

ALASKA LEGISLATURE SPECIAL COMMITTEE / SUBJECT FILES 8672

6.9 SCOMM 5A: AQUACULTURE POLICY STUDY GROUP 1978-1979

of Fish and Game have many successes to point to in their implementation of this ambitious and important program.

While achieving stable financing for economically sound ASRDP programs is essential to meet established statutory and program goals, our analysis indicates that revisions to the institutional arrangement of Alaska's fisheries development program are required if the goals enunciated in statutes and regulations by the state, and in program goals and statements of regional associations are to be met. The detailed institutional review contained in Appendix A to this report indicates that there are a large number of programs, each of which can and does affect ASRDP, which are not centrally coordinated. The wide variety of government agencies and private activities impacting on ASRDP presents a critical need for greater horizontal coordination and cooperation among such programs, greater coordination with federal and local agencies, and increased cooperation between the private and public sectors. This discussion concentrates on some of the potential institutional reforms which could be implemented to positively impact those programs with primary responsibility for achievement of fisheries resource development goals and objectives for Alaska. We do not suggest all of the detailed reforms relating to improved coordination among regulatory agencies, financing agencies, construction entities, and other programs affecting ASRDP should be the responsibility of the Aquaculture Policy Study Group. The study group should, however, focus

their attention on necessary reforms in those agencies having primary responsibility affecting fisheries resource development.

We have identified a number of federal institutions and programs which have significant impact on overall fisheries development in the United States. Many of these programs impact on Alaska fisheries development, and it has been suggested to the study group that, to date, the State of Alaska may not have received its "fair share" of benefits from federal programs impacting on Alaskan fisheries. We offer the observation that there are many federal agencies which enjoy special working relationships within Alaska who provide positive support to ASRDP. Noteworthy is the U.S. Forest Service, which has established cooperative agreements with the Alaska Department of Fish and Game, and informal arrangements with many of the regional associations to maximize the effectiveness and impact of its programs on the important Alaska salmon fisheries resource.

We briefly identify in outline form other federal institutions affecting ASRDP (Appendix B). We will discuss means of improving relationships between key federal and state agencies affecting ASRDP.

Finally, perhaps the most critical element to the success of an Alaska fisheries development program is the commitment of the legislative and executive branches. A major reason why this study has been conducted is the concern

shared among persons within executive and legislative branches that the salmon fisheries development program is not producing satisfactory results as measured against the original goals of primary programs. This concern was reflected in the most recent legislatively approved budget for the F.R.E.D. division and for regional associations. The members of the study group were well aware in formulating this study that the key programs in ASRDP could be the subject of ever greater scrutiny in the future, particularly in the face of projected tight budgets and declining revenues.

Among the general program recommendations which have evolved from our analysis of existing institutions and policies are the following:

1. There is a need for increased cooperation and coordination among major program elements of ASRDP;
2. ASRDP should be expanded or altered to include consolidation and coordination of programs affecting the development of species other than salmon, i.e., establishment of an Alaska Fisheries Resource Development Program (AFRDP);
3. There is a need for improved and expanded research, data and information affecting AFRDP;
4. Region-specific planning, programs and institutional arrangements which will maximize the benefits of the program consistent with area needs should be established;
5. There is a need to identify the appropriate level of activity for individual program elements within

AFRDP; this should be done on a continuing basis and not merely through established budget processes;

6. Improved relationships with federal, local and private sector programs affecting or having potential impact on AFRDP is necessary;

7. There is a need to develop institutional reforms which ensure greater financial stability for existing and new programs; and

8. There is a need to develop an information base sufficient to evaluate program successes and failures in the future.

(Note: Because of the present financial difficulties of the regional association program, the consulting team was directed when the study was nearing completion to spend more time evaluating institutional arrangements which could affect the future of the regional association program. We suggest that further more detailed analysis by the study group of financial and institutional alternatives affecting the regional association program will be required prior to the 1980 legislative session.

Identification of Primary Programs to be Included in Alaska Fisheries Development Program (AFRDP)

In the series of meetings with the Aquaculture Policy Study Group the consulting team sought to identify those programs primarily involved in fisheries development

activities at the state level. As indicated in Appendix A, there are a number of other programs which have an impact on fisheries development activities in Alaska, but the study group has designated the following programs and activities as includable in the primary program category:

- A. Alaska Department of Fish and Game.
 - 1. Fisheries Rehabilitation, Enhancement and Development Division (F.R.E.D.);
 - 2. Commercial Fisheries Division;
 - 3. Sport Fisheries Division;
 - 4. Shellfish Program.
- B. Private Nonprofit Hatchery Program/Regional Associations.
- C. Office of the Governor/Bottomfish Coordinator.
- D. Department of Commerce and Economic Development (Division of Business Loans).
- E. Department of Transportation (construction of facilities).
- F. Alaska Commercial Fisheries Entry Commission.
- G. Department of Community and Regional Affairs.

Because the initial focus of this project was to be on the salmon fisheries development program, major concentration on reforms affecting programs involved in this arena resulted. This is consistent with the goals, makeup and interests of the study group. However, we strongly believe that the salmon development program and its major elements cannot be planned or managed independent from other fisheries and that in the future it becomes critically important to

integrate the salmon development program with those for shellfish and bottomfish.

Statement of Project Findings and Needs

A. There is a Need for Increased Cooperation and Coordination Among Major Program Elements of AFRDP.

1. General Statement of Problems and Needs.

The detailed program outlines included in Appendix A indicate a need for greater horizontal coordination among a wide variety of programs and agencies in Alaska having impact on the successful operation of AFRDP. There is a need for clear direction as to the relative roles and responsibilities of each such entity: (a) as they relate to the overall goal of fisheries development; (b) as they relate to interrelationships of such programs in achieving established goals for the total fisheries development program; and, (c) as necessary to ensure that such programs and activities are not operating at cross purposes from one another. Increased coordination can be provided through the Office of the Governor or the State Legislature. Some lead agency could be assigned this responsibility by the Governor or the Legislature.

Following are a number of specific issues which must be addressed to increase cooperation and coordination among major program elements of AFRDP. These include improved relationships among:

- (a) ADF&G Commercial Fish, Sport Fish and F.R.E.D. divisions.
- (b) ADF&G and regional associations.
- (c) ADF&G, DCED and regional associations.
- (d) All Regional Associations.
- (e) ADF&G salmon and shellfish program elements, regional associations, and the Office of the Governor/Bottomfish Coordinator.

Increased coordination and cooperation are necessary for a variety of reasons. In some instances, improved relationships among these entities is absolutely essential to the future success of ASRDP. For instance, policies adopted by ADF&G regarding egg take and brood stock could effectively eliminate any prospect of success for individual hatchery programs or other activities undertaken by the regional associations.

In some instances, existing laws infer that coordination of activities among AFRDP entities is required or should occur. However, we suggest that there are situations where this legislative mandate is not strong enough. For example, legislation establishing the fisheries enhancement loan program, A.S. 16.10.500 et seq., provides authority in the Department of Commerce and Economic Development (DCED) to make loans and grants to regional associations for fisheries enhancement. There is no provision in the statute requiring or defining the necessary relationship between DCED and ADF&G regarding any aspect of the program. While

these agencies have undertaken certain steps to communicate and coordinate program activities, the regional associations have indicated dissatisfaction with the level and quality of those relationships. This matter could be resolved, in part, through legislative action.

In certain cases, relationships among program activities have not even been addressed by the legislature or the executive branch. For example, the newly established activities within the Office of the Governor relating to bottomfish development have evolved to date without identification of potential and necessary relationships between that office and fisheries development activities by ADF&G and the regional associations. If the legislature considers expanding the authority of regional associations to include other species, coordination with development activities of the Bottomfish Coordinator will be required.

Finally, there are situations where the legislature may wrongfully presume that coordination and cooperation among such entities is established and routinely occurring. One such instance involves the relationships among divisions within ADF&G. Testimony during study group meetings and a number of previous studies have indicated that the relationships among the F.R.E.D. division and the Commercial and Sport Fish divisions are less than fully cooperative. While considerable effort in recent years has been made to establish coordinated goals and objectives for these programs, it does

not appear that such activities have produced a result wherein each is working in as coordinated fashion as possible toward a common fisheries resource development goal.

2. Need for Improved Relationships Between ADF&G Commercial Fish, Sport Fish and F.R.E.D. Divisions.

There are a number of indications that despite considerable efforts in recent years to establish policies and practices which will effect improved relationships between the state's resource development program and management activities of the commercial and sport fish divisions, there remain areas of conflict between these divisions. As hatcheries come on line, the need for coordination and communication among such divisions will become all the more important. Management to maximize harvest and protect viable natural runs is all the more complex with the interjection of hatchery runs.

Relationships between harvest and hatchery managers are affected by statutes and policies protecting natural runs. A.S. 16.10.420(10) provides:

A hatchery (shall) be located in an area where a reasonable segregation from natural stocks occurs, but when feasible, in an area where returning hatchery fish will pass through traditional salmon fisheries.

The existing policy of the Alaska Department of Fish and Game (see Alaska Fishery Management Policy Manual, Policy #1, (1974) provides as follows:

The management of naturally occurring wild stocks will not be unduly hampered by locating the hatchery at the proposed site If complexities arise in managing mixed stocks, including both hatchery fish and wild fish, it will be the state's policy to manage the collective resource in a manner that favors protection of the wild stocks. (Emphasis added.)

As indicated at page 25 of the proposed Policy and Procedures, even "minor runs of salmon" must be given first priority consideration when a massive supplementally produced salmon run is imposed in fishing areas where wild fish are harvested. ADF&G acknowledges that this policy may lead to larger than required returns to the production sites. Over-protection of certain weak natural stocks at the expense of harvest of productive hatchery runs seems inconsistent with goals of the PNP hatchery program.

The department states that "long-term and continuing analysis will be conducted to assess benefits and disbenefits resulting from the fish cultural activity prior to any decision to sacrifice or overharvest wild stocks." (C.F. AK. Fish. management policy #7, page 4). The issue of protection of natural runs in areas where hatchery stocks have been introduced (e.g., Washington) is one of great controversy. This is in part because of failure of fisheries managers to address the potential problem prior to the evolution of major hatchery programs. At this time, the

State of Washington is struggling with the definition of "viable natural run" at a time when as much as half of the state-wide production of salmon is through artificial propagation. This has occurred in part because of the lack of imposed relationships and some conflict between harvest managers and hatchery managers at the outset of the resource development program. Alaska should make every effort to avoid repeating this experience.

