

APEC Project CTI 011/1999T - Trade Liberalization in
the Fisheries Sector of APEC

Synthesis Report from Pusan (Korea) Seminar – Options
for Policy Model Evolution Harmonious with EVSL

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1.0 Objective and Introduction

A key element of the activities of Asia-Pacific Economic Co-operation (APEC) is the emphasis on voluntary agreements. It is an established objective of APEC to reach trade liberalization between developed economies in the region by 2010, and by all economies by 2020. Within this context, Fisheries is one of nine (9) sectors proposed as a candidate for Early Voluntary Sectoral Liberalization (EVSL). Again, the emphasis on Voluntary can be noted.

Note all APEC member economies concur with this initiative. While some member economies are positive, even enthusiastic, others are indeterminate, and still others are hesitant. Accordingly, fisheries policies across APEC are not likely to be equivalent. There will be varying reactions to EVSL. Is it possible to bridge these potentially conflicting realities? Can we develop policy models for the fisheries sector of APEC that could facilitate EVSL, but remain acceptable to all approaches to trade liberalization?

The objective of this Synthesis Report is to capture the main conclusions and recommendations emerging from the Seminar “Trade Liberalization in the Fisheries Sector of APEC”, held in Pusan, Korea May 8-10, 2001, at the Haeundae Grand Hotel. This Seminar represented the climax of APEC Project CTI 011/1999T. This Synthesis Report also draws from the PricewaterhouseCoopers presentations “Conceptual Framework and Synthesis of Field Research” given at the beginning of the Seminar on May 8th, and “Options for Policy Model Evolution Harmonious with EVSL”, given on May 10, 2001 at the Seminar (the last day of formal presentations). Accordingly, this Synthesis Report is meant to represent the collective views of all the Seminar participants, the field research, and other work done by the research team.

The Seminar participants did reach consensus on many important points. Accordingly, the Seminar was able to develop some policy recommendations that, it is hoped, could help evolution of fisheries policies among APEC member economies towards EVSL, yet not force commitments to accept EVSL.

Full details of the seminar will be included in formal Proceedings from the Seminar, to be available from the Seminar organizers, a team from Kyungnam University, Korea, lead by Prof. Hyunwook Koh.

A formal communiqué from the Seminar has also been prepared, and is included as an Annex to this Synthesis Report.

2.0 Key Factors and Assumptions Guiding the Development of Policy Models, and Conceptual Framework for Fisheries Policies

Our Terms of Reference from APEC were to prepare a Study to Reduce Impediments to EVSL, and develop policy models that facilitated EVSL. We have accordingly assumed that Trade Liberalization in principle is positive while recognizing numerous issues must be addressed. The Seminar was designed to provide a forum for evaluating, and further developing, these policy model options.

We are not necessarily proposing with these options that economies must accept EVSL. Rather, our options should be understood as facilitating potential evolutions of policy that would be harmonious with EVSL in the long run. None of the options we propose should be interpreted as committing an economy to the EVSL initiative.

2.1 Our Overall Conceptual Framework Model

Our preliminary overall conceptual framework is illustrated in Exhibit 1. It is designed to provide a classification taxonomy that can be manipulated in order to illuminate, review, and analyze various options. This Conceptual Framework, in a simplified form, was presented at the opening of the Seminar.

The model framework in Exhibit 1 features eight (8) levels to provide policy options in different dimensions, and allowing the potential of iterative feed-back in light of evolving conditions. It should be noted that, while the model in Exhibit 1 is shown as being structured in a particular given sequence it should be understood as being capable of re-sequencing if required.

Broadly, the model identifies eight levels or dimensions as follows:

1. Overall APEC Objective
2. Policies
3. Applications
4. Strategies
5. Mechanisms
6. Impacts
7. Outcomes
8. Harmonization Spectrum

The model starts with an identification of the overall APEC objective of Trade Liberalization (Level I). Policy impacts are to be illuminated, reviewed and analyzed in light of this goal.

In Level II, the model differentiates between two main categories of policies that affect the process of reaching the Trade Liberalization goal. These two are policies for economic optimization, and policies for social optimization. Our experience suggests that it is between these two sets of policies that the greatest amount of controversy arises. For example, economic optimization may lead to larger fishing units through encouragement of economies of scale. However, this may be in contradiction to social policies that favour small fishing units, such as family firms or coastal village support. Social policy also may include consideration of environmental and sustainability objectives. Therefore, this differentiation is shown as the first consideration in the process of facilitating Trade Liberalization. As well, this level distinguishes between short-term, medium-term and long-term policies.

In Level III, the model differentiates Applications. Level III divides between Capture Fisheries Species and Aquaculture Species. This differentiation is important, because as a generalization, Capture Fisheries are much more constrained by resource and environmental capacities than Aquaculture. Accordingly, (as an example) a policy to expand fisheries activities through aquaculture infrastructure subsidies may be harmonious with social optimization, whereas a policy to expand Capture Fisheries through parallel infrastructure subsidies may not be. Again as a generalization, the policy requirements for Aquaculture are often found to be in contradiction to those for Capture Fisheries. For example, a social policy that aimed at environmental sustainability might wish to encourage support for Aquaculture, but constrain Capture Fisheries.

In Level IV the model differentiates Strategies. These are divided into three main classifications. These are Constraining Strategies, Mixed/Diversifying Strategies, and Expanding Strategies. Some examples are given for each category. Similarly, Level V shows mechanisms within the same main categories. Some examples at this level are also included. These two levels should be viewed as having a fairly direct relationship. Strategies refers to collections of policies and programs, whereas Mechanisms are examples of specific actions that can be used in support of any Strategy. It should be noted that often there is a certain ambiguity to both Strategies and Mechanisms. Some Strategies and Mechanisms can both be constraining and expanding. Examples are regional development strategies and price support mechanisms. Hence it is necessary to identify a group of Strategies or Mechanisms that can have either or both of a mixed expanding/constraining effect, or may have a diversifying effect (e.g. into Aquaculture from Capture Fisheries).

