents of a visionary; rather, it is the practical consequence of a disciplined and coordinated planning process which seeks out and explicitly recognizes the legitimate interests of all parties who may be affected by development - or, in some cases, a lack of development.

As set out in Part II (h) of this report, there is a fundamental relationship between planning and administrative fairness. This section will provide some discussion and examples of this principle in practice.

2. The primacy of planning

The fundamentals of planning are well understood within British Columbia's land allocation and administrative bureaucracy. Likewise, the province's universities and other educational institutions offer a well-spring of knowledge and original research in land use planning as a cornerstone of the concept of integrated resource management. American systems of coastal resource

management have been studied by both provincial ministries and educational institutions for at least the past ten years. Ministries with either major or peripheral involvement in aquaculture administration all recognize the importance of management tools which allow the left hand to know what the right hand is doing. This realization is reflected in the existence of what is known as the Aquaculture Steering Committee (ASC), formed in May, 1985.

The ASC, under leadership of the Deputy Minister of Agriculture and Fisheries, meets periodically to review and assess matters of concern related to aquaculture regulation and administration. These concerns span the entire spectrum of issues associated with the subject, ranging from municipal concerns to research projects aimed at helping the aquaculture industry combat fish disease. ASC exists because executive members of each of the Ministries involved realize the basic necessity to have, at the very least, periodic "round-table" discussions to exchange new information, decide Ministry priorities, coordinate programs, and attempt to work out resolutions to problems that cross jurisdictional boundaries.

The ASC is excellent in concept but faces a number of practical realities which limit its potential usefulness. These include:

- (a) There is no overriding legislation, regulation, or published policy which establishes goals, objectives or processes which the ASC must corporately pursue; rather, the ministries represented on the ASC continue to pursue individual legislated or policy mandates, and their representatives must, by reason of their positions, bring Ministry policy to the table.
- (c) A corollary of the above is that the ASC is dependent upon the goodwill and common sense of its members in order to achieve any degree of functional effectiveness. While the exposure of this office to the workings of the ASC indicate that these qualities are demonstrated in the ASC's deliberations, the process by which it operates and the jurisdictional division inherent in its composition do not ensure that the results of its work will serve the public interest in optimum fashion over the long run.

What remains obvious is that while each Ministry recognizes the importance of cooperative planning, and utilizes principles of "strategic planning" in the design and management of its own operations, integrated inter-ministerial planning does not exist under a broad legislative mandate.

3. Recognition of the primacy of planning: a review of the proposed Planning Act (1980)

In September of 1980, the Ministry of Municipal Affairs released a discussion paper containing the proposed Planning Act. The discussion paper begins with a detailed description of the need for planning and the mechanisms incorporated in the proposed Act designed to address this need. The principles enunciated reflect a solid understanding of the relationship between planning and administrative fairness, and are worthy of study. The proposed Planning Act failed to receive Cabinet approval and was never passed into law by the Provincial Legislature.

Some elements which are worth extracting from the discussion which preceded the text of the proposed Act follow. It should be noted for clarity that these principles and observations were extracted from the Ministry's commentary, and do not reflect an attempt by this office to analyze the text of the proposed Act itself. Observations and principles worth noting include:

- (a) Finite land resources and infinite land uses and requirements dictate the need for careful land use planning.
- (b) Planning necessarily demands regulation of activities, the most valuable activities being "evaluated on a scale of province-wide objectives and priorities."
- (c) Several statutes regulate land use, and compliance with their requirements may significantly increase the time, cost, and uncertainty associated with development.
- (d) A developer or other applicant or local resident deserves to know:
 - i) the reason for regulation and the process which must be followed;
 - ii) how long final approval will take

- iii) how many referrals are needed;
 - iv) who will consider the application at each stage of approval;
 - v) criteria for acceptance or rejection, and the values used to make a decision.
- (e) An efficient, inexpensive, and independent appeal system is necessary to correct instances of unequal treatment or incorrect decisions.
- (f) "Every citizen should be able to get an answer to the question of why the provincial government should be involved in any land use decision it regulates."
- (g) Local government should outline areas of its own need and concern, now and for the future, in land use plans which allow public participation in building a framework for regulation, and which enhance predictability of regulatory action and assessment of government performance.
- (h) Three administrative features of the proposed Planning Act which it purported to promote, and which would be endorsed in principle by this office include:
- i) A cohesive system of planning that is accessible and accountable at all levels of government, and,
 - ii) the coordination of provincial planning and land use programs to provide an integrated framework for determining the optimum use of land and resources.
 - iii) Approving officers in municipalities would eventually be "independent of any Ministry having a specialized interest in land use."

Some of the basic administrative principles enunciated in the proposed Planning Act are worthy of implementation in enabling legislation directed toward the establishment of integrated coastal resource management systems. It should be remembered at this point that aquaculture is and remains but one application of coastal resources.

B. INTEGRATED RESOURCE MANAGEMENT AND PLANNING:
OTHER BRITISH COLUMBIA EXPERIENCES

1. Government Research and Recommendations

In May 1977, the Coastal Zone Resource Sub-Committee, reporting to the B.C. Land Resources Steering Committee, produced a comprehensive work entitled "The Management of Coastal Resources in British Columbia". Volume 1 was produced in draft form only and was entitled "State of the Art". The "State of the Art": this volume contained a summary of recommendations, some of which are paraphrased below. It should be noted that the recommendations which follow were part of an internally generated document which was not officially adopted as an expression of government policy. Nonetheless, it is the opinion of this office that the administrative principles contained within the summary of recommendations remain equally applicable today, and it remains a valuable source document for anyone seeking to develop an appropriate system for the management of coastal resources in this province. It should also be noted that the Sub-Committee members were drawn from both federal and provincial ministries and represented an assembly of diverse expert knowledge.

Excerpts from the summary of recommendations of the sub-committee are reproduced in Appendix 11. The principal components of the sub-committee's recommendations are worth reviewing:

- i) A full-time inter-governmental agency mechanism should be established to perform coordinative, advisory, information, assessment, and identification functions regarding coastal management programs, strategies, and initiatives.

A major function of the agency mechanism would be development and implementation of an integrated coastal resource management program, beginning with the preparation of a coastal resource atlas and a "biophysical" inventory program for the coastal zone. Other related functions would include improvement of inter-agency information exchange, research programs, resource use criteria, and referral systems.

Public information and interdisciplinary resource management programs at the graduate student level would be encouraged as well as programs for generation of socio-economic information which would be integrated with biophysical data.

- ii) Initial focus for these initiatives would be in the Strait of Georgia region. [Note: The Committee likely reasoned that as the most populous coastal area of the Province, it would be the area of greatest environmental impact and potential resource use conflict. However, what was not foreseen at that time was the extensive development of Sechelt Inlet for aquaculture, and the controversy which has followed.]
- iii) Local governments should be assisted with application guidelines for biophysical and socio-economic data, and with technical expertise for zoning and development control process, as appropriate. General policy and management guidelines should be distributed to both government and private organizations involved in development of proposed facilities in the coastal zone.
- iv) Coastal resource management plans which designate the uses of land and water resources should be developed.
- v) Federal-provincial initiatives aimed at acquiring lands worthy of conservation, but not protectable through existing mechanisms, should be considered.
- vi) The public should have opportunities to participate in coastal resource use decisions, and "affected interests should be provided with an opportunity to participate directly in the decision-making process."

2. Crown Land Plans

In June 1980, the Skeena Region Operations Division of the Ministry of Lands, Parks and Housing, published the Graham Island Crown Land Plan. It was adopted at that date as official Ministry policy for "the planning, management and disposition of unalienated Crown lands in the Plan area."