A review of Washington's 1979 proposed salmon management plan is illustrative of a major change in approach to harvest-hatchery management patterns. The plan suggests harvest of certain natural runs prior to full production from planned facilities in the same area. In some instances, this "writing off" of natural runs is occurring before construction of a facility has even started. We do not begin to suggest this policy for Alaska. However, it does indicate the potential significant changes that may evolve in terms of harvest management practices as the hatchery program evolves.

The present policy regarding natural runs can also impact on the necessary development of brood stocks and egg takes for existing and planned hatcheries. At page 26f of the draft Policy and Procedures, ADF&G proposes the following:

It is recognized that an objective of salmon fisheries harvest management is the attainment of an appropriate magnitude and distribution of brood stock to drainages in all management

units. It is not always possible through management of mixed stock fisheries to ensure the appropriate escapement to a specific stream or stream segment, but generally, desired escapement ranges can be obtained over larger geographical units. Hatchery brood stock goals, as an additional part of the desired escapement [sic]. Where possible, brood stock development plans will include harvest management procedures or recommendations which will enhance the potential for achieving hatchery brood stock requirements without significantly reducing harvest from other stocks. Where restrictions on mixed stock fisheries to create additional donor escapements are requested, Board of Fisheries approval will be required, unless the Commissioner determines that no substantial impacts on established fisheries would occur.

The proposed brood stock policy of ADF&G further states that hatchery egg take schedules will be formulated to realistically provide for brood stock while "minimizing impact on natural recruitment."

This policy may present problems even now as the demand for eggs and brood stock for hatcheries coming on line is immediate (particularly during bad run years). A policy of "long-term and continuing analysis" prior to any decision to sacrifice or overharvest wild stocks not only impacts on the ultimate harvest on hatchery stocks by Alaska fishermen, it also may affect the front-end potential and timing of ultimate production by state and regional association hatcheries. Definition of "viable natural runs" is not a matter which should be deferred any longer than

necessary. Legislative direction regarding alteration of harvest management and brood stock policies may be necessary to resolve this problem.

A second problem reflected in the draft Policy and Procedures is the lack of guidance regarding the interface between the resource development and management divisions within ADF&G as they might affect regional association resource development activities. Appropriate alteration to the above policies will require joint research stream surveys, site selection and planning by these divisions and the associations. The regional comprehensive planning process should be instituted in a fashion which more directly requires effective interface between harvest management and resource development programs. Representation of each activity on regional planning teams is suggested by ADF&G Policies and Procedures; inter-divisional cooperation can be further achieved by assuring development of harvest management plans in concert with hatchery planning activities (which can positively improve relationships with regional associations as well).

At page 26a of ADF&G's proposed Policy and Procedures, it is stated: "There is a need to clarify the relationships between the management of hatchery returns and the issuance of a private nonprofit hatchery permit." ADF&G proposes development of a basic harvest management plan before a private nonprofit hatchery permit is issued or approved by

the commissioner and the Board of Fisheries. The basic plan would be developed by department area biologists in consultation with the applicant. The regional planning team would review the plan as part of the application review process to determine the proposed hatchery's compatibility with finalized or preliminary "comprehensive regional plans" required under A.S. 16.10.375. Ultimately, the basic harvest management plan would be part of the "regional comprehensive plan". Why should harvest management plans be formulated separately and in a different manner than other elements of a comprehensive plan? Are basic harvest management plans merely to be developed on a project-by-project basis and then incorporated into regional plans?

We believe that the comprehensive regional planning process must be upgraded to develop a multi-species harvest plan for the region which will allow hatchery locations to maximize harvest. This will require much new data as to existing and planned runs by species. Establishment of a comprehensive harvesting plan as part of the regional salmon plan is not to suggest that regional associations should in any way be involved in actual management of salmon stocks (i.e. delegation of regulatory authority). It is to suggest that policies which in any way segregate harvest and hatchery management and planning activities should be changed to ensure fuller coordination.

3. Need for Improved Relationships Between Regional Associations and ADF&G.

We have indicated that past relationships between regional associations and ADF&G have been less than cooperative, and improvements are still necessary. Lack of cooperation and coordination among these entities can jeopardize the future success of all programs.

Regional association managers have stated that in many cases they have had difficulties with ADF&G regarding methods selected to enhance the resource. They have had problems in obtaining state approval to take brood stock and eggs for existing facilities and proposed new facilities and the quality of relations during the evolution of the regional planning activity has varied. These factors indicate little evidence of clear commitment by ADF&G officials to assure on a priority basis the successful evolution of the regional association program or vice versa.

A.S. 16.10.375 provides that the Commissioner of ADF&G shall have developed regional plans for salmon enhancement. The plans are to be developed by regional planning teams consisting of ADF&G personnel and representatives of qualified regional associations. Ultimately, a state-wide plan is to be developed. Regional plans have been developed in some regions and not in others pursuant to this statute. Some are more comprehensive than others. No state-wide plan has been completed.

Legislative recognition of the need for comprehensive regional planning with input by regional user groups is a most progressive policy. In fact, this fisheries development planning effort appears more sophisticated than those existing in other states. However, the legislature needs to address means of upgrading this process to achieve express goals and effect improved relations between ADF&G and the associations.

First, at present, regional plan approval is the exclusive prerogative of the Commissioner of ADF&G. This level of control has been the subject of some criticism. Association representatives and others have indicated that while their voices are exercised through this process, whether they are heard or not is by no means assured. We believe that ultimate management authority should reside at the professional management or state agency level. However, it may be that the level and quality of association input into the planning process will better reflect the legislative policy of regional input if a dispute resolution mechanism, or at least a discussion process, were developed to satisfactorily air differences of opinion with regard to adopted plans.

Second, we question whether comprehensive planning in the various regions should be allowed to run at a pace which depends exclusively on the commitment of local users to establishment of regional associations and approval by ADF&G of same. To date, the basic thrust of the planning

process has been that regional plans themselves can be as simple or complex as those individuals involved choose to make them. Likewise, the amount of time, effort and money which is spent in developing comprehensive plans varies by region. Differentiation between short-term planning necessary to start a reasonable number of development projects and long-range planning must occur.

If there is truly a need for comprehensive planning with user participation on a regional basis, and we think there is, tying the level and quality of planning to the progress a particular region makes in organizing regional associations makes no sense. In fact, a decision whether a regional association is a necessary entity in a particular region may well depend in part on the findings of a comprehensive planning activity. The voluntary aspects of the hatchery development program are appropriate; however, comprehensive resource development plans for a region are necessary regardless of the election to establish regional associations. While this point is moot in certain regions from an organizational standpoint, it is not in others. Moreover, if the legislature expands regional association activities to include projects relating to other species, short and long-range planning to define new goals and programs will be necessary. Finally, we suggest throughout this report means of upgrading the planning process. This contemplates a long-range planning effort, with commitment to

development of necessary data and information. Recent efforts to speed the development of regional plans based on this year's appropriation to existing associations is inconsistent with this proposal (see below).

Third, relationships between ADF&G and the regional associations are affected by the quality and content of comprehensive salmon resource development plans. As the regional associations improve their management and technical skills, and this is occurring, they will be frustrated by present limits in the quality of planning.

We believe establishment of a truly effective comprehensive salmon resource development plan will necessitate substantial technical support services, research, stream surveys tagging and other activities by or on behalf of the planning teams. This is particularly true if the management plan is to include those elements suggested as necessary below. It should be noted that the planning process cannot be carried out without adequate financing, region-by-region, in budgets of both ADF&G and the regional associations.

The quality of regional plans is also affected by present state policies protecting all natural runs. The proposed Policy and Procedures by ADF&G establish long-range and short-term objectives to be included in the regional comprehensive plan. Present policies may not apply over the long-term, and long-range planning which does not reflect likely changes in such policies will not be adequate. This

further states the need to address the issue and to begin to identify viable runs now.

ADF&G defines the focus of long-range comprehensive planning to include determination of public needs by species and user groups, proposal of numerical objectives by species to meet these needs, determination of numerical goals for natural stock maintenance and rehabilitation, determination of numerical goals for enhancement strategies by species, and integration of long-term user group needs with technical considerations on the biological potential of the resource. Short-term objectives involve essentially the same analysis for incremental time periods within the long-range (17 year) plan. We do not believe these objectives for comprehensive resource development plans, particularly for the long-term, are sufficient. While the establishment of numerical objectives may make some sense, it is the road map to establishment and achievement of those numerical objectives which should be the basic content of the comprehensive salmon resource development plans for each region and for the state.

Establishment of a comprehensive management plan might include at least the following basic elements:

1. Establish guidelines for salmon production.
2. Identify program objectives (it appears that this is the primary area of concentration presently contemplated for the regional planning process).
3. Describe and assess present natural production.

4. Determine and assess present artificial production.
5. Determine potential natural production.
6. Identify viable stocks and nonviable stocks that have potentially valuable characteristics.
7. Determine appropriate regional stocks by species.
8. Identify acceptable enhancement possibilities. These must be consistent with harvest management strategies.

Further consideration must be made for short-term and long-term policies for egg availability and development of brood stock. These policies must reflect the goals of maintaining reasonable fisheries and protecting viable natural runs during program implementation. All proposed projects in a region must be measured against the goals, policies or standards which will result from this analysis. This may require establishment of a construction and operating review process to ensure program activities consistent with approved plans.

Another major aspect affecting relations between ADF&G and regional associations involves the duplicity of roles to be assumed by the department. On the one hand, ADF&G is to help organize and help maintain viable regional associations. A.S. 16.10.380 provides that the Commissioner of ADF&G shall assist in and encourage the formation of qualified regional associations for the purpose of enhancing salmon production. On the other hand, the legislature has

also authorized the Commissioner to issue permits for salmon hatcheries to regional associations organized as non-profit corporations under A.S. 10.20 and regulate many operational aspects of the program. Thus, not only is the Commissioner the superseding authority over all regional planning activities as discussed above, he is also directed to assist regional associations and at the same time regulate all efforts pertaining to enhancement of salmon by the association-private non-profit corporation. Achievement of cooperation and assistance between ADF&G and the regional associations will be difficult, at best, given the nature and diversity of relationships presently existing. It will take strong management direction by both the state and the associations to recognize and deal with these sometimes conflicting roles. Establishment of clear biological, economic and management standards against which performance can be measured, and upgrading of the planning process may help offset the fact of these conflicting roles.