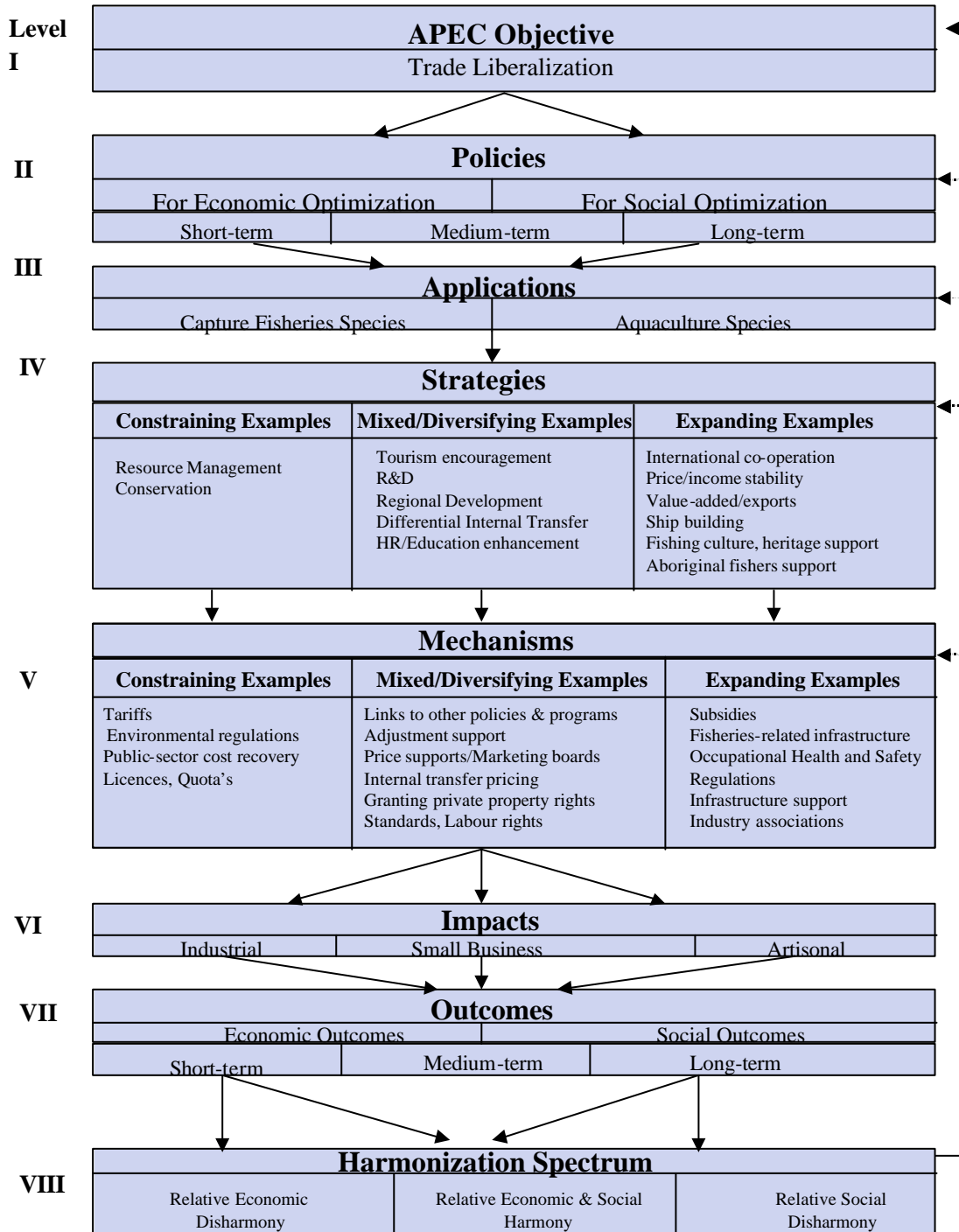
Level VI identifies Impacts. The model differentiates between three categories – Industrial Fishing Units, Small Business Fishing Units, and Artisanal Fishing Units. This is often the level at which economic policy most differentiates. The Industrial Units are typically more efficient. They may be able to drive the smaller players out of business on economic grounds. But this is not likely to be in harmony with social policy. As well, Industrial Units may reach environmentally-limited social constraints such as sustainability much faster than the smaller ones.



Level VII is described as Outcomes from the entire process so far. These are described as economic outcomes or social outcomes. The Outcomes are also differentiated as to short-term, medium-term, and long-term.

Lastly, Level VIII adds a final spectrum of Harmonization to the model. The two sets of outcomes may be coherent and harmonious, or they may be contradicting and disconnected. The level of harmonization from the outcomes will be dependent on specific “paths” followed in the policy process.

Exhibit 1 - Overall View of Conceptual Framework



3.0 The Nature of the Different Policy Issues Relating to EVSL in the Fisheries Sector

3.1 Overall View of Issues

The overall problem inherent in finding policy models that could facilitate trade liberalization in the fisheries sector of APEC is that at virtually every level of the fisheries environment there is some sort of conflict. This can be seen by reference to Exhibit 2 (Exhibit 2 is drawn from the Conceptual Framework developed by the research team at the start of the project, and included in the research team's opening presentation on May 8th at the Pusan Seminar).

Who Benefits?