It was a five year plan, binding upon the Ministry of Lands, Parks and Housing until July, 1985. In the Plan, the planning process, goals and objectives were all clearly laid out as well as the results of a physical inventory of the study area, including resources such as forestry, mineral and petroleum resources, agriculture, fish and wildlife, and archeological and historical sites. Present land use and resource capabilities were emphasized, and alternative development concepts (industrial, rural, or environmental) were put forth and evaluated. Finally, planned policies for each type of development or use were set out. It thus became a comprehensive information document and a reliable, predictable indicator of Crown policy for all of the lands within the study. The plan was not a paradigm of integrated coastal resource management, however, in that it dealt only with the use and disposition of Provincial Crown land. Integrated resource management as the concept is applied in this report refers to a process in which more diverse interests, and the use of lands over which other levels of government have jurisdiction, are recognized and reconciled to produce maximum benefit and minimum detriment to all parties.

Another useful example is the Sooke Harbour and Basin Crown Foreshore Plan released in August of 1980. This plan is similar in substance to the Graham Island Crown Land Plan, and involved the establishment of goals, the inventory of all resources and land uses within the study area, and the presentation of detailed plans and policies binding upon the Ministry of Lands, Parks and Housing for a five-year period. Detailed plans for specific areas, a "permitted use matrix", and a comprehensive plan map outlining development areas, resource management areas, and deferred planning areas, were included as integral components of the document. Nonetheless, what resulted was a Plan which reflected only the best efforts of one Ministry to serve the public interest to the limit of its own mandate. In that respect it did not fit within the overall concept of integrated resource management as it is understood by this office. A quote from the "Forward" to Sooke Harbour and Basin Crown Foreshore Plan will illustrate the limitations faced by the Ministry then known as Lands, Parks and Housing:

The pursuit by the Ministry of a planning process to facilitate improved Crown lands and foreshore allocation and management decision-making does not imply that the Ministry is attempting to usurp the planning and management

responsibilities of other government agencies at all levels. The Ministry recognizes and supports the fact that, by virtue of various statutes, many agencies have planning and management responsibilities relative to specific resources such as, for example, forests, water, wildlife, and archeological resources. The intent of the Ministry is to encourage these agencies to further their mandates to the greatest extent possible, as they pertain to unalienated Crown land and foreshore, and in a manner which maximizes the long-term economic, social and environmental benefits to the residents of British Columbia.

The Ministry could only rely on the goodwill and dedication to public service of the other Ministries to exercise their authority in a way which it was hoped would serve the best interests of all involved. In the absence of enabling legislation creating a statutory system of priorities, planning tools, and implementation mechanisms, an encouraging word was the best that it could offer. Other comprehensive Crown land plans, most notably involving estuary management, have been produced and implemented. A full analysis of their creation and operation is beyond the scope of this paper.

3. A Mighty Effort: The Fraser River Estuary Study. (FRES)

It is difficult to convey adequately the scope of effort and coordination which ultimately resulted in a management program for the Fraser River Estuary. It began as a joint federal-provincial study in 1977 by agreement between both federal and provincial ministries of the environment. Phase 1, which was completed in 1978, resulted in a series of reports describing characteristics of present and future land use and transportation; water quality, habitat, and recreation; and an analysis of the constitutional and legislative frameworks for estuary management.

Phase 2 of FRES was initiated in 1979 and completed in March of 1982. This included technical reports with proposals and data on management systems, information systems, area designation, referral systems, legal provisions and organizational options. Phase 2 also produced a comprehensive report on the results of public involvement and public opinion. The document containing the final proposal for an integrated management plan was entitled "A Living River by the Door".

The report of the proposed management program for the Fraser River Estuary is divided into five main segments: 1) Vision, 2) Creating a management program for the estuary, 3) Estuary management policies, 4) Estuary management system, 5) Estuary programs, plans and designations.

The elements of the management program and its relationships are illustrated by the diagram in Appendix 9. It begins with issues, concerns and trends in the changing estuary which are incorporated into visions for the estuary. Visions (or long-term concepts) are then translated into policies in which a basic policy is created with goals and objectives surrounding each of the four elements of the visions. From these policies are developed an estuary management system, interlinked with estuary programs, plans and designations. In the estuary management system, a policy committee, key agency group and program committee work together with the lead agencies through three special processes: a participation process, a coordinated referrals and assessment process, and a Fraser Estuary Information System (FEIS). The estuary programs, plans and designations are divided into three main divisions: activity programs covering port terminal, navigation traffic, habitat management, waste management, recreation and parks, etc.; area designation; and management area plans for each specific designated area of the estuary.

The following summaries of user group and government agency concerns regarding management of the Fraser River Estuary, presented in "a Living River by the Door"¹³, illustrate the diverse range of private, commercial, and public interests which an integrated management plan must attempt to reconcile in a manner which is consistent with maximum benefit to all. These summaries are included as they represent a multi-interest, multi-party, multi-jurisdiction situation, which provides a reasonable model of what a coastal planning team might expect to encounter:

Fraser River Estuary user group concerns -

- i) "The forest industry wants to assure that the estuary is managed as part of the coast-wide log movement system. Log storage in the estuary is essential due to the need for inventories for mills, high cost of land storage, and the lack of alternate water storage sites.

- ii) The marine transportation industry wants to ensure that navigation channels are capable of handling anticipated demands for goods movement. Areas for industrial development to be identified so industry can plan and maintain unrestricted water access.
- iii) The fisheries industry wants the commercial fish base to be maintained. Improved enforcement of pollution control legislation, preservation of habitat in the estuary, and salmonid enhancement are required.
- iv) Unions want employment to be an objective of estuary management.
- v) Natives are concerned about controls on economic development within Indian Reserves. The onus for protection of the environment should not fall on natives who were the last to develop their lands.
- vi) Agricultural interests want the economic value of farming to be recognized and future values protected. Urban uses have alienated and inflated the price of farmland.

Additional farmland may be needed in the future to replace soil types that are being taken out of production.

Fraser River Estuary - government agency concerns -

- i) Agencies responsible for managing port and port-related industrial development are concerned about encouraging, accommodating and servicing deep-sea and shallow-draft shipping. ...there is a strong feeling that the economic benefits of port development have not been adequately considered in past decision-making. This has led to excessive delays in project approvals and inflexibility by resource management agencies.
- ii) Biological resource management agencies want to preserve remaining habitat in the estuary and ensure its continuing productivity. Historic habitat loss, cumulative effects of

foreshore fill from hundreds of small projects, and impacts of major projects on river flow and patterns of sedimentation and erosion are all viewed as threats. Buildup of persistent pollutants such as heavy metals and organic contaminants can place long-term productivity at risk.

- iii) Water quality management agencies seek to maintain good water quality by eliminating toxic pollutants, improving treatment of effluents, and improving monitoring and enforcement. ...discharges should be regularly monitored and illegal discharges should be halted through vigorous enforcement of existing regulations. Continued monitoring of effluents in receiving water is needed to provide a better base for future decisions.
- iv) Local governments want greater involvement in guiding decisions by federal and provincial agencies which affect upland use. It is felt that the views of senior governments tend to dominate in estuary decision-making, that impacts on local communities are inadequately assessed, and that local needs are not considered.

Decisions affecting land use, resource management and major developments should consider official community and regional plans and also be assessed to reduce local impacts, such as noise, aesthetic impacts, and demands on transportation and services. Municipal councils and regional district boards and Indian bands should be consulted and their staff should be involved in estuary planning, decision-making and implementation.

Improved public recreation access points are needed, but municipalities lack funds to acquire them. Municipalities support high water quality but feel that they lack the authority to maintain water quality in tributaries and drainage ditches. In addition there is concern over the costs to local governments of programs for secondary treatment and source control. Lack of acceptable sites for municipal landfills is also a growing problem.

Local governments expect more direct accountability by senior governments for their actions which affect local government interests."

Obviously, reconciliation of such diverse interests would involve a sophisticated system of negotiation and bargaining in the development of goals, objectives, management strategies, and programs for implementation and monitoring. The next section of this paper addresses the difficult question of resolution of disputes which occur in a public interest context.