A.S. 16.10.443 states that the department shall make every effort "within the limits of time and resources" to advise and assist applicants in the planning, construction and operation of salmon hatcheries. The level and quality of assistance by the department to regional associations has varied from region to region and is affected by personalities and budget. Most association managers have indicated that relationships with local ADF&G officials at the technical

staff level have been quite positive and they have received considerable assistance from such persons. However, they have received less cooperation and support from the central office as a general rule. Procedures to clearly delineate reporting relationships and for expediting decision making on issues of concern to the associations need to be improved. Establishment of policies and procedures involving interrelationships between ADF&G and the associations should be developed with the cooperation of the associations. Moreover, top level management control and commitment to the success of both regional association and F.R.E.D. programs is essential. Association managers must have clear access to the director of the F.R.E.D. division, the commissioner and board members.

A third major issue and necessary element to improve on relationships between ADF&G and the regional associations involves clarification of the activities to be undertaken by both. We have suggested in Chapter II the evolvement of defined roles and responsibilities over a ten year period. Of course, it is difficult at this point to finally determine the types of projects and programs which should be undertaken by regional associations other than planning until their financial viability and organizational stability is secured. However, assuming that problems relating to financing can be resolved on a satisfactory basis, clear definition of roles and responsibilities of ADF&G and the associations for both short-term and long-term

operations is essential. Specific program activities to be undertaken by ADF&G and regional associations in a particular region can and should be addressed, in part, in the development of comprehensive regional plans. However, guidance from the legislature as to the division of responsibilities is also appropriate. The study group and/or the Fisheries Council should be continued to assist the legislature and the Governor in continuing to define these roles.

To date, regional associations have built hatcheries and other artificial propagation projects, performed habitat rehabilitation, conducted (region-specific) research, they have created greater public awareness of the need for salmon resource development, participated in regional planning activities, and institutionalized themselves to varying degrees. At the same time, ADF&G has built hatcheries and other artificial propagation projects, performed habitat rehabilitation, conducted research, created greater public awareness of the need for salmon resource development, and participate in regional planning. Again, ADF&G exercises considerable regulatory authority over regional association projects and programs and controls the regional planning process. Based on present mandates, there is considerable potential for duplication of activities between the regional associations and ADF&G, and unhealthy competition between these entities for limited dollars and projects: The Potential for the operation of certain programs at cross purposes from

one another, and perpetuation of adversary relationships are equally serious problems resulting from the lack of clear guidelines, priorities and authorities for each program.

The legislature can direct a phasing-in of operational authorities (or segregation of same) over a reasonable period of time, with final program assignments reflecting the relative maturity, skills, interests and financial capacity of each. Regional associations could over time become responsible for operation of production facilities operating at full or near full capacity consistent with approved comprehensive plans. This would reflect the legislature's goal of continuing to attract reasonable sums of private monies, to maintain user group participation in ASRDP, and would avoid long-term commitment of budget for operation and maintenance of hatcheries at a time of projected declining revenues. Projects of higher risk and supportive of the production program, but presenting costs or risks which would not naturally be borne by the private sector, would in large part be undertaken by ADF&G. For example, research operations and facilities would also be ADF&G's responsibility. Stream surveys might be the responsibility of the state, but conducted by associations on a contract basis. Joint participation in planning for production facilities and support services, including clear assignment of tasks can occur as institutions mature and obtain the financial commitments consistent with evolving assignments

which will further contribute to an improved and coordinated program.

Another element critical to the joint success of ADF&G and regional association programs, discussed in Chapter II, is assurance over time that financial resources will be sufficient to support a program which will begin to achieve established numerical production goals as part of an upgraded comprehensive regional plan. At present, it appears that the regional associations and ADF&G are strictly limited by statute and available financial resources as to the number and types of production projects they may undertake, regardless of the final outcome of the assessment litigation. Review of proposed long-range association plans reflects a fairly conservative approach to expansion of existing programs. While this may make sense under present circumstances, we suggest that Alaska will not begin to reach appropriate production goals in a reasonable period of time if it is unwilling to assume greater risk and undertake projects more aggressively than indicated by its present course. Improved planning, research and data, and coordination of program activities are steps that will minimize risk over time. The legislature and the Governor must recognize, however, that legitimate expansion of AFRDP consistent with its established goals will require approval of actions and management decisions that involve some yet unanswered questions. ADF&G and the associations cannot achieve reasonable production goals within the present financial, budget and statutory limits.

4. Need for Improved Relationships Between
or Alteration of Roles of ADF&G and DCED.

A.S. 16.10.500 et seq. provides authority for a fisheries enhancement loan program. The Commissioner of the Department of Commerce and Economic Development (DCED) is authorized to make loans to qualified regional associations holding permits pursuant to A.S. 16.10.400-470 for the planning, construction, and operation of hatchery facilities. Thus, the financing of regional association activities largely within the authority of DCED. We have indicated above an apparent lack of an appropriate cooperative relationship between ADF&G and DCED by statute. The proposed Policy and Procedures by ADF&G, at page 60, infers that coordination between ADF&G and DCED is necessary for orderly review and approval of permit applications and loan applications. Members of the study group have indicated that relationships between the two agencies are not well coordinated.

DCED operates a number of financial assistance programs and conducts other activities related to the economic development policies of the State of Alaska. It is perhaps for this reason that the financing program for the regional association hatchery program was originally assigned to that agency. We do not believe this assignment of authority for financing of regional association projects is appropriate.

As noted above, the financial viability of proposed artificial propagation is directly related to a number of

biological factors and harvest management strategies, among other things. We have suggested guidelines for evaluation of the economic feasibility of artificial production projects from both a micro- and macro-economic perspective. Again, many of the criteria involved in the evaluation of individual projects, or a broad-based regional program, involve consideration of a number of factors which require the expertise of persons familiar with the science of fisheries production. Further the bulk of analysis related to the financing of regional association projects, not to mention those to be undertaken by ADF&G, involves information not traditionally considered by lending officers. In fact, association grant and loan decisions presently made by DCED are more akin to hatchery program budget analysis than traditional lending practices.

A further point related to ADF&G, DCED and regional association relationships involves recent problems by the Southern Southeast Regional Aquaculture Association in obtaining a final installment of its loan for a major hatchery facility. This failure to make a scheduled installment payment by DCED would effectively have stopped construction at a very late stage of the project, thus rendering the investment in the facility to date as wasted. Concerns of the financial officer might have been alleviated if he had a better understanding of fisheries related aspects of such projects and if project risks were not to be evaluated

within the context of traditional lending practices. Even if financial concerns at this stage of the project were legitimate, it is suggested that holding a loan officer blameworthy for the failing of a project of this magnitude and kind and for a program in a relatively early stage of public experimentation would be most inappropriate. It is (or should be) widely understood that there are technical risks inherent in these programs which may dictate training and experience not common to persons with traditional financial backgrounds.

Finally, the state has not established sufficient standards, guidelines or criteria to evaluate the potential rate of return on investment for its salmon production programs or to evaluate the relative cost and benefits of such programs. This expertise can and should be developed within ADF&G. With this accomplished, transfer of authority for financing of fisheries enhancement facilities from DCED to ADF&G would clearly be desirable. We see no justification for continuing the financial aspects of the program under DCED authority.

5. Need for Improved Relationships Among All Regional Associations.

Regional associations are at varying levels of maturation, and in some instances, have not been formed to the point of approval by the Commissioner of ADF&G. We have

observed in recent meetings with the study group a growing inclination for association managers to discuss among themselves various problems and potential solutions. Communication as to research and planning results, means of operation of facilities, and other activities is occurring. However, members of the study group and others have reported and our own observations have indicated the need for improved relations among the associations. Some of the improvement is necessary because of differences in personalities, and in other cases a misguided spirit of competition among the associations appears to exist.

There is good reason for allowing associations to establish resource development programs at their own respective paces within each region, although in some instances the pace of program and project development has unnecessarily been slowed because of regulatory problems, obtaining necessary approvals, and the like. The experiences of the more mature organizations will be most helpful to those in the beginning stages of development. Much research, data and information has been performed and compiled by some regional associations. The sharing of such information should occur as a matter of course, and it may be necessary to establish a system among the associations to ensure that this occurs. This could be mandated by the state legislature.

It is critical for each association to understand what the others are doing. The potential for duplication of

tasks unnecessarily among the associations exists without a clearly established system of communications. It is suggested that the study group or perhaps an upgraded Fisheries Council be continued into the future, perhaps with a specific mission to ensure continued communication and improved relationships among association representatives (and state agencies).

6. Need for Improved Relationships Among Salmon, Shellfish and Bottomfish Development Program Elements.

We have suggested that the development of Alaska's abundant fisheries resources be viewed and organized as a single program (AFRDP). Competition for research, management, development and investment dollars among program elements at federal, state and local government levels and from the private sector is presently unavoidable among salmon, shellfish and species development activities. This competition among species has been heightened by new opportunities available as a result of enactment of the Fisheries Conservation and Management Act (FCMA).

Assuming the goal for development and utilization of fisheries resources off the shores of Alaska is to maximize potential benefits to the citizens of the state consistent with principles of sound conservation and enhancement, establishment of programs and activities to achieve that goal based upon treating each fishery independent of one another and on a haphazard basis makes no sense. Certainly salmon, shellfish and bottomfish species are at varying

stages in terms of development, utilization, management sophistication, market potential and value, industrial development, and understanding of resource status and potential. All such factors will be reflected in the ultimate budget commitment and programs of the state to affect reasonable maintenance, development and utilization of these renewable resources. However, the organizational and professional disciplines to be applied to proper utilization of all species of fish are relatively the same. The fixing of sound state policies, budgets and management principles for each fishery with maximum avoidance of conflicts, and the sharing of information, expertise and program experiences to maximize effectiveness of each is essential.