There may indeed be greater efficiencies for fisheries in an EVSL environment. But consideration needs to be given to the distribution of the benefits – and the distribution of the losses as well. A paper from Zengyoren, the National Federation of Fisheries Co-operatives Associations of Japan suggested that if EVSL was to go-ahead, five(5) key points had to be taken into account:

1. In order to ensure food security to prepare for the expected world's food crisis in the future, it is essential that each nation primarily ensures improvement of her domestic food self-sufficiency rate;
2. Promotion of international trade liberalization solely based on the money-first, economic rationale could undermine the multifunctionality of fishery and fishing communities, and impede the sustainable development of fisheries;
3. In order to eradicate IUU (illegal, unreported and unregulated) vessels such as FOC (flag of convenience) fishing vessels which do not abide by the relevant resource conservation and management rules and regulations, international cooperation is needed to uproot their trade distorting action;
4. Sustainable development of fisheries could only be established when the multifunctionality of fisheries and fishing communities including community-based fisheries management efforts etc. is ensured
5. Exporting countries alone should not get the international trade benefit unilaterally, and the legitimate right of fishers' livelihood in the fish and fishery product importing countries should be recognized, and based on this awareness, fair and equitable international trade rules should be established.

Exhibit 1
What's the Problem? Conflicts At Every Level



Level 1 of this Framework refers to the overall APEC objective of Trade Liberalization. While the desirability of Trade Liberalization is accepted throughout APEC in principle, the specific initiative of Early Voluntary Sectoral Liberalization in the Fisheries sector is not accepted by all economies.

During the Seminar, this was brought out by several presentations, and had also been a feature of the field research conclusions. Papers that emphasized the benefits of EVSL came from Canada, U.S.A., New Zealand and Chile. One of the papers from Korea, using econometric (quantitative) techniques, also indicated that there were net benefits to that economy from accepting EVSL.

On the other hand, papers from Japan, another paper from Korea, Chinese Taipei, and the research team's brief summary presentation of Mexico's position on EVSL, based on field research, all suggested that EVSL was more doubtful in terms of benefits to those economies.

Accordingly the Seminar could not conclude with a pro-EVSL "go-forward" policy model, but rather showed the need to respect both sides of this debate.

All of the approaches to EVSL were somewhat different as developed, from the papers given by representatives both of pro-EVSL and EVSL-hesitant economies. These different approaches, in turn, revealed sub-conflicts buried in the overall spectrum of attitudes towards EVSL. These sub-issues can be described by reference to Levels II through VIII.

Level II differentiates policies – broadly grouped as policies aiming at economic optimization on the one hand, versus policies aiming at social optimization on the other. In general, the papers pursuing the pro-EVSL approaches focused on policy models aiming at economic optimization. For example, a key element mentioned by the Canadian, US, and New Zealand papers pro-EVSL was lower real prices to consumers of the fisheries sector's products through trade liberalization

The Impact of Trade Liberalization on Fisheries Sub-sectors

A paper from the National Taipei University of Technology addressed the question of how EVSL could affect sub-sectors of fisheries quite differently. For example, in Far-Sea fisheries, Chinese Taipei would likely find itself uncompetitive on price with South Korea in Squid markets, but Chinese Taipei catches of tuna and others seem competitive. For offshore fisheries, Chinese Taipei is likely to be non-competitive in sardine, mackerel and several other species. On the other hand, coastal fisheries seem likely to remain competitive, and several aquaculture species also seem to have advantages. The bottom line: Chinese Taipei is willing to participate in EVSL, but the economy does have to weigh carefully the impacts across many different sub-sectors – there's no simple answer.

What Are The Benefits of EVSL?

The paper from the U.S. National Oceanic and Atmospheric Administration addressed the questions "what are the benefits of EVSL?" Six key items were listed: economic efficiency; stable supply of fish in the marketplace (including increasing supplies from aquaculture); better consumer choice; wise investment internationally; economic development and growth; and new markets. The U.S. paper went on to suggest as a "bottom line" to the policy debate, that promoting trade liberalization meant capturing benefits to importers, exporters and consumers.

The U.S. paper did not deny that there could be legitimate concerns about EVSL and particularly fisheries sustainability. But the U.S. paper suggested tools in both international and domestic toolboxes were available to address such concerns. Domestically, these included such items as Rights-based Management, use of Co-operatives, Marine Protected Areas, Science-based Total Allowable Catches, and Limited Entry and Permits. Internationally, there were agreements such as the UN Fish Stocks Agreement and the World Bank Forum for Sustainable Fisheries. The paper argued that EVSL doesn't have to lead to accelerated resource depletion.

creating greater economic efficiency. This was also implied as a benefit by the Korean econometric paper.

On the other hand, papers from EVSL-hesitant economies pointed out questions relating to social implications of EVSL. Two key points mentioned in this context were issues of sustainability and resource management, and the impacts on fishers (especially artisanal and small business fishers) of lower prices. This was brought out by papers from Japan and Korea, among others.

First, sustainability and fisheries management remains a major question. As was argued in the Japanese paper, commercial fishers, in an EVSL scenario, will likely seek to expand their markets in the interest of profits. Especially this could be true of industrial fishers with access to capital. The net effect, even in a lower-real-price environment, could be significantly increased pressure on marine resources, unless there was offsetting activities in terms of fisheries resource management. The question of EVSL possibly leading to accelerated resource depletion was one that had also been identified by the research team during the field research component of the project in Canada, Mexico, Japan, Korea, Australia, and at the OECD.

Moreover, fisheries management is a question not only for capture fisheries – it has to be addressed in respect of aquaculture also. As was brought out in various discussions, while undeniably aquaculture is a prospective solution to supply constraints in marine fisheries, nevertheless management questions remain. For example, it is not uncommon for aquaculture – bred fish to be bigger and perhaps stronger than wild equivalents, owing to relatively better feeding, and more health-conscious environments. This can lead to problems in the wild, however, if any of the aquaculture stock escapes its supposedly closed environment. The aquaculture-bred fish can actually damage the wild stock by the force of their greater size. Similarly, stock bred in

Can The Benefits of EVSL Be Quantified?