It should be noted that the Fraser River Estuary Management Plan officially came into being October 10, 1985, through the signing of a five-year agreement which included five major representatives: Environment Canada, the B.C. Ministry of Environment, the Federal Department of Fisheries and Oceans, the Fraser River Harbour Commission, and the North Fraser Harbour Commission. The Management Plan incorporates a central office in New Westminster to facilitate the operation of a coordinated project review process. The key components to the process are described in the Estuary Management Program's Annual Newsletter (issue No. 1, March, 1986):

- i) Lead agencies (responsible for issuing leases or permits);
- ii) Common application forms;
- iii) A central project registry, at the Secretariat Office in New Westminster; and,
- iv) An Environmental Review Committee. This Committee, composed of Environment Canada, Federal Fisheries and Oceans, and B.C. Ministry of Environment, reviews comments of environmental agencies on project proposals, advises lead agencies of environmental concerns relating to these proposals, and determines if further environmental review is required at more sophisticated levels.

The Secretariat office has continued to produce annual newsletters which indicate that steady progress is being made and, although it is beyond the scope of this paper to analyse the success of the program, it would appear that

full implementation of the program will, like the process which led to its creation, take considerable time and effort. What appears to have been the main obstacle to the creation of FREMP will likely continue to be the main obstacle to continuing success: namely, the fragmented jurisdiction and enforcement authority of the many agencies involved, which the management program itself was intended to overcome. However, progress to date would indicate that all parties agree that the effort is worthwhile.

C. Integrated Resource Management and Planning: Summary

The material chosen for inclusion in this section is intended to illustrate, in a limited fashion, the scope of administrative knowledge and experience in B.C. pertaining to resource planning and management, and as well to provide a brief "primer" in the basic principles of this discipline. It is the opinion of this office that adequate administrative tools can be created to manage effectively and fairly the diverse resources within the coastal zone of the province. Fairness for individuals, companies, and communities demands that resources be managed and allocated in a manner which provides for a broad range of meaningful participation within a framework of long-range planning.

As a final note on the subject, it should be remembered that good planning requires good data; the Coastal Management systems of the American states reviewed in this report all allow for the vital functions of inventory gathering and mapping. This necessity has not gone unnoticed in British Columbia; the Ministry of Crown Lands is at present coordinating the development of a prototype computerized Geographic Information System (G.I.S.) which will provide an integrated, multi-use database. The prototype will be tested in the spring of 1989 for applications with the Ministry of Environment.

Apart from data collected for the CRIS study, there has as yet been little work done for coastal inventory purposes; however, the G.I.S. shows promise as an effective tool for the handling and interpretation of coastal data as it is acquired; its ultimate role as a component of integrated resource management would be vital.

P A R T VI

THE RESOLUTION OF PUBLIC INTEREST DISPUTES

- . PUBLIC INTEREST DISPUTE RESOLUTION IN COASTAL
RESOURCE GOVERNANCE: THE STATE OF THE ART IN B.C.
- . WHEN SYSTEMS GET STUCK: RESOLVING PUBLIC
INTEREST DISPUTES THROUGH A CONSENSUAL APPROACH.

Public Interest Dispute Resolution in Coastal Resource Governance: The State of the Art in British Columbia

In 1986 the Westwater Research Centre at the University of British Columbia published an insightful text entitled, "Bargaining in the Governance of Pacific Coastal Resources: Research and Reform". This book outlines the "governance challenge" and the state of bargaining among the various interests in the present coastal resource governance system. Bargaining, as the term is used by Westwater, encompasses negotiation and agreements within a spectrum of legal structure ranging from informal understandings to legislation.

The bargaining, of course, occurs among and between the various levels of government and private groups and individuals be they single land owners or commercial or community interests. It is helpful to review Westwater's analysis of four types of conflicts, arising within the context of resource management or allocation, which can be identified:

1. Cognitive conflict is rooted in different understandings of the situation. Example: while both fisheries biologists from the forest industry and biologists from fisheries agencies might be equally concerned about damage to fish in the case of log booming in the Cowichan Estuary, the disagreement might well be over whether the damage is in fact occurring.
2. Value conflict stems from different judgment about the ends to be accomplished by the action contemplated. Example: differences in two parties' judgments about the desirability of trade offs between environmental quality and economic growth.
3. Interest conflict: this occurs when there is disagreement about the distribution of the costs and benefits. It results from differences in judgments about who should pay and who should benefit.
4. Behavioural conflict is rooted in the personalities and circumstances of the interested parties.

The Westwater text goes on to outline certain basic principles of governance which should inform the bargaining process. The fact that these principles are expressed in almost constitutional terms reinforces the premise that they represent fundamental assumptions without which the bargaining process is likely to fail. The principles are outlined as follows:

1. All individuals have certain inalienable rights that cannot be violated by the courts, ordinary legislative actions or administrative organizations.
2. Individuals and groups should be treated fairly by society. From the principles of fairness stem expectations of how those legitimately involved in the bargaining processes of governance should be treated.
3. Subject to basic rights and fairness, the preferences and priorities of all individuals affected have equal merit in governmental decisions. In the governance of Pacific coastal resources, representatives are elected in this manner to three decision-making arenas: parliament, the Legislature and municipal councils. Regional districts and the Islands Trust are a fourth set of arenas but the representatives are not necessarily elected directly. The valuation of a governance system must assess how well procedures for leadership and accountability operate throughout the bargaining processes.

The principles of governance lead to the basic principles of bargaining. These principles were first presented by authors Fisher and Ury of the Harvard Negotiation Project in their book, "Getting to Yes":

1. Separate the people from the problem. While you should be soft on the participants, you should be hard on the problem that is to be resolved. The goal should be a wise outcome reached efficiently and amicably, and defined as "one which meets the legitimate interests of each side to the extent possible, resolves conflicting interests fairly, is durable, and takes community interests into account";
2. Focus on interests, not positions.

3. Invent options for mutual gain.
4. Insist on explicit criteria.

These principles in and of themselves do not provide a totally adequate foundation for the resolution of public interest disputes, but nonetheless represent "the state of the art" as at 1985. More recent publications, most notably a text entitled, "Breaking the Impasse", a result of the MIT - Harvard Public Disputes Program, have built upon these principles for the resolution of multi-party, multi-interest disputes in a public context.

Westwater's text emphasizes three questions in applying these governance and bargaining principles to the evaluation of the governance of Pacific coastal resources:

1. How well informed are the participants in the bargaining processes?
2. How adequate are the opportunities for informed participation or representation of affected interests in the bargaining processes?
3. How productive are the bargaining processes?

These are questions which cut to the heart of the process, and apply with equal force regardless of the techniques of bargaining being employed. The development of the argument continues, by drawing upon research by Mason and Mitroff,¹⁴ to declare that "the best understanding of large inter-dependent, complex and uncertain systems can be achieved by structuring a debate among those possessing whatever knowledge is available." Mason and Mitroff, as quoted in Westwater's text, suggest that "real world problem solving methods must meet four criteria":

1. They must be "participative" because they must actively involve the individuals with relevant knowledge and whose interests are affected.
2. They must be "adversarial" in the sense that the best judgments result from constructively challenged assumptions and arguments.
3. They must be "integrative" because, while participative and adversarial processes can facilitate analysis, it is necessary to go on to synthesize coherent responses to complex problems.

4. They must be "mind supporting", because they must serve the individual's ongoing need for insight into the nature of the complexities and ways for coping with it that are credible to that person. (p.94).

These four criteria, as employed by Westwater in combination with the techniques of Fisher and Ury, represent an attempt to achieve broader application for the resolution of public interest disputes. This office would interpret the ultimate goal of this exercise as being to produce a set of principles for consensual resolution. The application of "adversarial" techniques in order to challenge assumptions and arguments constructively requires commitment, tolerance, and patience from the negotiating parties, and the results achieved will be directly proportional to the skills of the participants. It therefore comes as no surprise that it is argued later in the text that skills in communicating, challenging constructively, and bargaining successfully, must be increased through effective training and education in order to increase the productivity of the bargaining system. While the Westwater's text suggestions are both innovative and constructive, it should be noted that they are intended to be applied primarily within a context where explicit third party mechanisms (e.g. legislated appeal or mediation systems) are not available. The assistance of a trusted, neutral facilitator or mediator, knowledgeable and skilled in techniques of consensual dispute resolution, will be perhaps more vital to the process than trained participants. For complex, multi-party resource management or allocation disputes (in which some parties will inevitably have inordinate power and influence) it should not be expected or required that each party with a legitimate interest to bring to the bargaining table will possess the necessary skills.