In the development of its "Alaska Fisheries Plan," ADF&G acknowledged that salmon stocks can and need to be rehabilitated. Numerical objectives were established by ADF&G to provide minimum annual harvests of 40 million salmon at the end of seven years and 100 million salmon at the end of eighteen years. These goals would be achieved through a combination of enhancement, rehabilitation, management, development research and habitat protection at a cost of 300 million dollars over fifteen years according to the proposed plan. ADF&G acknowledged that implementation of the plan would "require a major effort on the part of fishermen, industry and government alike . . ."

The level and quality of government and private sector planning, management and development activities for shellfish and bottomfish lag far behind those for salmon. The maturity of programs and dedication of state resources to maintenance and proper utilization of these important species differ as well, largely because the legal and economic opportunities affecting the harvesting and production of each has varied.

The study group is well aware that salmon harvests will no longer predominate fisheries development activities because of these newly available opportunities and the economic reality of need for diversified harvesting activities by fishermen formerly able to target primarily on salmon. There has been much talk, and considerable study, planning, and now, pilot projects related to necessary economic development activities to maximize benefits to Alaskans of utilization of offshore fisheries. Most representatives of the industry, fishermen, processors, bankers, public officials and other participants at regional and national conferences on 200-mile limit fisheries (despite differing findings from a variety of consultant reports), indicate that by necessity this new industry will not develop separate and apart from existing fisheries and industry. This reality further establishes the need for a holistic fisheries development and utilization policy and program.

As noted above, responsibility for development activities relating to these fisheries presently resides in a number of different agencies and offices. The need for program activities and budget for each have not been addressed in the context of a single program or policy, priorities affecting each have not been established nor have relationships or coordination among them been imposed. We have been directed by the study group to assess on a preliminary basis alternative means of converting ASRDP programs to the broader program context of AFRDP. Our review is not only to include potential organizational arrangements affecting state activities, but also alteration of the missions and structure of regional associations. To this latter point we will now briefly speak.

It is our view that an altered regional association form (already necessary) which allows such associations to become involved in diversified activities necessary to the development of all fish resources consistent with local priorities and needs is appropriate. This suggested diversity and expansion of authority may seem odd at a time when the financial arrangements for the program are directly threatened by legal extinction. However, certain features of the existing program are most applicable to development needs and opportunities in other fisheries. These include:

1. There is a clear need for involvement of fishermen and other sectors of the industry

in the protection, utilization and development decisions affecting all fisheries.

2. There is a need for fishermen and other sectors of the industry to participate in the financing of all fisheries development activities (the legislature's recent re-enactment of A.S. 43.75, which taxes all species harvested in Alaska waters to finance fisheries development indicates support for this rationale).
3. There are varying needs and interests by region with regard to fisheries development. For example, salmon fisheries development may be a priority to fishermen in Southeast Alaska, while projects related to bottomfish development may be more relevant in the Aleutian Chain.
4. The more flexible the regional association structure is in terms of meeting clear regional needs and reacting to priority development activities, the greater the likelihood of financial and institutional stability.
5. A feature of the regional associations is their clear mandate and need as an organization to be responsive to the variety of interests among local fishermen. We believe that over time, a balanced approach to fisheries produc-

tion will evolve as a result of this program, and that this will occur on a multi-species basis if the mandate and membership of such associations is broadened to include development of and planning for other fisheries.

6. The need for a holistic fisheries approach, if appropriate for state programs, is also necessary for regional associations. This is especially true if the role of user groups in regional fisheries planning (regional planning teams) is to be upgraded.
7. Regional fisheries planning can and should address potential gear and harvest conflicts on a multi-species basis.

Certain other features will need to be built into the regional fisheries development program as a result of the recent Superior Court decision and the need for a secure income and financing stream. If the program assumes more of a local quasi-governmental character than at present (e.g., borough or municipal fisheries development service areas), assumption of a more diverse economic development program may be appropriate. The legislature should address whether newly instituted associations could finance, construct and operate needed infrastructure, marina space, processor facilities (for lease) and other activities such as do port facilities, economic development districts or other local

governmental entities. However, care must also be taken to preserve certain of the private sector features of the present associations in deciding what activities they might undertake.

Assuming that the appropriate institutional arrangements for regional associations necessary to expand their basic authority can be made, necessary relationships will need to be established between such associations and the existing Office of the Governor/Bottomfish Coordinator. Governor Hammond has created a bottomfish task force, whose membership includes state legislators, agency commissioners, and private sector representatives, to define specific goals for the state and to design a work plan for industry development relating to the state's bottomfish development opportunity. In a draft report by the bottomfish program coordinator, dated May, 1979, a program management and organization structure which would have all bottomfish program elements operate at the direction of the bottomfish coordinator, with advice from the bottomfish task force, was proposed. This program proposal suggests that the Department of Commerce and Economic Development would pinpoint areas of industrial weakness and offer strategies and guidelines to strengthen the economic incentive for harvesting bottomfish. The Department would also provide capitalization to the industry through state loan programs, the Commercial Fishing and Agriculture Bank, and the Alaska Industrial Development

Authority. ADF&G would monitor the biological characteristics of the bottomfish resource to provide information for managing the resources for optimum sustainable yield and to assess harvest potential. ADF&G would sample commercial harvest efforts and identify areas of potential conflict between bottomfish fisheries and those of traditional salmon and shellfish fisheries. The Department of Community and Regional Affairs would draw up strategies to assist local communities in alleviating specific local physical and social-economic impediments to development.

While relationships with other fisheries development activities at federal, state and local levels are suggested by the Bottomfish Coordinator's report, establishment of a holistic fisheries development program is not. The proposed program plan to achieve bottomfish development goals and objectives is an impressive start toward the establishment of specific program activities to achieve the state's bottomfish resource utilization goals. However, only limited program budget monies are committed to the resource management aspects of the proposed program. Resource development and enhancement is only vaguely referred to and the relationship between salmon and shellfish fisheries development programs and that for bottomfish is not seriously addressed. The concept of top-level management control over all elements of the Alaskan fishery with provision for coordination among agencies and programs is essential to the success of AFRDP.

B. There is a Need for Improved Information,
Data and Research Results for AFRDP.

1. Introduction.

We have discussed the clear need for improved data and information regarding fisheries development activities from economic, financial and biological perspectives, by both state agencies and regional associations, if financing for expansion of the fisheries resources of the state is ever to be secure. Lack of information and proof of success of existing programs has affected budget reductions and instability which makes short- and long-range planning very difficult.

We have also described the likely prospect of competition for dollars among salmon, shellfish and bottomfish development program activities, and have suggested that lack of a holistic of the fishery and an understanding of its needs will make it difficult for the Governor and the legislature to make proper budget decisions. Not only is a methodology for assessing potential returns on investment and relative program costs and benefits necessary, provision of technical data and information upon which to base such assessments will be required.

Finally, we have referred to the need for greater coordination and expansion of research activities related to AFRDP. This section will describe certain non-financial data and information needs for both ADF&G and regional

associations as well as the expanded research and development requirements associated with development goals for the Alaska fisheries. This section will also describe alternative institutional arrangements which are necessary to meet the goal of improved information, data and research.

2. Need for Improved and Expanded Research for AFRDP.

While there is a major need for improvement of data and information for budget purposes, increased biological information regarding existing and proposed projects and to accomplish the objectives of AFRDP also are necessary. A first step in improving Alaska's research program is establishment of categories of research which will afford biologists a common basis to fix research priorities and goals.

For salmon, we would place federal, state and private sector research into three categories. The first category would include evaluation of the potential for maintaining and enhancing artificial and wild salmon. The second would include development of improved techniques to increase the numbers and quality of artificially propagated salmon. A third category would involve assessment of environmental factors causing variations in the abundance of anadromous species. A further description follows:

Category 1: Evaluation of Potential for Maintaining and Enhancing Artificial and Wild Salmon.

Evaluation should extend to existing wild and artificially produced populations as well as proposed new

production because of the need to monitor the Alaska salmon production system as a whole. Priorities and areas of investigation will need to be continuously re-assessed as information is gathered.

The following specific areas are suggested for priority investigation:

(a) Evaluate the economics of enhancement - benefits versus cost or return on investment to improve knowledge about the economics of fisheries.

(b) Determine population levels and behaviors of wild and artificially produced stocks, and population interactions for the purpose of reducing negative impacts. This would include determination of catch distribution and migratory routes for mixed stock fisheries.

(c) Assess environmental limits for productive capacity of wild and artificially produced stocks.

(d) Determine and solve disease problems as they relate to stocking policies.

(e) Identify valuable stocks, including measures of isolation or inbreeding, and examine opportunities for new introductions both in nature and artificial facilities.

Category 2: Improved Techniques to Increase the Numbers and Quality of Artificially Propagated Salmon.

Research should be aimed at improving the cost effectiveness of artificial propagation systems through

modification of existing technology or the development of new culture techniques, including increased survival of artificially propagated salmon. It follows that newly developed techniques must ultimately be shown to contribute significantly to the fishery under carefully controlled pilot-scale rearing and/or release experiments. Examples of recommended research are given under the five following headings:

1. Physiology: Development of physiological, biochemical, and endocrinological measures to assess the effect of the rearing environment on smolt quality. Development of smoltification indices as a tool to predict optimum time for release and techniques to enforce, advance, or delay smoltification.
2. Genetics: Development of brood stock management and breeding regimes to identify and enhance those characteristics of salmon that produce the greatest benefit to the fisheries. Develop strain of disease-resistant, fast-growing, early-maturing salmon. Test the application of various brood stock techniques and breeding regimes to particular artificial propagation strategies.
3. Disease: Development of new methods for diagnosis and prevention of hatchery diseases.
4. Nutrition: Development of cost-effective feeds using new or under-utilized nutrient sources.

5. Behavior: Development of a technology to control migratory and homing patterns in appropriate circumstances.

Category 3: Environmental Considerations.

Enhancement, which is defined as all means of increasing production--both natural and artificial--of anadromous salmon, not only is dependent upon the successful rearing of the animal, but also the ability of the animal to survive in its total environment. Information is required to assess the effect of habitat alterations on the fish. Emphasis should be given to delineating environmental factors, good and bad, causing variation in the abundance of anadromous species.

1. Habitat Maintenance.

Studies to be directed toward improving existing habitat, including in-stream flow and temperature requirements and barrier passage.