While the terms of reference for the research team precluded complex quantitative and econometric approaches to developing policy models for facilitating EVSL, one Korean paper from the Korea Maritime Institute did analyze effects of early liberalization in terms of potential net figures for Korea. This paper differentiated between increased consumer surplus from increased imports, decrease of producer surplus from increased imports, and increase of producer surplus from increased exports.

The overall results were favourable to EVSL, with a potential net gain of up to Won 34.6 billion (approx. \$28.8 million) annually. But this paper did also point out that there were likely to be impacts on Korean producers, especially on the 85.3% that are boats smaller than 5 tonnes gross. Liberalization should be carried out step-by-step. In the short run, small-scale fishers should be helped to diversify out of fishing if they wish, and in the long-term, to enhance their professional education.

International Agreements

The paper from the Marine Stewardship Council focused on how that organization addresses issues of international agreement. The paper used the question of eco-labelling to illustrate. The MSC offers six principles. First, it is voluntary in nature, open access, non-discriminatory, and market based. Second, it aims at truth in claims, and clarity of information to consumers. Third, it is science based on objective criteria. Fourth, it includes assessment, auditing, accountability, and verification. Fifth, it tries to achieve harmonization, and standards equivalence. Sixth, it carries due regard for government rules and regulations.

captivity for release to the wild in order to off-set depleted stocks also have to be grown and released with care.

Moreover, other aquaculture management issues emerged at the Seminar. For example, the health of aquaculture stock has to be carefully guarded. Inside a closed aquaculture environment, disease can spread immediately and forcibly. This can lead to not only loss of valuable stock but create downstream health problems for consumers.

Yet another issue – what precisely are aquaculture species to be? If the aquaculture stocks are based on species feeding from animal-protein (i.e. other fish), which tend to be the more valuable and hence worthwhile species, then the resource sustainability issue could simply be removed one level in the food chain – where does the feed come to support aquaculture? On the other hand, if the aquaculture species are based on bio-mass (plant) feed, then the supply chain to the aquaculture stock is less critical, but some human consumers seem then not to appreciate the fish at the dinner-table as much as other species. Either way, aquaculture, while definitely an important part of the solution as illustrated by the Chilean and Chinese papers, still has to be managed skillfully.

Second, the Japanese paper highlighted the implications for employment in the EVSL goal of lower prices, namely, that employment would likely drop in the fisheries sector in an EVSL environment. Obviously the increased efficiencies in the sector could very well imply lower employment levels. In fact, as the Japanese paper illustrated, in general this is exactly what has happened. The Japanese paper even set out details of the aging of the Japanese fishers' demographics, together with a declining total employment. Accordingly, the Seminar concluded that the benefits of EVSL in terms of economic optimization had to be weighed against the implications of negative effects on social optimization goals.

However, a certain consensus did appear at the Seminar on this conflict; namely that there was agreement that the EVSL policy agenda had to address the issues of resource management/sustainability, and employment/quality of life for fishers, especially artisanal and small business ones.

Level III brings out the conflict between short-term (5-10 yrs), medium-term (7-12 yrs), and long-term (10-20 yrs) time horizons. Several papers addressed this conflict. A good illustration was the paper from the Russian representative. The Russian economy was described as “re-structuring”. This involves considerable re-direction and renewal of capital investment. The key conclusion from this paper was not that EVSL goals were impossible for such an economy but,

Innovation

Technology change and innovation is speeding up in the global economy. What are the implications for fisheries? A paper from the University of Ottawa, Canada, addressed this changing nature of innovation and technology change. Some areas where innovation was suggested would help fisheries include: minimizing by-catches; minimizing collateral damage to wildlife; minimizing environmental damage; developing better information on the resource base; and improving aquaculture.

These are new aspects for fisheries management – managing technology change. These are probably not the most obvious ones, but of increasing importance nevertheless.

rather, that EVSL could not be accommodated in anything but the long-term. So also was the main thrust of the first of the two Vietnamese papers; while by no means unsympathetic to EVSL in principle, the key element in this Vietnamese paper was that developing economies would require both long-term time horizons to subscribe to EVSL and, moreover, even then, were going to need pro-active international co-operation in order to facilitate obtaining necessary technology transfer and capital investment funds in a trade-liberalized scenario. Accordingly, the Seminar illuminated the conflict inherent between the short-term and long-term; a long-term goal such as trade liberalization is not necessarily compatible with short-term realities.

Level IV illustrates a major conflict facing policy makers: policy applied to capture fisheries is likely to reflect precisely the opposite priorities than policies applied to aquaculture. Capture fisheries are globally insecure from a sustainability perspective. While the resource renewal cycle is at different stages according to species-specific factors, there can be no doubt that sustainability of capture fisheries cannot be assumed in the absence of more sophisticated resource management in the APEC region. In other words, capture fisheries may well have to be constrained in some way in terms of total catch. This was brought out by the paper from the Marine Stewardship Council; the issue was highlighted as well by papers ranging from Canada, (which reviewed current OECD thinking on the issue), to Japanese and Korean papers.

On the other hand, aquaculture was presented as an important part of the solution to fisheries sustainability. In other words, aquaculture needed policies aimed at expansion – exactly the opposite for much of the capture fisheries spectrum. This was brought out by the Chilean and Chinese papers. As well, the field research by the

Supply Responses in Developing Economies

EVSL suggests the prospects for new and bigger markets become better for competitive producers. Developing economies with very competitive labour costs ought in principle to be able to take advantage of these prospects. A paper from Vietnam, however, points out that this may not be as feasible as it seems. First, there is the need to build capabilities among developing economies in terms of technology, and possibly skills. While traditional approaches to fisheries may well be skillfully worked out in developing economies, new, export-based, markets may require entirely new approaches, not well understood locally. Second, throughout APEC, the fisheries sector consists of small- and medium-sized enterprises, but in developing economies, the proportion can typically be even higher. A high priority from this perspective would be to give attention to small-scale but international programs in capability building.