It is interesting to note that the Westwater Research Centre classifies mariculture, that is, marine aquaculture as a classic "wicked" problem because the inter-dependence, complexity, and uncertainty of the issues to be resolved create questions which are not amenable to resolution by traditional techniques of analysis.

"Bargaining in the governance of Pacific Coastal Resources: Research and Reform" concludes with observations of weaknesses which continue to exist and hamper optimum effectiveness [and, this office would suggest, the fairness] of current institutional structures. It is the opinion of this office that the criticisms apply with equal force at the present time:

- The new institutional arrangements, with the important exception of those for conducting public enquiries and impact assessment, generally do not constrain bargaining but they also do not explicitly recognize it;
- The formal structures for conducting public enquiries do not facilitate bargaining, but rather induce negative adversarial relations and encourage positional bargaining;
- Structures for facilitating bargaining and planning have generally received little development so far.
- Lack of leadership has greatly frustrated the bargaining processes.
- Without leadership and associated strategic planning to inform the bargaining, meaningful accountability has been impossible.

The Westwater text notes the fundamental importance of planning in order to provide a broad policy context within which the impact of specific projects can be assessed. However, it also notes that the planning which has occurred to date has had a primarily areal focus on the coast, being undertaken at the regional and sub-regional level, rather than coast wide.

WHEN SYSTEMS GET STUCK: RESOLVING PUBLIC INTEREST DISPUTES THROUGH A CONSENSUAL APPROACH

This section briefly examines the nature of public interest disputes involving citizens and their government and considers alternatives to litigation for resolving them. In doing so, it recognizes the massive impact of the public sector on modern society. While administrative action is the most intrusive and dominant influence on all of our personal, commercial and social interests, traditional legal remedies and processes are frequently impotent to hold the public sector accountable for the fair and effective reconciliation of apparently adverse interests.

The types of disputes previously referred to in this paper involve competing demands for public resource use and allocation rights. These should be distinguished from disputes involving pure constitutional issues, contract terms or tort claims. The courts are very effective in interpreting the law, determining fault and assessing damages. They may also play a vital role in defining rights in situations where legislation is lacking or provides little guidance, and where the common law does not provide clear direction. However, the adversarial process is not well suited for achieving an enduring solution to various competing but legitimate interests within and between governments and private individuals and corporations.

While litigation may not be the most appropriate way to resolve public interest disputes, the public administration itself is often incapable of responding sensitively to competing interests. Administrative policy and practice must be adapted to act more fairly and effectively in the first instance so that the urge or need to litigate does not arise.

All of the public and private interests mentioned in this paper are legitimate, compelling and often competing. They are also interdependent and the failure to reconcile them will be to the detriment of all. However, neither the courts nor the current administrative structure may well be suited to ensure a balanced and enduring resolution. Clearly, an integrated and consensual process is required which will identify the common interests among the various parties and achieve a result to which all can voluntarily subscribe.

A. Litigation Concerns

Litigation will almost always be the least appropriate way to resolve public interest disputes for the following reasons:

1. The interests and issues are usually too numerous to benefit from an adversarial process and a simple win-loss decision. Characteristic of public interest disputes is the interdependence of the various competing interests. Effective resolution requires a voluntary crafting of mutually acceptable terms and trade offs, and the adversarial court process is ill suited to this need.
2. The expenses and delays involved in complex litigation may favour parties with the greatest resources, but not necessarily with the highest and most legitimate degree of interest.
3. Private interests will never be the equal adversary in litigation given government's effectively limitless resources, its political and institutional stake in its own policies, and its control over information.
4. Many administrative and executive decisions and actions of government are non-reviewable on their merits and therefore there is simply no remedy at law to their potential unfairness or unreasonableness.
5. Where litigation succeeds in changing or setting aside government action, the result may simply be avoided by a subsequent change in the legislation or in the process by which an offending decision or action was taken.
6. Government has a harmonizing role in society as well as a regulating one, and it is often unseemly and inappropriate for it to be in court with its citizens. Because of its special responsibilities, government owes a duty of fairness to individuals in society which can go well beyond bare statutory or other legal mandate and responsibility. The courts can not deal with such fairness issues. Indeed, as soon as litigation commences or is even contemplated, positions harden along legalistic lines and broader fairness issues can get lost.

7. Court decisions are imposed against the will of the losing parties. As such, in public interest disputes, although they may create legal rights they are unlikely to attract the cooperation necessary for continuing enjoyment of those rights. Adverse publicity campaigns, continuing legal challenges, civil disobedience, political agitation and simply a lack of necessary cooperation can eliminate stability from a court awarded victory.
8. Courts are not well suited to resolving the dynamic issues in situations that often arise in public interest disputes. A resolution must be sufficiently flexible to allow for changing circumstances and the inability or unwillingness of courts to play a monitoring role reduces their effectiveness in resolving such disputes.
9. Public interest disputes are often miscast as one dimensional battles between economic and social interest, with recourse to litigation seen as the only way to divide the spoils or declare the victor. Yet the courts are not well suited to providing a solution which is flexible, self-regulating, enduring and mutually productive. Social harmony, political consensus and economic competitiveness are essential objectives in public interest disputes. All are poorly served by an adversarial process which imposes settlements, drains resources and distinguishes winners and losers.

B. Consensual Resolution

The consensual resolution of public interest disputes requires a recognition by all major private and public interests that the best chance of achieving their individual objectives will occur through the enhancement rather than at the expense of apparently competing interests.

This is a building process rather than a destructive one. It exhibits the following major characteristics:

1. While it requires creativity, patience and goodwill, it does not require self sacrifice. In fact, self interest is its sustaining force.

2. Because the various interests will value aspects of the public issue differently, resolution packages can be crafted which satisfy each party's major concerns while trading off less vital ones.
3. The interdependence of interests empowers even relatively minor stakeholders to be valued partners in the resolution, rather than bothersome but beatable opponents.
4. It is a negotiated process, not an adversarial one, which will likely require the assistance of a trusted, neutral facilitator or mediator to ensure free communication, full disclosure and balanced participation.
5. It is essential that all significant interests voluntarily involve themselves in the process, through the participation of a legitimate and authorized representative. Each party must believe that its particular interest will be better served by a negotiated settlement than by an imposed one. If any one party believes it can win the dispute outright, judicially or politically, then the process will not work.
6. The process requires each party to define its objective in positive terms, rather than negatively saying what it absolutely doesn't want some other party to do. By thinking in terms of what it wants to achieve, each group becomes better disposed to accommodate apparently competing interests by concentrating on creative alternatives for reconciling them.
7. Government must show leadership in promoting consensual resolution rather than confrontation. It may be required to fund the mediation, research, resource and representation costs of some or all of the parties to ensure full and effective participation in the process.
8. Because solutions are voluntarily entered into, they will be self-regulating and enduring. Because they have been designed through a process based on openness and respect, the positive relationship will allow flexible adjustment of terms to meet changing circumstances in the future.

9. Business interests will gain from stability and certainty in the exercise of commercial rights, and from an enhanced reputation as good corporate citizens.
10. Special interest groups will play an influential role in designing solutions to difficult public conflicts. They will be recognized as legitimate participants introducing important concerns to the process rather than strident and absolute positions.
11. Where scientific, technical, legal or other experts are required to advise the process, they should not be engaged to align with particular interests, but rather to develop a common set of acceptable assumptions, standards or conclusions on which joint decision-making can be based.
12. The legal profession will undoubtedly play a major role in consensual negotiation as mediators, counsel or expert advisors. More fundamentally, lawyers must be able to redefine the notion of success for their clients. Public interest disputes are often won, not through winner-take-all but often illusory court victories, or through cost and risk cutting compromises, but rather through voluntary, enduring, mutual-gain solution building.
13. Our overburdened court system would clearly enjoy the absence of protracted, multi-party public interest law suits to which its remedial tools are not well suited. It may be that judges can assist the diversion of such disputes by appointing or recommending pre-trial or mid-trial mediators or masters to work with the parties towards consensual resolutions under the alternative threat of a costly and inadequate court imposed settlement which may fail to meet any party's major interest.
14. Consensual resolution requires courage from the participants. Single interest confrontation is straight-forward in that each representative feeds off the support of his or her interest group. However, it takes boldness and skill to bring one's own group over to supporting another group's objectives in its own enlightened self-interest.