2. Evaluation of the Animal and its Habitat.

To assess environmental changes, it is necessary to measure the response of the animal to such changes.

Establishment of these research categories suggests the need for a long-range research program in Alaska to improve salmon resource development activities for natural and artificially produced salmon from the point of egg take or implantation (including improved incubation methods) to

the emerge stage, to survival through the full migratory pattern of the fish. Research related to the stages of a salmon's survival and growth should be undertaken on a cooperative basis with the federal government, University of Alaska, and others with research capabilities consistent with the jurisdictional interests of each. For example, assessment of the salmon in the ocean environment, which is within the jurisdiction of the federal government should be a priority of the National Marine Fisheries Service. It appears that research relating to environmental concerns are now a priority of the U.S. Fish and Wildlife Service, and to a lesser degree the U.S. Forest Service. Research relating to hatchery operations and performance and that relating to the natural environment in fresh waters, including certain research relating to environmental considerations, would appropriately be the priority of the state. Discussions with study group members indicate that this division among federal and state research activities is evolving on an informal basis.

Biological standards for construction and operation of hatcheries and other artificial propagation projects need to be established as part of the comprehensive planning process. ADF&G has done some work in this area. However, the adoption of final standards will require further research and analysis on the impact of such projects on existing natural runs; the viability of projects in the face of

competing beneficial uses of watersheds, and a wide variety of other critical biological issues will also require additional research before final standards can be established.

The establishment of guidelines to evaluate potential areas for the construction and operation of hatcheries and other projects, and evaluation of performance of such projects will necessarily require improved data and information regarding stock identification (i.e. tagging, scale studies and various other marking methods), and stock assessment through improved means of counting salmon in various stages of the life cycle. Such data and information will be necessary in order to make improved management decisions, including those related to the development program.

For bottomfish, the draft report to the bottomfish program coordinator of May, 1979, describes a role for ADF&G in the development of fisheries management plans for off-shore fisheries. While the management authority over such resources largely resides within the North Pacific Fisheries Management Council, ADF&G is recommended as the state entity responsible for overseeing the activities of the Council and recommending sound management practices to ensure protection of bottomfish resources. Data and information and research activities relating to both shellfish and bottomfish lag behind that available and presently being conducted for salmon. Included among those proposed activities to be undertaken by ADF&G for bottomfish which relate to the above research, data and information goal, are the following:

1. Coordinate research activities and cooperate in the design of needed projects with other research agencies.
2. Sample commercial harvests for biological, effort and technical data in a manner and volume which is statistically significant.
3. Assess resource independently of the commercial harvest (survey, tagging) and analyze data collected.
4. Collect and distribute to the public relevant biological and technical information generated by resource agencies, including ADF&G.
5. Identify areas of conflict between the bottom-fish fishery and present historical fisheries and recommend measures to resolve these conflicts in a manner resulting in optimum yield from these interacting fisheries.

Discussions with a number of persons in the industry, federal and state policymakers, and others, indicate that the single most important effort to be undertaken by government in the next few years to ensure the appropriate development of off-shore fisheries is related to the research and data goal. The concern has been expressed that investments in some fisheries may be lost because so-called under-utilized species may already be on the decline as a result of over-harvesting by foreign fleets. Mistakes of the past regarding

other species which allowed overharvesting without consideration of resource impact should not be repeated. The potential to enhance presently depressed species needs to be evaluated. The role of the state in protecting resources off its shores cannot be minimized. If new industry or benefits are to accrue to Alaska by development of off-shore fisheries, there is a legitimate state interest in doing that which is necessary to protect these resources. The state can best accomplish this by preparing to be an effective advocate before and assistant to the federal resource manager.

While research relating to shellfish management and development is in a more advanced stage than for most bottomfish species, this may not be true on a world-wide basis. Accessing foreign data and information developed with regard to off-shore fisheries may begin to offset some of the information gaps.

The proposed research, data and information program to be undertaken by ADF&G pursuant to the report of the bottomfish coordinator is an ambitious one. Priorities will need to be established between this and other fisheries research and information development programs. Clearly, ADF&G will need adequate funding if it is to begin to accomplish the suggested goals.

2. There is a Need to Coordinate Research and Development and Information Systems Among Federal and State Agencies and Regional Associations.

We have sought to identify certain research cate-

gories and information needs which over time must be met in order to maximize the productivity of AFRDP. Another factor necessary to the accomplishment of this goal is improved coordination among federal, state and private sector research activities. Avoidance of unnecessary competition for dollars among state agencies and duplication of activities among all research entities, as well as the establishment of priorities for research consistent with guidelines and criteria, can and should be accomplished with or without legislative action. However, a legislative mandate for improved research coordination may be required.

Perhaps the single most important means for ensuring greater coordination of research would be the establishment of a comprehensive joint research facility in Alaska. As has been previously discussed, Alaska may not be receiving its fair share of fisheries research benefits when compared to other states. Particularly in view of the fact that it produces as much as eighty percent of the nation's bottomfish resources, is the largest producer of salmon, and is a major source for shellfish. In Washington, a joint research facility is being funded in large part by the federal government and is to include state, tribal and university research facilities as well. Justification for the joint facility included the obvious need for improved research coordination, increased information and greater likelihood of joint projects, an expanded skill base for research as a result of centraliza-

tion of research staffs in a single facility, and the avoidance of unnecessary duplication. Such a facility may be more appropriate for Alaska and is necessary to attract quality research staffs, appropriate levels of funding for state-federal projects, and to respond to the major research requirements evolving from development of new off-shore fisheries. Such a facility could be jointly funded by federal and state governments.

A second major step at improving coordination among research entities is to clarify research responsibilities among programs within AFRDP itself. As previously indicated, a major thrust of an improved AFRDP will require clearer definition of the roles and responsibilities of state agencies and regional associations. It has been suggested that a long-term policy could be established to specifically provide that research activities by or in behalf of the state be the responsibility of ADF&G. Were this accomplished, assurances must be provided that regional association needs will be met, possibly by legislative mandate. Establishment of a comprehensive regional plan for salmon fisheries development and other species can and should include fixing research priorities for the region. Of course, continuous upgrading of the comprehensive plan based on experience and information developed over time will be required.

A third means of improving coordination among research activities may be found in action already undertaken

by the legislature. The Science and Technology Act of 1978 established a statutory framework for the creation of the Alaska Council on Science and Technology (ACST), a comprehensive planning mechanism to guide important research activities in support of state objectives and to ensure the efficient transfer of resulting data and information. This act reflects legislative recognition of the importance of the role of science and technology in public policy and decision making.

The Council's activities are to include:

1. Objective evaluation of the need for specific research;
2. Set priorities for state research requirements;
3. Identify and evaluate immediate and future options available to solve a particular problem or implement an idea; and
4. Coordinate data and information exchange among research organizations to avoid unnecessary and costly duplication of effort.

The Council's authority is not limited to fisheries research activities. Additionally, its involvement in evaluating and coordinating priorities for research by the private sector, the federal government, and others, appears somewhat limited.

We believe ACST can provide an appropriate model for ensuring coordination and fixing of appropriate research priorities for fisheries in Alaska. It might be possible to

establish a sub-committee to ACST to deal specifically with fisheries research activities. (Note: That Council membership includes representatives with fisheries-related research backgrounds from the University of Alaska, the U.S. Department of Commerce and ADF&G.)

An alternative approach might be establishment through legislation or executive order of a fisheries research council or work group, to perform many of the fisheries related tasks of ACST. A council would be responsible for establishing cooperative agreements with federal research agencies and private research laboratories; reviewing and incorporating research priorities established by regional associations through proposed regional planning processes; and, working with the state legislature in the development of budget proposals to fund an improved and expanded research program. The committee could also oversee the funding, design and construction of a joint research facility. Membership on the committee might include representatives from the U.S. Forest Service, the U.S. Fish and Wildlife Service, the National Marine Fisheries Service, the Bureau of Indian Affairs, ADF&G, the Legislative Affairs Agency, the Alaska Department of Transportation, the Office of the Bottomfish Coordinator, and representation from the Regional Associations and Native Corporations, among others.

A fourth means for improving research is the establishment of cooperative agreements between federal and

state agencies to ensure research consistent with the needs and priorities of AFRDP. ADF&G has in effect a cooperative agreement with U.S. Forest Service, although this agreement does not significantly address research coordination as discussed above. There is considerable interest and precedent at the federal level in providing for coordination with state activities through interagency agreement.

The legislature can mandate that the regional associations and the state negotiate cooperative agreements with all appropriate federal agencies. These agreements should not necessarily be limited to fisheries agencies or affect the research function alone. Research conducted by environmental agencies, industrial development agencies, economic planning programs, and others will occur and coordination is appropriate if AFRDP is to achieve its lofty goals.

A fifth important means of upgrading the research and information development elements of AFRDP is establishment of a uniform reporting and accounting system for each association. State agencies (DCED and ADF&G) and legislators have to date been relatively critical of the level and quality of information available to them regarding internal activities of the associations. While an annual report by the regional associations is required, a more sophisticated budget and accounting system by which the legislature can evaluate individual regional programs and ADF&G projects will be

helpful. Economic data and financial information consistent with the methodology described in Chapter I should be required.

In analyzing economic and biological projections, as well as total program results over the long-term, it will be necessary for regional associations and ADF&G to work from much common data. This is necessary to compare the effectiveness and efficiency of different programs and approaches to resource development undertaken by the associations and federal and state agencies. Any improved system must be simple and yet report out information necessary not only to evaluate the programs, but also to reduce and minimize administrative burdens and costs to the associations. Obviously, the regional associations must participate in any program effort at information and data system development. The state-wide comprehensive planning process might be an appropriate vehicle for accomplishing this.

C. There is a Need to Improve Relationships With and Expand the Contribution of Federal, Local and Private Sector Programs Affecting or Having Potential Impact on AFRDP.