The Situation of China Fisheries

The paper from the Chinese Academy of Fisheries Sciences provides a case study on how fisheries production can be increased. China is reckoned as the global leader in fisheries production at 42 million metric tones in Year 2000. Aquaculture is a major proportion of the total – 24 million metric tones. This is a high proportion for aquaculture. As well, fisheries production has become an ever-larger share of agricultural production; from about 4% in the middle -1980s to close to 11% in 2000.

Interestingly, this expansion has come while consumption price index for fisheries products has declined. The price index stood at 120 in 1994; it had declined to 94 by 1998.

The Chinese Academy of Fisheries Sciences paper did suggest, however, that there is still a definite need for new technology, and that most fisheries companies in China are not ready for a liberalized trade environment. This suggests Chain's strategy should be oriented towards: re-structuring the industry; strengthening investment in technology; more attention to product quality; and make full use of all resources.

research team had also highlighted the aquaculture option from Canadian and Australian sources. Accordingly, depending on an application, there is a need for one set of policies that say “go”, and another set that say “stop”.

Level V differentiates strategies and mechanisms available to governments in order to fulfill policy objectives, i.e. to turn policies into concrete activities. The key element here is obtaining agreement between economies to respect each others standards, regulations, and definitions. However, this doesn't happen automatically. Several points, particularly in discussions on the various papers, emerged in this regard.

Definitional problems arise, for example, imagine a Korean or Canadian fishing vessel capturing fish in home waters respectively (i.e. within each economy's respective Economic Exclusion Zone or EEZ). Both sets of activities would, on present consensus, constitute domestic production. The vessels would be subject to their respective economy's regulations (for example, in respect of safety, or in respect of quota), but equally could not be subject to (say) tariffs – they would be domestic. On the other hand, one can imagine each vessel hypothetically landing its catch in the other economy's ports; this would be international trade, and subject to respective trade policy e.g. tariff protection. However, note that in this hypothetical example, the definition of what is or is not domestic is the registration of the vessel. Accordingly, if a Korean vessel legally came into Canadian waters, and returned its (Canadian) catch to a Korean port (this is not a realistic example, but serves to illustrate the debate), should this count as a domestic activity or an international one? After all, the vessel is domestic but the fish would not be. Both perspectives emerged at the Seminar.

Similarly, standards may or may not be reciprocally agreed. This can relate to “eco-labelling”, species recognition, classification of stocks, etc. A key issue is the extent to which a given economy's fishing sector is subsidized by government policy. In particular, as the New Zealand paper brought out, resource management costs can be viewed as being the responsibility of the commercial enterprises in the sector; this implies that economies that do not so recover their management costs (e.g. coast-guard, bio-research, “tagging”, etc.) are subsidizing their fishing sectors. Accordingly, the Seminar illuminated sizeable differences in perspectives on this level of issues.

Codifying International Agreements

One Korean paper addressed the question of legal factors in the Codification of trade liberalization of the fishery products. The paper was prepared by representatives of the Korea Ocean R&D Institute, and the Korea Maritime Institute. How does a non-binding resolution, such as EVSL, be the basis for the evolution of an acceptable international legal agreement? The Korean paper differentiated three stages. First, it must have the character of being “soft law” that reflects practical priorities to which all economies can agree in principle (for example, sustainable utilization and development of marine resources. In the second stage, the “soft law” can be complemented by adding annexes and protocols. This stage relies on individual economies' self-constraint and willingness to accept any obligations in proportion to their economic capability. Finally, in the third stage, its practical effect is secured by institutionalizing a compliance monitoring system.

Level VI differentiates the impacts of EVSL on three sizes of fishers – artisanal, small business, and industrial. Artisanal refers to traditional techniques and equipment levels, being used in inshore fisheries. Small business refers to owner/operators of single vessels, typically of 10 tons gross or less. Industrial refers to factory high-seas fleets.

Each of these levels has completely different variables in terms of (among other things) ability to raise capital, use of technology, skill levels, awareness (and vulnerability to) resource depletion, and malleability (ability to change activities in light of economic or resource indicators).

Industry Rationalization

The paper from the Inter-American Center for Sustainable Ecosystems Development (ICSED) in Chile shows, among many other things, how an aquaculture approach that is accepted as very successful, nevertheless forced some industry internal restructuring in that economy. For example, of the 12 regions in Chile, 85% of Chilean salmon and trout production from aquaculture is concentrated in just one Region. In 1998, twelve companies produced 50% of total volume exported and another 30 produced the other 50%; one year later (1999), there were only 40 companies in salmon “farming” in total. Moreover, the salmon industry in Chile is about 85% vertically integrated. But today Chile has become the second largest producer of salmon in the world after Norway.

While the differences in responses to any emerging EVSL environment was acknowledged at the Seminar, there was consensus that the artisanal and small business fishers were vulnerable to changing environments more so than was true of the industrial level. In particular, there is throughout APEC a relatively heavy preponderance of artisanal and small business fishers. This was brought out by papers ranging from Korea and Japan through to Canada and New Zealand. Accordingly, the Seminar illuminated that scale of fisher operation made an important difference; policies for one size might conflict with policies for another size.

Level VII developed conflicting indicators. Productivity gains from EVSL (good) conflict with increased opportunity to deplete resources (bad); lower prices (good) conflict with loss of employment (bad). Finally, Level VIII provides a harmonization spectrum – where is the balance settling between economic harmonization and social optimization?