15. Fundamentally, consensual resolution is a reasoning process rather than a coercive one; as such, it is immensely more powerful. A reasoning process stimulates a voluntary change in the way of thinking which endures to the benefit of all parties in the future. By building understanding and respect among the parties, it generates productive energy. In contrast, a coercive process drains energy from all parties and produces a weak outcome by leaving embittered and resistant losers.

Application of Consensual Dispute Resolution: Aquaculture

While there is an obvious multiplicity of interests in the administration and management of the British Columbia coastline, many of which appear to be diametrically opposed, there is nonetheless no need for these interests to be engaged in destructive opposition with one another. Environmental quality is as important to entrepreneurs investing in a vulnerable stock as to conservationists concerned with a vulnerable wilderness; broad and meaningful participation in long range planning at once satisfies all the community and individual interests in protecting property, the government concern to make decisions based on all relevant information, and the business need for a certain and stable investment climate. Integrated management of abundant but finite coastal resources can put different areas to the appropriate and optimum use of each distinct interest; and revitalized coastal economies will help to finance the preservation and enhancement of other interests.

The administrative practices and consensual initiatives discussed above can be applied towards a resolution of the aquaculture controversy. Similarly, the approach is appropriate to resolving a wide range of public interest disputes which otherwise divide society and frustrate our judicial system. Rapid transit systems, pesticide use on public lands, hazardous waste disposal, natural resource allocation and land use decisions, aboriginal rights issues and countless others are both amenable to consensual resolution and inappropriate for judicial intervention.

The various elements of this approach are not novel. It is clearly recognized, for example, that voluntary collective bargaining will produce the most enduring and mutually beneficial results to both labour and management; and mediated settlements in family disputes work to

everyone's advantage. However, as our communities become more pluralistic, as our natural resources become less abundant, as society becomes more interdependent and as international economic competition becomes more fierce it is clear that public interest litigation is not the answer. We simply can not afford the debilitating waste of energy and good will that such disputes cause or the cost and burden of government regulation and judicial intervention required to control them.

Instead, individual self-interest must be creatively and realistically identified as being inextricably linked to that of other interests in society. The consensual resolution of public interest disputes requires maturity and clear thinking, but it has the potential to promote social harmony and economic growth in an otherwise complex and threatening environment.

A most notable and successful example of consensual dispute resolution within the context of integrated resource management is the Timber, Fish, Wildlife Agreement (TFW) negotiated in Washington State. It represented a radical departure from the traditional method of reconciliation of interests, which was to fight fierce battles in State Legislatures, the State courts, Ministry bureaucracies, Federal courts, in Congress, or the White House. A description of the background, negotiation process and applicability to the Canadian context of the TFW Agreement is provided in Appendix 13.

P A R T VII

CONCLUSIONS AND RECOMMENDATIONS

CONCLUSIONS AND RECOMMENDATIONS

This report concludes with three major recommendations, with sub-recommendations for each:

RECOMMENDATION 1:

The government should reconsider the statutory authority for the administration of aquaculture with a view to the enactment of a separate Aquaculture Act, or other statutory scheme which gives clear, coordinated and express authority in this area.

It has been stated that the creation of such an Act would require administration by a "neutral agency", and would create anomalies and inconsistencies among programs administered by other agencies. This is not an insurmountable burden and in fact is encountered and overcome when most new legislation is introduced. While it would be possible to amend the Land Act to provide a statement of objective and binding criteria, this may not adequately meet the needs of the industry or coastal communities, given the inter-disciplinary, inter-ministerial nature of the subject. A separate Aquaculture Act would not prevent government from playing an active role in promoting aquaculture in the context of regional and economic development. It would simply mean that the decision-makers charged with performing regulatory functions should be required to give due consideration to all affected parties in the administration of the Act. Conflict is likely to be substantially reduced if the aquaculture industry can be clearly seen to be the subject of impartial regulation.

An alternative route, although somewhat fragmented, is for amendments to be made to existing legislation such as the Land Act, the Fisheries Act, and the Waste Management Act, or regulations thereto, to deal specifically with aquaculture issues. Any such regulatory amendments should be consolidated under a single Order in Council, for clarity and ease of reference.

It is a matter of legislative policy, on which this office expresses no opinion, as to whether an Aquaculture Act should incorporate land allocation (leasing or licencing) provisions. The approval of a management plan to carry on the practice of aquaculture, and the granting of tenure to occupy a parcel of aquatic land exclusively, are separate and distinct processes. However, whatever mechanism is employed, the legal requirements should have a published statutory foundation, whether through an Aquaculture Act, amendments to the Land Act, or other legislation.

(a) An Aquaculture Act, or alternatively amendments to existing statutes and regulations, should emphasize the following elements in its design, in order to maximize certainty and administrative fairness:

- i) facility siting consistent with long-term development plans produced through application of principles of integrated resource management with meaningful participation for all affected parties;
- ii) siting and operational requirements consistent with high standards of environmental integrity with provision for effective environmental monitoring and reporting. Aquaculture facilities should not only have a duty to participate in maintaining environmental integrity, but should also be able to rely on provisions aimed at protecting the quality of their own water supply, whether fresh or marine;
- iii) efficient appeal mechanisms which would provide access by all significantly affected parties to an independent, expert tribunal, prior to a final grant of tenure;
- iv) explicit recognition of the authority of local or regional governments to establish areas in which specific aquacultural activities may be limited;
- v) the property rights of aquaculturists to the cultured species being raised within their facilities, to provide legal assurance of ownership, including the ownership of escaped fish within a prescribed radius of the facility;
- vi) provision for the office of an Aquaculture inspector, with broad powers of investigation, to enforce the legislative requirements;

- (b) Ministry policies (the manner in which a Ministry interprets and implements its mandate as determined by statute or ministerial directive) should be published in plain language and made readily available.
- (c) The inter-ministerial (and inter-group) referral system, by which information on a proposed aquaculture installation is solicited from interested and affected parties, should provide for exchange of referral comments and information among the referees, and written reasons should be provided by the appropriate ministry (e.g., Crown Lands and/or Agriculture and Fisheries) to explain and justify decisions made or action taken.

In addition, there should be, in situations where referral comments indicate significant conflict, a further period for rebuttal comments to be circulated among the referral entities.

- (d) A neutral Impact Assessment mechanism should be integrated into the overall aquaculture facility licencing and permitting structure. It should be open to public involvement, with written reasons provided for decisions made. However, it should not require such expense or delay that meritorious projects would suffer unduly, which in itself would constitute administrative unfairness.
- (e) Visual impact and site-specific facility design criteria should be developed to maximize "blending" of aquaculture facilities with their surroundings, particularly in areas where such development has not been previously introduced.
- (f) Internal and external appeal processes relating to facility siting, granting of tenure (lease or licence), and facility operations (e.g., impact beyond waste management limits) should be put into place, and be available to all significantly affected parties. The external appeal body should be independent and expert, with at least one member knowledgeable in principles of

administrative law. If the Land Act is to continue to be employed as the governing statute for aquatic land allocation, the appeal provision (s. 59) should be replaced with internal and external appeal systems which reflect the basic tenets of administrative fairness as set out herein. Opportunities for consensual dispute resolution should be available as alternatives to these appeal processes: see Recommendation 3.