1. Introduction.

We have identified in outline form a number of federal fisheries programs which have direct and indirect impact on achievement of the goals of AFRDP (see Appendix B for outline presented to the study group), and have discussed the need for federal and state research coordination. Improved relationships with local governments have been

discussed during the last two years because of the enactment of the FCMA. A number of commentators have indicated the need for local governments to develop infrastructure, processing capabilities, and other necessary support services to the growing bottomfish industry if Alaska is to maximize the benefits to be obtained from this important resource. We have suggested that local government involvement in the development of all fisheries resources is growing in importance as a result of the recent decision by the Superior Court affecting the authority of regional associations to raise revenues for salmon production and the reenactment of A.S. 43.75 relating to fisheries taxes on all species harvested in Alaska waters or off its coast. The new law provides for sharing a proportion of such revenue with local governments after the end of fiscal year 1980. This will necessitate greater interaction between state program elements of AFRDP and local governments. Finally, the considerable efforts of the state through regional planning processes and the regional association program to increase the input and stake of various elements of the fishing industry in AFRDP have been identified.

Alteration of the regional association institutional form to better assure financial and organizational stability, upgrading of the association's role in regional planning, and expansion of the ASRDP program concept to AFRDP provide the means for increasing private sector and local government

involvement in AFRDP. This section will concentrate on the need for improvement of federal and state relations.

2. There is a Need to Build a Case for a More Equitable Federal Contribution to AFRDP.

Although it was impossible to obtain detailed budget statements regarding commitment of federal dollars to programs and activities relating to AFRDP, we would suggest that a number of factors indicate that Alaska may not be obtaining a fair share of federal research monies commensurate both with its resource availability and potential when compared with other states. While the overall federal presence in Alaska is perhaps greater than in any other state, competition for limited dollars is again a fact of life among the states when it comes to monies which would contribute positively to accomplishment of the goals of AFRDP. A first reality when exploring possible reasons for less than appropriate federal expenditures relating to Alaska's fisheries than may be justified is the state's comparative lack of presence at congressional and federal agency levels. Alaska's Congressional delegation is small, and in recent years has been forced to concentrate the bulk of its efforts to the D₂ lands issue.

A second reality is that Alaska is not perceived as conveniently located by most persons in the lower forty-eight states. Federal regional offices and major district offices for the Western region are located in large part in

Seattle and Portland. Fisheries policy is generally made in these offices or in Washington D.C. Most of the major regional and local fisheries research facilities are located outside the State of Alaska. These and other factors may have tended to reduce Alaska's input into federal decision making.

An expanded federal contribution to AFRDP is clearly justified. First, the federal presence in Alaska is greater than in any other state in the union. Second, considerable degradation of fisheries resources in Alaska occurred during years in which the federal government was responsible for management of the resource (before statehood). Third, a major proportion of the nation's fisheries resources are off the shores of Alaska. Fourth, with enactment of legislation affecting native claims to fisheries, and the trust responsibility of the United States over such claims, the need for expansion of fisheries resources to meet subsistence and other needs of Alaska natives will be heightened in coming years. Finally, the State of Alaska is among the most economically dependent of any of the states on its fisheries.

Research needs related to Alaska's unique fisheries problems (e.g., weather, methods of stream classification to be applied to the large number of Alaska streams, migration patterns, etc.), dictate establishment of research priorities to achieve the goals of AFRDP. An articulation of these

needs will help Alaska better justify expanded federal and state expenditures. Coordination of research activities with federal agencies through cooperative facilities and agreements will be a further important step towards justifying increased contributions to meet the goals of AFRDP.

3. There is a Need for Greater Federal-State Regulatory Coordination.

We have identified a number of federal requirements and regulations which can (and do) significantly increase costs and reduce the productivity for AFRDP. The regional associations have experienced the need to obtain an excessive number of permits from federal agencies merely to begin their operations. These requirements are also imposed on ADF&G. Regulations affecting the development of the bottom-fish industry are perhaps even more difficult because of the broad jurisdictional authority of the federal government over coastal zones outside three miles. While many and perhaps all of the permit requirements are justified, the process for obtaining necessary approvals can be greatly simplified. The first step should be a concerted effort by the state to consolidate its permit requirements, eliminate duplication, and provide services which may include a one-stop licensing process for AFRDP activities.

Alaska has already enacted legislation for a one-stop licensing program, and this program could serve as a vehicle to minimize regulatory impacts on AFRDP. The state

program could reasonably be applied specifically to fisheries resource development projects on a priority basis. A necessary next step would be the expansion of this program to include federal regulatory activities. AFRDP activities, including the development of salmon hatcheries, other enhancement projects, infrastructure development, and necessary support services for a growing bottomfish industry, could also provide an appropriate model means for bringing about coordinated and consolidated non-fishery related federal and state regulatory processes.

Because Alaska has not yet developed its coastal zone management program to the point of full implementation, and because coastal zone management is viewed by the federal government as a potential vehicle to achieve rational development through simplified processes, monies are available to incorporate measures of regulatory reform and coordination into this process. As part of a special AFRDP program effort (perhaps to be undertaken by the study group or Fisheries Council at the direction of the legislature), policies, processes and initiatives which will ensure improved coordination by federal and state regulatory activities should be developed.

It is noteworthy that most existing fisheries statutes, not to mention upland regulatory activities, specifically authorize coordination, and in some cases, the federal government has appropriated funds for the establish-

ment of such processes through programs other than coastal zone management. Yet, implementation of model programs for specific interest areas (e.g., fisheries development) are in effect only on a limited basis to date. Impetus towards development of off-shore fisheries can be utilized as a further rationale for incorporating a model permitting project for AFRDP, which could be funded in large part by the federal government.

4. There is a Need to Identify Federal Programs Which May Contribute to Accomplishment of the Goals of AFRDP.

Most states have difficulty identifying on a continuing basis the many federal programs which may be utilized to contribute to accomplishment of broad state policies. The State of Alaska can and should make special efforts to identify federal activities and funding sources, not to mention those in the private sector, which can be utilized to contribute to the accomplishment of the goals for AFRDP.

A major argument against seeking federal financing for fisheries development programs is a legitimate concern over the "strings attached" to such funds. Given the level of federal presence in Alaska, this concern is clearly justified. Thus, in the framing of an overall Alaska fisheries resource development program, attention must be paid to the true cost of federal funding. It is suggested that loss of resource management authority or local government

planning control over development activities is hardly worth the sacrifice for additional federal dollars.

The legislature can mandate identification of information and data needs for effective intergovernmental advocacy and relations, coordination with the federal government as discussed above, and a continuous monitoring of federal programs to ensure maximum support for AFRDP. Because working with the federal government can involve considerable time and effort, any monitoring and fund seeking activity should be measured by the legislature, over time, on a cost-benefit basis. Building the expertise in working with the federal government is a necessary element of this program.

5. There is a Need to Evaluate AFRDP Program Goals in Relation to the President's Recently Announced National Policy on Fisheries.

In May, President Carter announced a national fisheries policy aimed essentially at increased utilization by Americans of fisheries resources off the shores of the United States. The attractiveness of the development of off-shore fisheries has led to what can be termed a reversal of existing federal policies relating to fisheries activities. As indicated in prior study group meetings, the U.S. Office of Management and Budget has indicated in the past no special treatment of fisheries related programs is justified and all such programs must be considered as in competition with

other resource and economic development projects. While this reversal in policy indicates greater federal interest in fisheries development, the study group must understand that the impetus for the change in policy is not salmon fisheries development.

We are aware of considerable national interest in the proper development of Alaska's fisheries consistent with this new policy. While the state is taking a number of actions to take advantage of the national policy, this is not a coordinated or priority activity at this time. We suggest that a major state effort be undertaken to upgrade AFRDP and effective presentations of state oriented proposals to federal policymakers are essential to achieving a more appropriate federal contribution to the state program.

Alternative Institutional Arrangements for Consideration
by the Study Group and the Alaska State Legislature

A. Introduction.

We have discussed a number of potential reforms to AFRDP which we believe are necessary to accomplishment of the broad fisheries development goals and objectives established by the state legislature and the executive branch for expansion and utilization of all the state's fisheries resources to the maximum benefit of its citizens. We have directed attention to the need for sound economic evaluation of AFRDP projects and programs prior to and during the course of

their operation, means of achieving greater financial stability for AFRDP program elements, and evaluation of institutional needs to achieve broad program goals. This review suggests a number of alternative institutional arrangements and possible reforms which should be considered by the legislature during the 1980 session. It is the purpose of this section to assist the study group in addressing certain alternative approaches to reform of AFRDP.

Alternative approaches include:

1. Options to assure greater central management control and horizontal coordination among all programs directly and indirectly involved in the development of Alaska's fisheries;
2. Options which reflect the need for planning and program implementation on the basis of identified regional needs; and
3. Options responsive to the particular organizational needs and problems extant within the present regional association program.

B. Options Relating to Centralized Management of Alaska's Fisheries Development Program.

We have identified a number of institutions at the state level directly involved in or impacting on AFRDP. Additional to those are a number of specific programs which indirectly affect accomplishment of fisheries development goals of various programs. (See Appendix A.) The needs and

missions of these many programs or offices must be also considered in the development of any proposed alternative organizational structure for AFRDP.

Option 1 - Maintain Present Organizational Structure, With Firm Legislative Mandate for Inter-Agency Cooperation and Coordination of Activities, and With Reforms to Individual Programs Responsive to Above Findings and Conclusions.

This approach would contemplate no alteration of the organizational structure of AFRDP as it presently exists, but would require legislative and executive action on a program-by-program basis to effect coordination and many of the necessary reforms. Authorities of various program activities would be altered or expanded to allow the programs to perform in a manner consistent with approved recommendations.

Legislative mandates to coordinate program activities already exist in a number of cases. In many instances, however, effective implementation of enacted programs has not occurred. Thus, a weakness of this approach is the lack of assurance that coordination among the wide variety of AFRDP activities will occur through clearer direction from the legislature.

Specific identification on a program-by-program basis of each activity which must be coordinated may be difficult from a legislative perspective because it would require a large number of amendments and detailed definition

of agency relationships. Certain of the program elements (e.g., office of the bottomfish coordinator, division level program activities, etc.), are not specifically established by state legislation. In other cases, reorganization deemed appropriate by the executive branch may be inhibited by legislation which specifically authorizes and refers to division and office level activities.

While we have proposed a number of reforms which could require legislation affecting the various programs of AFRDP, we doubt that the goal of centralized coordination and consolidation of program as has been suggested can be achieved without some stricter mandate and clearer form of direction to the executive branch. A lack of accountability for such coordination, except on an individual program basis, would imply that AFRDP program results can be achieved through piecemeal management and without significant centralized direction. We do not believe this can be realistically achieved.