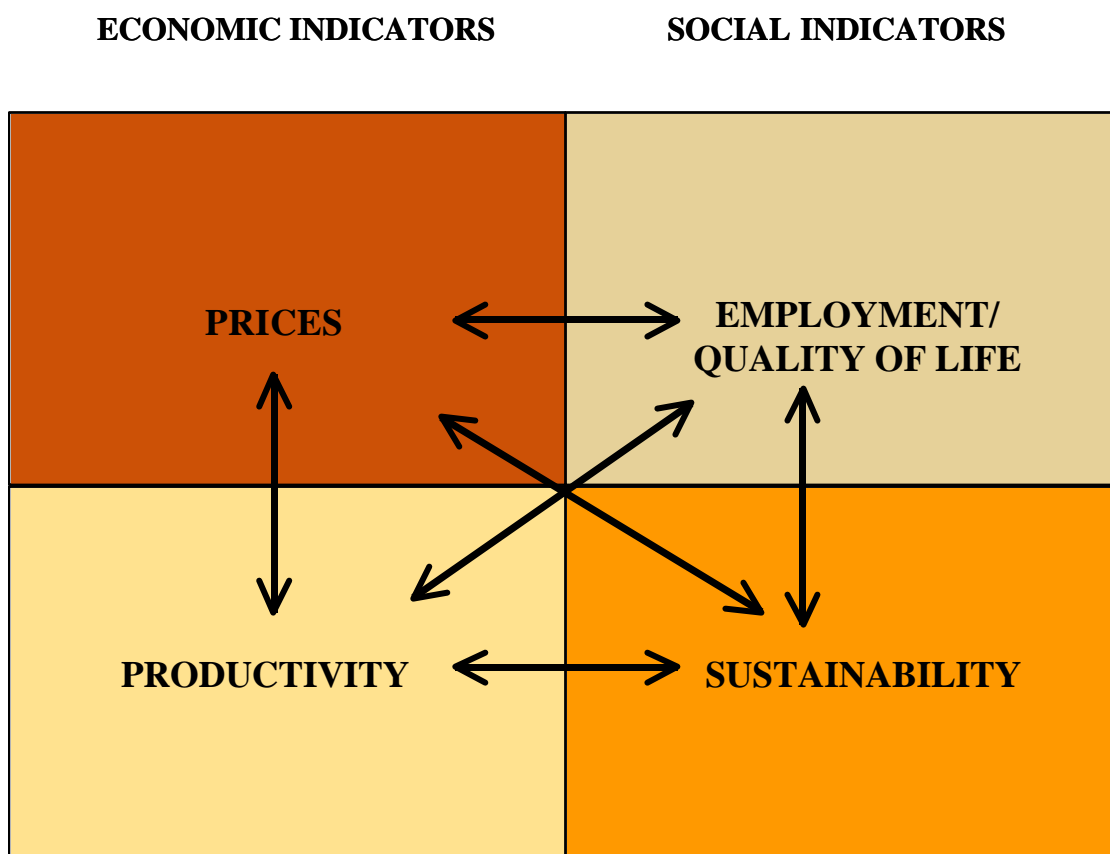
3.2 Summary of the Policy Conflicts and Implications for EVSL

Exhibit 3 summarizes the overall sets of conflicts by using the indicators developed for Level VII. The objective is to plot the balance between economic and social goals asked in Level VII.

Each indicator carries implications for all the others. For example, consider prices – an indicator frequently referenced in the course of the Seminar. There was consensus in the Seminar that EVSL implied a trend towards still lower real prices. But this has implications for Employment/Quality of Life for fishers – the lower prices imply, at any given level of output, that employment must go down owing to the need to gain efficiencies to remain competitive.

Nevertheless, given that, overall, Trade Liberalization across all of APEC remains a long-term goal (10-20 years) for economic optimization, then using key indicator of real price levels, they should be lower at that time. Accordingly, a major impediment to EVSL is the negative impact on artisanal and small business fishers who lack access to fresh capital with which to cut costs.

Exhibit 3: Summarizing the Conflicting Issues



On the other hand, as another example of the conflicting issues, consider productivity. Lower real prices could at least carry the connotation of reducing pressures on fisheries resource stocks, fishing activity being discouraged by the lower financial gain in prospect. However, several of the papers at the Seminar indicated that production can still rise even if real prices are declining: this was mentioned in the papers from China, and Chinese Taipei, among others. In economic terms, the gain in productivity from EVSL efficiencies is sufficient to offset lower price signals. The implications of this could be ominous for sustainability. Accordingly, a major impediment to EVSL is the undetermined impact on resource sustainability.

In sum, EVSL cannot be expected realistically to give the best of both worlds – economic optimization and social optimization. It can give economic optimization, summed as lower prices and enhanced productivity. But in the absence of deliberate policy action, it cannot simultaneously give social optimization, summed as enhanced employment and/or quality of life in the fisheries sector, and ensure sustainability of resources. In fact, the evidence at the Seminar suggested that, in the absence of off-setting policies, EVSL was likely actually to accelerate the

loss of employment in the fisheries sector that was apparently already happening, and certainly could actually impair sustainability despite sending lower price signals to producers (although this prospect cannot be determined to be so at this time).

3.3 Seminar Agreement on Key Guidelines and Conditions

The policy conflicts that exist at every level in the fisheries conceptual framework carry the major implications, both pro and con, for EVSL as set out above. Implementing EVSL cannot be done unless these conflicts are addressed. However, the Seminar participants did agree that policy models had to take into account the following as key guidelines and conditions for directing policy. These are:

- maintaining the sustainability of fisheries resources;
- ensuring effective fisheries management;
- conserving the heritage of fishers and fishing communities;
- making available adequate environmentally-sustainable technology, technology transfer, and technology tool-kits; and
- acting in a timely way, in order to respect the EVSL timeframe.