- (g) Advertisements giving notice of application for disposition of Crown land should clearly indicate, in non-technical terms, with words and diagrams, the location and size of the proposed facility. Signs posted on land should face the water and any nearby travelled roads; location on the proposed development area should be designated; for maximum visibility they should be readable from a reasonable distance, e.g. 30 metres. Because a parcel of "aquatic land" is of necessity travelled by marine transportation, notice to the marine community or nautical commuters should be provided by means of a clearly visible sign attached to a coloured buoy anchored at or near the centre of the proposed tenure.

RECOMMENDATION 2:

A framework for integrated management of resources and activities in the coastal zone should be created, with appropriate enabling legislation, as a mechanism to enhance administrative fairness in all aspects of coastal planning, resource allocation, and management by Provincial Ministries.

Note: A new "coastal zone management" Ministry need not be created. What is suggested is an integration, through specifically stated priorities, of existing management capabilities. It is inevitable, however, that an office - perhaps in the nature of a Secretariat - would be required to provide coordination, review, and reporting functions.

- (a) Coastal management should emphasize and facilitate community planning and control. Community plans, produced in conformity with

provincial goals and objectives, appear to be a useful vehicle for maximizing administrative fairness and minimizing conflict if a litigation model is to be avoided.

- (b) Public participation should be given explicit priority and accommodation at all stages of coastal planning processes. This is a corollary of (a) above.
- (c) An inventory of coastal resources, produced in cooperation with local municipalities or regional districts, should be created as the foundation for coastal planning. Recommendation 1(D) of the Coastal Zone Resource Sub-Committee (Appendix 11) would appear to be a good model for resource inventory and related information-gathering functions.
- (d) A comprehensive set of priorities (as was articulated in the proposal for a Fraser River Estuary Management Plan) should be produced, published, and refined through broad public participation. From these can be produced specific goals and objectives, which can then be translated into specific management plans to provide a framework within which local government can establish its own priorities. Publication of priorities - providing citizens with a long-range view of what is contemplated or proposed - is essential to maximizing administrative fairness within the context of resource allocation and management.
- (e) The concept of "highest and best use", as employed by the Ministry of Crown Lands to determine appropriate use of specific parcels of land, (or aquatic land) should be abandoned and replaced with sound integrated resource management criteria. "Highest and best use" most often is equated with maximum economic yield, and may therefore conflict with values advanced by other Ministries, conservationists, environmentalists, tourism and recreational interests, or Native Indian bands.

RECOMMENDATION 3:

Consensual dispute resolution (CDR) techniques, as outlined in this Report (pp. 89 - 96) should be recognized, promoted, and applied as official policy by all relevant Ministries, and should, as appropriate, be recognized and implemented through amendments to existing legislation. CDR techniques should be available as an option for the resolution of aquaculture-related disputes which may occur at any stage of the priority development or project development process.

There remain a number of potentially contentious matters noted below which are beyond the jurisdiction of the Office of the Ombudsman, and upon which no opinion is expressed. However, these concerns may be amenable to a process of consensual dispute resolution:

- rights and desires of Native groups to control, be involved in, or limit aquaculture development;
- impact on the commercial fishing and fish processing industries (both economically through competition and by potential effects on wild salmon stocks) of salmon net-pen operations;
- use of antibiotics in fish husbandry and the possibility of introduction of residues into the human food chain;
- use of anti-foulant chemicals on fish farm nets and their impact on the surrounding environment and aquatic species, and potential questions concerning chemical residues entering the human food chain;
- impact of net-pen facilities in general upon the environment, and the degree to which the seabed, aquatic organisms, and adjoining waterfront areas are affected;
- labelling of farmed fish as to their origin, at point of sale.

The above issues often involve diametrically opposed claims which purport to be based on valid scientific data. With expert pitted against expert, and no independent, authoritative agencies involved to mediate the dispute, it is no surprise that an impasse on any of these matters may be quickly reached.

There are also social and economic policy matters beyond the jurisdiction of this office which form the context for the advancement of competing claims. Collectively, these questions make a compelling case for the creation of consensual dispute resolution mechanisms which will allow the facts to be determined neutrally and creative options for the mutual enhancement of interests to be explored.

FOOTNOTES

1. Marden, The Continental Shelf: Man's New Frontier, 153 National Geographic 495 (Ap. 1978), quoted in Bowden, Gerald, Coastal Aquaculture Law and Policy: A Case Study of California, Boulder, Colorado: Westview Press, 1981, p. 1.
2. R.S.B.C. 1979, c. 214.
3. R.S.B.C. 1979, c. 306.
4. R.S.C. 1970, Chapter F-14.
5. R.S.C. 1970, Chapter N-19.
6. Re Attorney General of British Columbia and Attorney General of Canada (Georgia Strait Reference) (1984) 8 D.L.R. (4th Series) 161 (Supreme Court of Canada).
7. R.S.B.C. 1979, c. 137.
8. Tynan, B. Aquaculture - The Constitutional Framework, Private Paper, p. 1.1.14.
9. R.S.B.C. 1979, c. 136.
10. Finkle, P.Z.R., and Lucas, A.R., ed., Fairness in Environmental and Social Impact Assessment Processes, Canadian Institute of Resources Law, Faculty of Law, University of Calgary, 1983, p. 14.
11. Source: Development of Aquaculture in Sweden, by Hans Ackefors, published by the Swedish Council for Planning and Coordination of Research, in collaboration with the National Marine Resources Commission, 1983
12. Sources: Fiskeridepartementet Informerer. Fish Farming - Act of 14th June 1985, No. 68, relating to the breeding of fish, shell fish, etc. (With comments on the individual provisions in the proposal for the Act). -

Fiskeridepartementet Informerer. Summary of Report No. 65 (1986-87) to the Storting (Norwegian National Assembly) on Aquaculture.

Bjorbaek, Cari and Hempel, Erik: The Status of Norwegian Salmon Farming. Royal Norwegian Ministry of Fisheries, Oslo.

13. Government of Canada and Province of British Columbia
A Living River by the Door - A proposed Management Program for the Fraser River Estuary. March, 1982, pp.16-18.
14. Mason, R.O., and I.I. Mitroff. 1981. Challenging Strategic Planning Assumptions: Theory, Cases and Techniques. New York: John Wiley and Sons.