Option 2 - Present Structure, but Defined Through Executive or Legislative Action, With Lead Agency Responsibility for Certain Program Activities Within AFRDP.

This organizational alternative contemplates establishment of a lead agency which would be responsible for directing implementation and coordination of all activities related to AFRDP. While the basic authority of each individual

program, division or other activity would not be altered except as pursuant to accepted recommendations, their responsibility to respond and work cooperatively with the lead agency in establishment and implementation of AFRDP would be clearly established either by legislation or executive order.

This alternative will help elevate the priority of fisheries development within Alaska's government, provide greater visibility to fisheries development goals and programs, and should assure greater horizontal coordination and efficiency and improved management. While there will be debate as to which program or activity most appropriately would serve as lead agency, it is suggested here that there is a best choice among the candidates. Clearly, fisheries development involves more than just an understanding of salmon and other species. A lead agency must have or be able to draw expertise on such issues as the economics of fisheries, infrastructure development, construction of capital facilities, administration projects, project financing, among other things. No single agency presently has this broad capability.

However, we believe that the agency with the clearest mission and most relevant skill base to the task of over-seeing AFRDP is the Alaska Department of Fish and Game. We have discussed the problems of separating financial and operational aspects of the regional association program and recommended transfer of the financing program from DCED to

ADF&G. Such a consolidating action would not be necessary in other instances. What is necessary is establishing that by statute a lead agency be provided with sufficient management authority and control over various agencies and program elements to achieve and direct cooperation and support for AFRDP.

We believe that ADF&G is best suited to serve as lead agency because their understanding of resource issues is critical in the development of management, conservation and enhancement strategies for all species. As noted in our discussion relating to establishment of a methodology for economic evaluation of programs and assessment of financing needs of such programs, most proposed criteria or standards are clearly related to accurate assessment or projection of biological factors. However, a typical weakness of state fisheries management agencies is that they are dominated at mid-level and top management levels by persons who have worked themselves up through the ranks. In many cases, such persons lack the broad range of professional and management skills necessary to oversee the variety of disciplines involved in a major resource development program. Thus, if ADF&G is to assume a lead agency role, evaluation of existing talent within that agency and its capacity to perform in a managerial capacity consistent with the goals of AFRDP should occur.

We are impressed with the institutional arrangement

in effect for Alaska's bottomfish development program. While we do not believe it is essential for a program coordinator to reside within the office of the Governor, it would appear that this has contributed to greater visibility and attention to the off-shore fisheries opportunity than might have occurred had the program been located within a single department at the outset. Over time, and particularly if ADF&G or some other department is established as a lead agency for AFRDP, it will make sense to remove the office to that lead agency.

A second feature of the state's bottomfish development activity is the establishment of a bottomfish task force, comprised of individuals within and without state government. The task force serves in an advisory capacity to the bottomfish coordinator and the Governor. Establishment of a similar advisory task force to work with the lead agency in the evaluation of AFRDP options, to offer new ideas and proposed actions, and to assist in the oversight of program activities makes sense. Such a task force would be primarily involved in the evaluation of centralized or state-wide management aspects of the program with regional associations and regional planning teams being primarily involved in dealing with local problems and interests. The legislature has already mandated that a comprehensive state-wide salmon development plan be established. This planning process should be expanded to include other species

consistent with proposals for AFRDP, and a top level task force could be involved in the development and evaluation of this comprehensive plan. A primary goal would of course be to ensure the integrity and protection of regional plans unless they are inconsistent with approved state-wide policies. Finally, we have suggested herein a continuation of the study group or the Governor's Fisheries Council. The functions defined for a task force could be assigned either of these groups if they were reorganized and properly funded. This would help avoid unnecessary duplication and possible competition.

Option 3 - Maintain Present Structure, but Establish Within the Office of the Governor an Alaska Fisheries Resource Development Coordinator.

This organizational alternative contemplates top level oversight and policy management of the wide variety of AFRDP programs from the Office of the Governor. This process would in many ways mirror Alaska's bottomfish development program. With the many agencies involved in fisheries development, the exercise of special top level management to ensure coordination and effective prioritization of the use of limited funds would be most helpful. Moreover, a coordinator's office within the Office of the Governor would elevate the level of public visibility for the fisheries development program, it would offer the opportunity for greater policy direction and control from that office, and

it would provide an office responsible for ensuring that agencies not operate at cross-purposes. Again, an AFRDP task force could operate in a manner consistent with the bottomfish program.

If this option were elected, the coordinator would need sufficient staff and direction either by executive order or from the state legislature to clearly define its functions, powers over existing agencies, program goals and priorities. This is not to suggest establishment of a new bureaucracy, but merely a coordinating office with sufficient staff to perform assigned tasks consistent with established goals for AFRDP.

Some negative aspects of this option include the appearance of establishment of a new super agency or "czar" responsible for operation of fisheries programs at the expense of powers of other agencies. Moreover, it would be difficult for this office to maintain control over a wide variety of program elements with only indirect day-to-day oversight and incidental involvement in program operations. The potential for conflict between the office of the AFRDP coordinator and mid-level and top-level management in the various agencies is considerable.

Establishment of an AFRDP coordinator within the Office of the Governor could also be subject to the vicissitudes of politics. The legislature may be hesitant to place necessary powers in such office, and may tend to limit

necessary powers.

Finally, creation of an AFRDP coordinator within the Office of the Governor for any long-term period may tend to remove further centralized management and state-wide policy and planning activities from those proposed to be accomplished at regional levels. Line agencies have local staffs and experience or responsibility for close relations with regional entities. An AFRDP coordinator would not (unless his office was to be expanded to include field representation) participate in development of local plans and policies. A major new bureaucracy may have to be developed to deal with fisheries development activities if the new office were to expand its operations and involvement into regional development and planning activities.

Option 4 - Establish a Separate Fisheries Development Agency or Office Through Executive Reorganization Authorized or Approved by the State Legislature.

Establishment of a fisheries development agency or office under the Governor, with assignment of existing programs from a wide variety of agencies to such new agency or office is a possibility. (For example, assignment of all salmon, shellfish, and bottomfish development activities, loan programs and facilities construction programs, within a single agency might be possible.) This agency would have the specific responsibility to work directly with regional associations in a manner consistent with newly established

policies. Positive aspects of this alternative include clear high-level visibility for AFRDP by establishment of a special program and agency; single agency control over budget and responsibility for all elements of AFRDP; and, separation of major development and management activities. This organizational option may more clearly separate development and management from a regional association perspective, with key association relationships evolving with the development agency rather than the harvest management agency.

Negative aspects include likely competition for dollars between fisheries development and fisheries management agencies, perhaps greater difficulties in coordinating fisheries development and management activities which are necessary to the success of both programs, and the possibility of a larger bureaucracy with increased program costs. Moreover, it would be impossible to include all program development activities within a single agency. For example, activities pertaining to infrastructure development, data collection applicable to both management and development programs, a wide variety of state regulatory activities, and the like, would not likely be included in this "umbrella agency."

C. Organizational Alternatives Affecting Greater Regional Coordination Between State Agencies and Regional Associations.

It is our view that the peculiar needs of the many diverse regions of Alaska must continue to be addressed by

the study group and the state legislature. We have already suggested a number of reforms to affect improved relationships between the state and regional associations. Among major recommendations are:

1. Expansion of regional association authority to become involved in development activities related to species other than salmon (i.e., an active role in AFRDP);
2. Upgrading the regional planning process and regional association involvement in that process;
3. Upgrading of data and information and benefits of research to be available to regional associations and establishment of procedures to ensure sharing of information and research among regional associations and state agencies;
4. Consolidation of regional association financing and operational programs within a single agency;
5. Establishment of clear biological, economic and management guidelines against which all development projects and their performance can be measured;
6. Establishment of a one-stop model permit program for fisheries development activities;
7. Mandatory cooperation between ADF&G and

regional associations regarding specified activities;

8. Establishment of a coordinated research program, including construction of a joint or consolidated research laboratory and coordinated research planning mechanisms and methods to fix research priorities consistent with AFRDP program goals;
9. Mandatory coordination of AFRDP activities through development of cooperative agreements between ADF&G, regional associations and appropriate federal and state agencies;
10. Establishment of a ten-year operations plan which ensures development and clear delineation of responsibilities of regional associations and state agencies to be assumed over the long-term, and which seeks to build requisite skills in such associations and state agencies to ensure accomplishment of AFRDP goals; and,
11. Alteration of the regional association form to include greater local government involvement, this to ensure stability of financing and improved operations.

Options relating to regionalization of Alaska's boards of fish and game were embodied in house bill 193, introduced during the 1979 legislative session. While we

have reviewed this proposed legislation, and would expect the study group to focus on this or similar approaches, we have directed our attention to alternative institutional arrangements relating specifically to the operations of regional associations and ADF&G, including those outlined above. For purposes of this discussion, we assume a basic goal of facilitating greater responsiveness of AFRDP to regional development needs. Alternative institutional arrangements would appear to include:

1. No alteration in ADF&G or regional associations (this option would assume that the financing problems for regional associations might be resolved without altering the regional association form);
2. Expansion of ADF&G regional staffs to better address local development needs and implement a coordinated program to include increased support services to regional associations;
3. Legislative establishment of regional offices, empowering a regional administrator to fix ADF&G regional policies and implement approved programs--such legislation would include clear definition of relative roles and responsibilities of ADF&G regional offices and regional associations.
4. If an AFRDP coordinating office is established

in the office of the Governor, somewhat similar to establishment of an office of the bottomfish coordinator, it may be appropriate to establish regional offices to ensure a direct link between regional associations, fisheries development program staffs, and the Office of the Governor.

5. If development activities are in any way separated out from fisheries management activities, regional relationships between these functions would have to be established for purposes of regional planning and program implementation and operation.

In assessing institutional arrangements to further improve the level and quality of consideration of regional interests and increased coordination among regional associations and development program staffs, certain key issues must be addressed. Included are:

1. Assessment and identification of roles, responsibilities and powers of both regional associations and program staffs in planning and in the development of policies and implementation of programs. Again, we have suggested that the evolvement of AFRDP, including final institutional arrangements consistent with goals and recommendations herein, will involve

approximately a ten-year planning and implementation cycle. Assignments of responsibilities and powers will be dependent upon the maturation of various program elements and their relative capacity to perform assigned tasks. In many instances, experimentation will be required on a model project basis (e.g., regional association involvement in development projects related to species other than salmon).