Timing and Restructuring

The paper from the State Fisheries Committee of Russia showed how the restructuring of the Russian economy affects the ability of Russia to implement EVSL. Russia is currently in the process of joining the WTO. Current scenarios indicate a sharp increase in tariffs in the very short run after joining, followed by a gradual decline. Eventually, the supposition is that Russia will abide fully by trade liberalization initiatives. But is it reasonable to expect a transitional economy like Russia to be able to accept early liberalization?

4.0 Current Profile of APEC Policies

Coming out of this description of the conflicts in policy facing the fisheries sector, and the key guidelines and conditions agreed at the Seminar, what is the relative balance of current policies among APEC member economies?

A previous study done for the APEC Fisheries Working Group (FWG) by PricewaterhouseCoopers seems to shed some light on this question. The previous PwC work compiled an inventory of fisheries support programs across APEC. This was included in the Study Into the Nature and Extent of Subsidies in the Fisheries Sector of APEC Member Economies, APEC, December 10, 2000. This study categorized APEC support programs according to certain broad classification demand from work at the OECD.

A major problem is perceived if current profiles of program expenditure are compared with the description of issues given above. In fact, the current program priorities seem precisely opposite to the guidelines and conditions developed at the Seminar.

Current profile emphasizes Capital and Infrastructure Support to Capture Fisheries (\$4.7 billion expenditure out of \$12.6 billion of all programs). (See Exhibit 4)

Second priority is Fisheries Management (\$1.7 billion applied to Aquaculture, and \$1.5 billion to Capture Fisheries).

Third priority is Direct Assistance to Fishers in Capture Fisheries (\$1 billion).

There is very little Direct Assistance support applied to Aquaculture, although small amounts (\$0.4 billion or less) are available for Aquaculture as lending programs, marketing and price supports, and tax preferences.

In sum, it can be seen from Exhibit 4 that the bulk of government support program funds are going to aiding the taking of fish from the open marine environment (capture fisheries), whereas the Seminar participants were focusing much more on the desirability of sustainability and the need for fisheries management.

Moreover, this profile of APEC expenditures does not change greatly when assessed by number of programs or number of economies rather than dollars. (See following Exhibits 5 through 8.)

There are a couple of very important qualifications that must be borne in mind on this apparent conflict. First, a dollar spent on fisheries management may have much more impact than a dollar spent on Infrastructure. This was a key qualification brought out in the text of the above-referenced PwC study. It is also a highlight of OECD work on fisheries. In other words, any realistic assessment has to take into account the interplay between policies: relatively modest

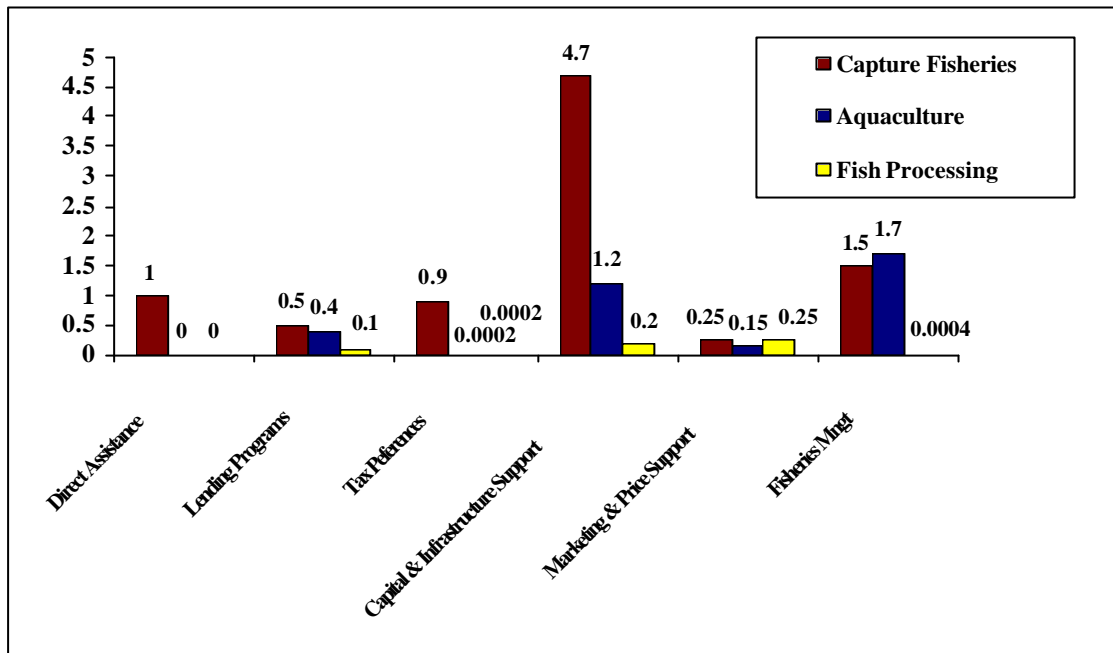
sums spent on fisheries management may well be able to so guide fisheries activities that many dollars spent on Infrastructure may still be fully harmonious with sustainability.

Second, the PwC study also indicated that there was evidence of evolution in the APEC expenditures. The PwC research team could not document this evolution, and the requisite research to do so was outside the terms of reference of the study, yet nevertheless, the dates on the introduction and ageing of programs appeared to the research team as showing a relative decline in Infrastructure expenditure and relatively more expenditure on fisheries management. Whilst undetermined in precise scope, this perception by the research team may need to be borne in mind before any definitive conclusions are drawn.