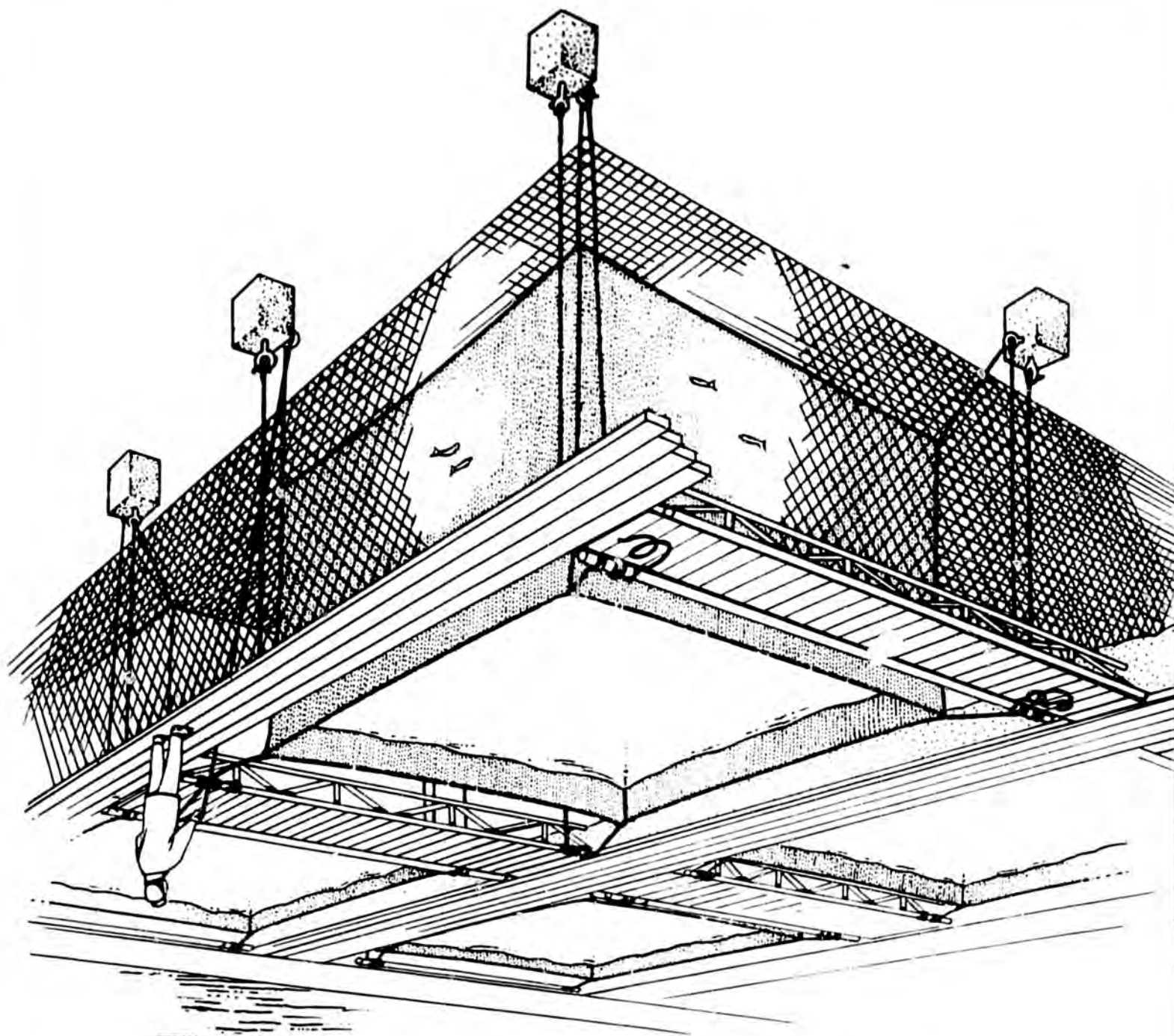
APPENDICES

1. Diagram: Net-pen facility (courtesy Ministry of Agriculture and Fisheries)
2. Aquaculture Licencing and Approval Flowchart
3. Distribution of legislative jurisdiction over foreshore and sub-aquatic lands in British Columbia (From Tynan, B.)
4. Swedish application and referral process (From Ackefors, H., "Development of Aquaculture in Sweden")
5. Excerpt from Washington State "Aquaculture Siting Study"
6. Washington State Shoreline Management Act of 1971 (excerpts); Coastal Zone Management Act of 1972 (U.S./Federal excerpts)
7. Etolin Island area Mariculture Pilot Project final report, re coastal use conflict and siting guidelines. (excerpts)

Alaska Coastal Zone Management Program (excerpts from statute); Alaska Coastal Zone Managment Program - 1986 Annual Report (excerpts)
8. Oregon Coastal Management Program Summary
9. Fraser River Estuary Mangement Program - flowchart (from "A Living River By the Door")
10. Aquaculture Industry Overview: Statistics
11. Excerpt from Summary of Recommendations of Coastal Zone Resource Sub-Committee (May 1977)
12. Possible impacts of a salmon farm upon the marine environment (courtesy Ministry of Environment and Parks)
13. Commentary on Washington State Timber, Fish and Wildlife Agreement.

APPENDICES

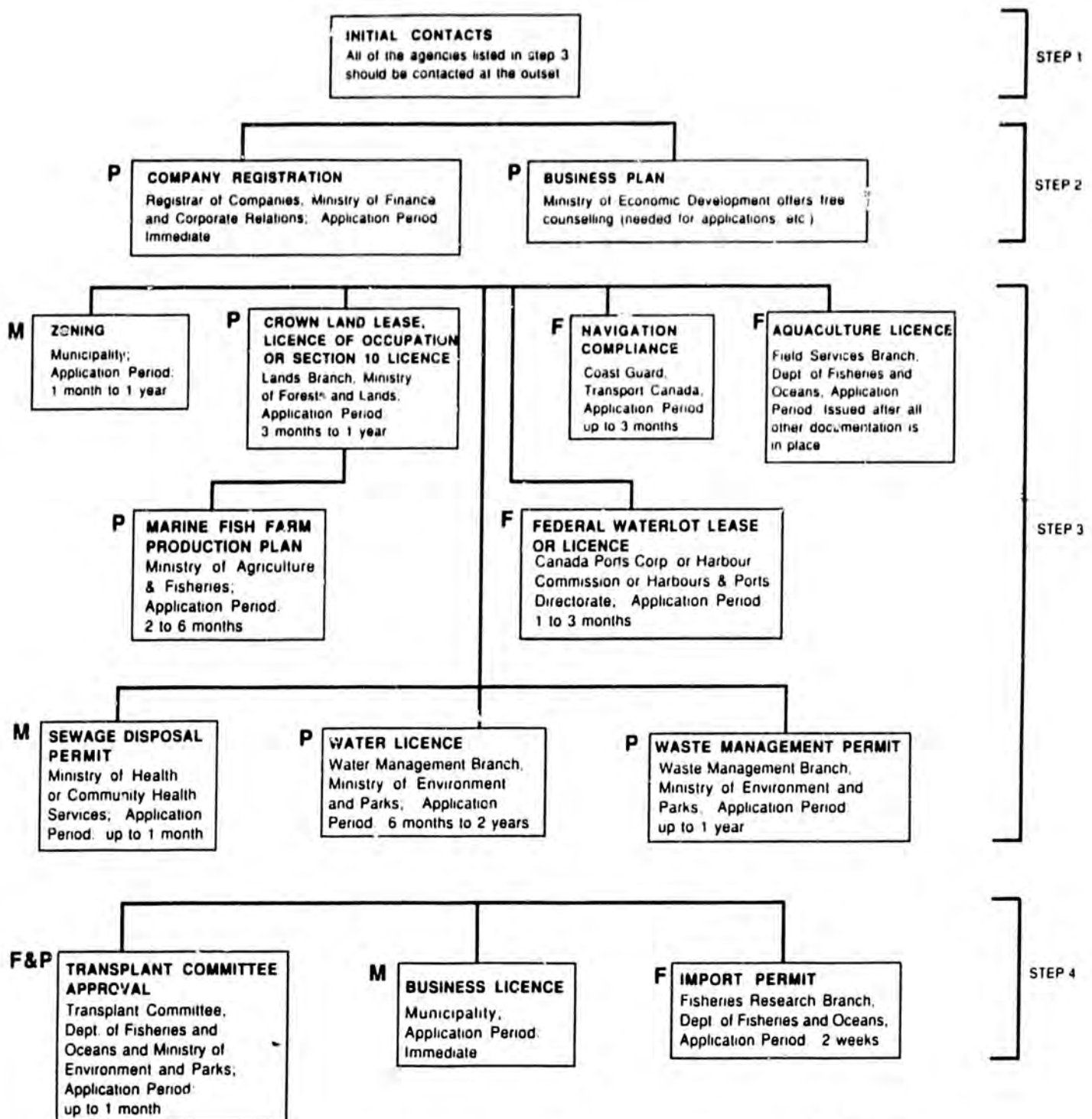
1. Diagram: Net-pen facility (courtesy) Ministry of Agriculture and Fisheries)



SALMON FARM FLOAT AND NETPEN

2. Aquaculture Licencing and Approval Flowchart

FIGURE 4. PERMIT AND LICENCE STRUCTURE FOR MARINE FINFISH CULTURE.