2. Appropriate assignment of technical staff support on the basis of needs of each particular region;
3. Arrangements to ensure resolution of disputes and conflicting policies among the regions;
4. Establishment of a methodology for implementation of state-wide policies region-by-region;
5. Establishment of a methodology for making responsible and equitable budget decisions as they affect each particular region;
6. Establishment of means to assure coordination between regional officials and all programs directly or indirectly involved with AFRDP; and,
7. Identification of means to establish relationships between regional officials and external activities (e.g., federal, private) affecting

fisheries development activities in the region.

We have not focused on developing a detailed institutional arrangement related to the organization of regional agency staffs. This is a matter which may appropriately be addressed by the study group prior to the 1980 session, at least to determine necessary first steps to be considered and reviewed during the course of the proposed ten-year reorganization plan. While we have developed a number of concepts regarding the regional organization structure, these have not been sufficiently tested or evaluated to be included in this report.

D. Organizational Alternatives Affecting Regional Associations.

1. Introduction.

As discussed in Chapter II, the recent Superior Court decision ruling that A.S. 16.10.530 is unconstitutional forces us to consider a number of alternative institutional arrangements to the present regional association program. This would have been necessary in any event because of the need for greater financial and organizational stability for the program.

The State Attorney General has suggested the need for legislation and has identified five "potential legislative alternatives to the now unconstitutional statutory scheme" in a letter to the Governor dated July 20, 1979. We have

suggested a sixth option which would require alteration of certain constitutional provisions and have elaborated on alternative options pertaining to establishment of service areas. We also explore alternative approaches to financing regional associations in the future.

2. Potential Institutional Arrangements, Assuming No Constitutional Revision.

Option 1 - Active Legislative Involvement in Regional Association Program.

Article VIII, Section 5 of the Alaska Constitution provides:

The legislature may provide for facilities, improvements, and services to assure greater utilization, development, reclamation, and settlement of lands, and to assure fuller utilization and development of the fisheries, wildlife, and waters.

The legislature could on an annual basis approve specific facilities and services (or appropriate funds on a more general basis) and directly appropriate funds to the associations for specified purposes. The level of funding of approved projects and services could be established with or without reference to fisheries taxes collected by legislature, but an appropriation would be required (see Article IV, Section 7 of the Alaska Constitution prohibiting dedicated funds). Any taxes collected for fisheries development would be by the state, assessments as declared unconstitutional in Alex v. SSRAA would not occur.

This option suggests legislative control of all activities to be undertaken by regional associations, much as if they were individual state agencies. Funds for planning have been appropriated this past year for regional associations, and appropriations to DCED's loan fund for the program also occur.

More direct legislative involvement in the program than at present arguably presents problems. First, subjecting the program to the vicissitudes of the appropriations process on an annual basis offers limited financial stability. Second, the concept of user pay is not present and commitment to the program may be limited because of the heavy front end investment in both the F.R.E.D. and regional association programs without special arrangements to offset this burden with contributions from those who would achieve the primary benefits. Third, regional associations would have to annually lobby for financial support. Fourth, there would be excessive competition for limited dollars among the associations and F.R.E.D. Fifth, this financial plan does not provide for any reduction in operating and maintenance costs to the state over time. Because of these problems, we suggest that this option be considered only as an interim funding source.

Option 2 - Establishment of Special Service Districts Consistent With Constitutional Provisions.

Article X, Section 5 of the Alaska Constitution

provides that a borough assembly may establish service areas to provide special services within its boundaries, and authorize "the levying of taxes, charges or assessments within a service area to finance the special services." Article X, Section 6 provides that the legislature may do the same for unorganized boroughs. We have suggested in Chapter II that alteration of the regional association program to conform with the service area concept could provide greater organizational and financial stability than does the present form.

Conversion of the regional associations to a service district, however, presents some problems. The first problem is the obvious alteration of the regional corporations to a quasi-governmental arm of local government. This may present a philosophical problem for legislators, association members and local governments themselves who may not be pleased with so strong a user controlled form of governance. Additionally, some may not accept this arrangement as an acceptable alternative to private non-profit or for-profit aquaculture.

Second, borough boundaries do not conform with those presently established for the associations. The legislature can likely fix relatively the same service area boundaries as for regional associations in the unorganized boroughs. It will be more difficult for organized boroughs to extend service areas beyond their boundaries (see Article

X, Section 5 of the Constitution). Article X, Section 13 of the Constitution authorizes cooperative agreements for joint administration of any functions or powers among local government units. Extending jurisdiction of a service area to parts of another organized borough, but perhaps not all of it presents obvious problems. Reaching agreements among these local boroughs will not be easy, as powers to be divided among the governments will be the subject of dispute. Pressures for changes of governmental roles and controls could be a constant as local interests become concerned with their perceived share of program benefits. Cooperative agreements can be broken or altered under difficult circumstances. There is a valid question whether persons outside the borough but included in the service area will be satisfied that they are truly being represented by borough officials whom they do not elect.

The present association boundaries are founded for good reason. Fishermen are licensed to fish in specific areas in Alaska and the benefactors of the program (and those to be assessed) are easily defined. Borough boundaries, if used, may also present a special "free rider" problem for the regional association program. To the extent boroughs represent smaller districts and are not drawn to reflect where fish are hatched or harvested, aquaculture by such a small service area may inhibit investment in the resource because there is less assurance of returns to the investor

(payers of the assessment).

Another critical issue in the establishment of service areas will be to preserve to a reasonable degree the level and quality of input and control user-benefactors are to exercise for both development and planning activities. The organization and functions of the service area are again a matter for the legislature. It is likely that local officials will expect a greater role in the operation and management of the service area, as they are ultimately accountable for performance. Moreover, to the extent these entities are to provide financing for construction and operation of local port facilities and infrastructure, the impact of such programs on other municipal and borough functions must be considered.

A special effort to resolve problems related to this service area option is necessary, as it offers a number of positive benefits. First, the legislature may be more inclined to accept greater risk and fund more liberally activities of a local government entity. Legislators are used to dealing with such entities; they recognize that accountability for failures or success will exist; local agencies will be able to offer certain services, administrative assistance, and data and information more easily to service districts than to the associations; and, service areas present a more mature organizational form with a wider experience base than do the organizations of existing

regional associations.

Expansion of the authority of the regional associations consistent with the concept of AFRDP fits especially well with this possible alteration of the association form. Many of the development activities related to utilization of off-shore fisheries involve funding for infrastructure, port facilities, marina and dry-dock space, etc. These activities are often funded in large part by local government entities (e.g., port districts). Additionally, attraction of federal and state matching funds for such purposes will be easier for local government entities than the present associations, and the local citizenry can be taxed to the extent they may benefit from local development activities. Local government permits will be easier for approved service area actions than perhaps is the case at present for the associations.

Finally, there are some specific legal questions regarding the service area option which need to be considered prior to the 1980 legislative session. First, does the legislature have authority to establish service districts or areas within the organized borough? If so, can the legislature extend such service area boundaries into another organized borough or the unorganized borough? A positive determination as to these questions would make it possible to establish service area boundaries consistent with those for existing and planned regional associations more easily, and without

Sixth, in the face of the Superior Court's holding that "an incorporated non-profit association may not become a 'service area', either by inference or express legislative declaration," and that the "hybrid creature legislatively conceived cannot survive the constitutional infirmities and defects present at its birth . . .," is it realistic to assume that the regional associations can maintain any of their private or corporate characteristics? Further, is it even possible for some new agency to assess and collect taxes in behalf of or pass through state taxes a regional association which retains these characteristics? Could such monies be collected by or through to Salmon Authorities established by A.S. 16.10.600 et. seq.?

3. Potential Institutional Arrangements,
Assuming Constitutional Revision.

Potential constitutional revisions to resolve the legal problems affecting the regional association assessment problem and to affect greater organizational stability include:

- (a) Amendment to Article X, Section 5, which allows for establishment of service areas, to allow extension of the boundaries for provision of special services beyond those of an organized borough.
- (b) Amendment to Article IX, Section 7, which prohibits dedication of the proceeds

constitutional amendment.

Second, can the legislature mandate that organized boroughs establish service areas for fisheries development and further require that the borough reach cooperative agreements with other boroughs for extension of the service area into their area of jurisdiction? Again, a positive determination will resolve in part boundary problems relating to the service area option.

Third, can the legislature authorize organized boroughs to levy taxes, charges or assessments within a service area (perhaps beyond its boundaries) in behalf of a fisheries development service district established by state legislation and performing most of its functions (other than taxation or assessments) separate and apart from the organized borough? This issue arises if the legislature seeks to separate the regional fisheries development program authority from the taxing authority, with the local government entities (organized boroughs) passing tax or assessment receipts directly through to the program. The problem of dedicated funds from a local government entity needs to be addressed if a positive determination is made that such separation can occur. A related and similar question involves what level of control or authority over fisheries development activities must be exercised by borough officials if the service district concept is adopted?

Fourth, in the case of the unorganized borough,

what entity would be responsible for taxing or assessing fishermen in behalf of the association or service district established by the legislature? Additionally, in the case where a borough service area is extended into the adjacent borough or unorganized borough, who collects taxes or assessments from fishermen licensed to fish in areas outside the borough, but in the service area?

Fifth, we are concerned about preserving the voluntary assessment aspects of the existing program. Presently, fishermen in a given region must elect to form regional associations and assess themselves for aquaculture development activities. We have discussed the possibility of diverting a portion of state-wide fish taxes (A.S. 43.75) to the regional association or its predecessor organization. Another possibility is to increase this tax, in lieu of an assessment or separate local or state-wide tax for aquaculture. Regional fishermen might then have the option to elect not to pay a certain percentage of the state tax (e.g., that percentage added to the existing tax). Will a state-wide tax, with provision that a service district exercise an option either for or against an additional tax for purposes of fisheries development, stand the constitutional test under the due process and equal protection doctrine? A related question involves who must be represented in the organization of the service district and who must be taxed to pass this constitutional test?