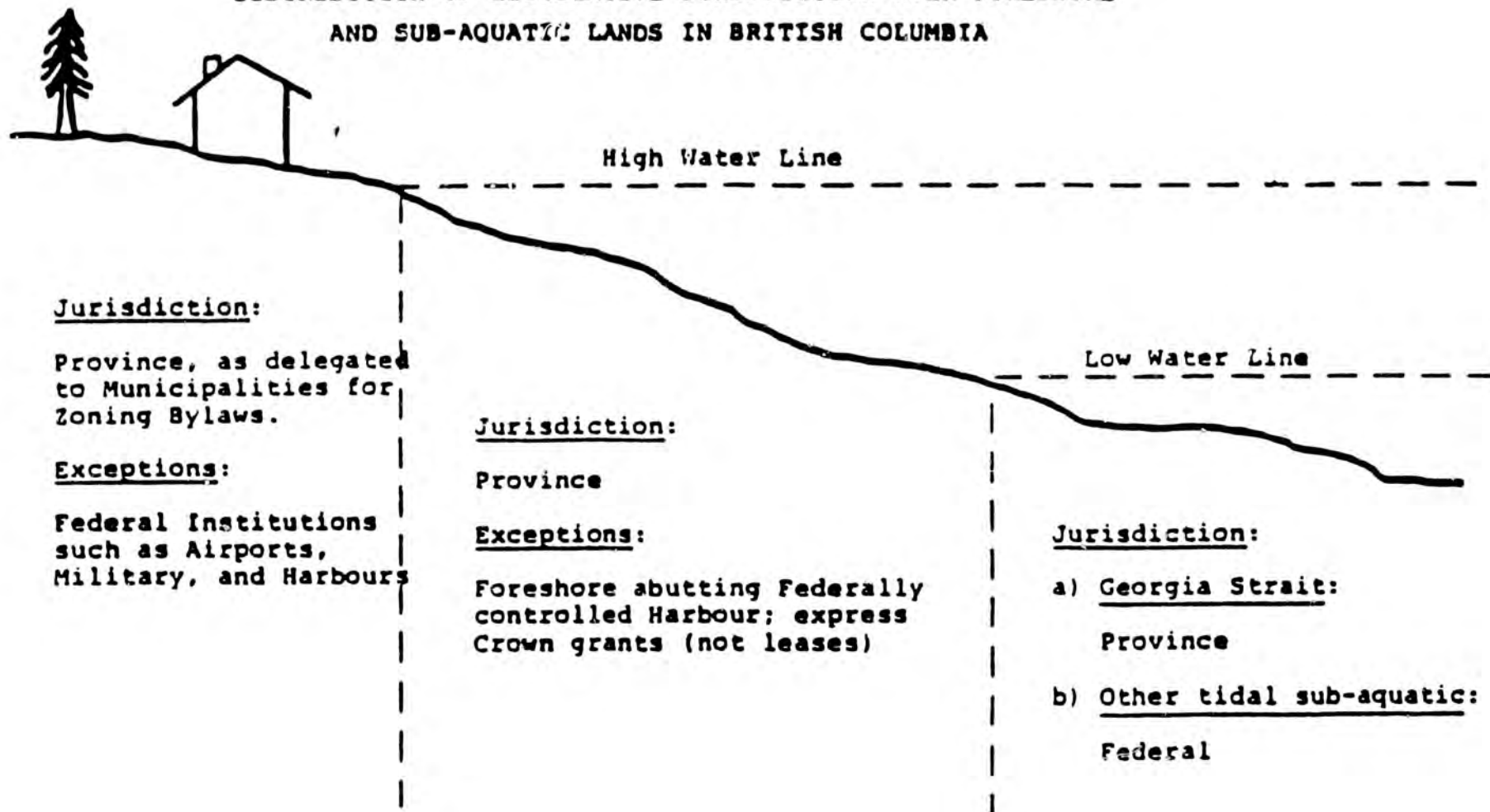


- 1) Permits or licences listed are not required in all instances
Contact the agencies indicated to determine the individual requirements for specific farms
- 2) Marine Fish Farm Production Plan was previously called Salmon Farm Management Plan

F = Federal
P = Provincial
M = Municipal

3. Distribution of legislative jurisdiction over foreshore
and sub-aquatic lands in British Columbia
(From Tynan, B.)

DISTRIBUTION OF LEGISLATIVE JURISDICTION OVER FORESHORE
AND SUB-AQUATIC LANDS IN BRITISH COLUMBIA



4. Swedish application and referral process (From Ackefors, H., "Development of Aquaculture in Sweden")

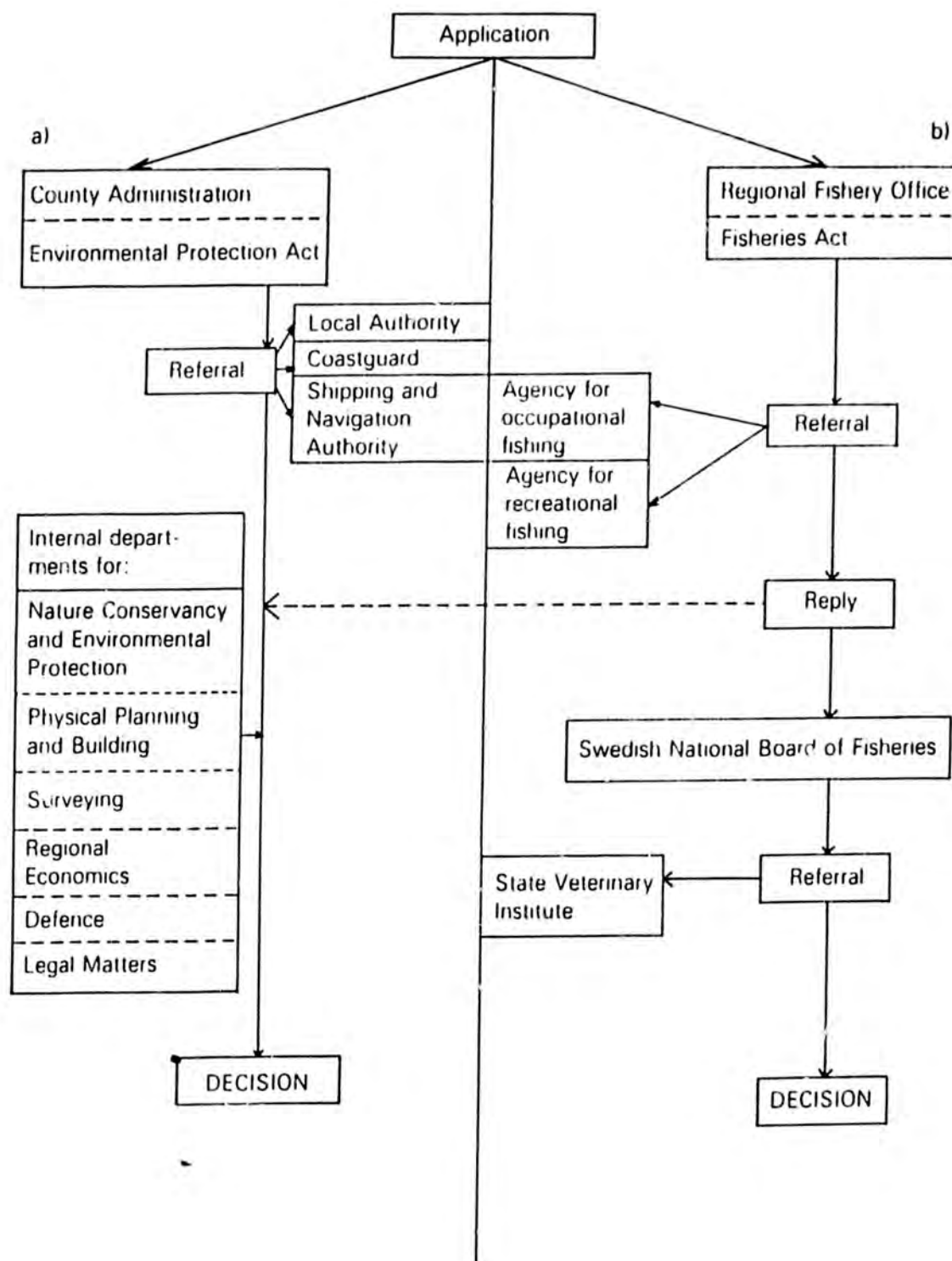


Figure 12. Routes by which an application for aquaculture is dealt with (a) by the County Administration in accordance with the Environmental Protection Act, and (b) by the Swedish National Board of Fisheries in accordance with the Fisheries Act.