On the other hand, evidence continues to mount that sustainability is an issue. Another study done for the FWG by Global Economics in 1999 suggests that a majority of fishes species in the APEC region are either actually senescent (dying out) or, from a fisheries perspective, fully mature catches. The implications of this suggest that, however effective the interplay of policies are, and however much program expenditures are relatively evolving in favour of fisheries management, there is still an issue of sustainability. Accordingly, the Seminar participants' agreement that sustainability and fisheries management represent key guidelines and conditions for new policy models seems very defensible.

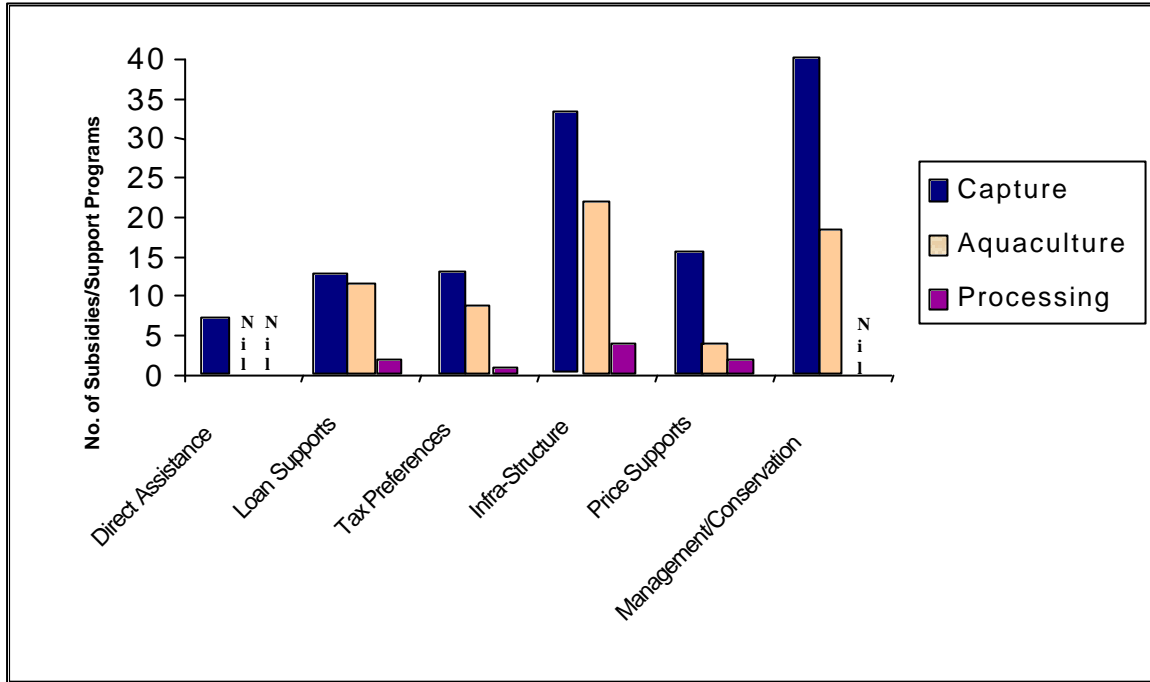
However, small scale funding programs that provide less than \$1 million in any one case, or are less than \$100 million in total, are relatively much more applied to Aquaculture. This would seem more in harmony with the agreed positions from the Seminar, and implies these sorts of programs are more in keeping with the guidelines and conditions of the participants.

Exhibit 4
Current Profile of Fisheries Support Programs Within the APEC Region by Classification
(Billions \$US)



Total: \$12.6 billion

**Exhibit 5
Current Profile of All APEC Programs**



**Exhibit 6
Concentrations by No. of APEC Economies**

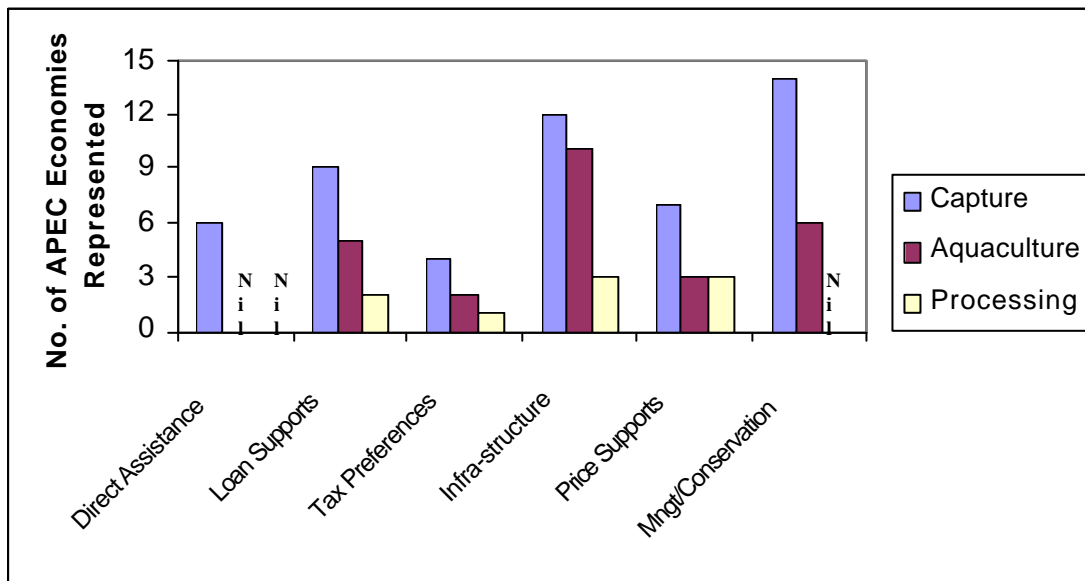


Exhibit 7
Current Profile of APEC Large Scale Funding Programs

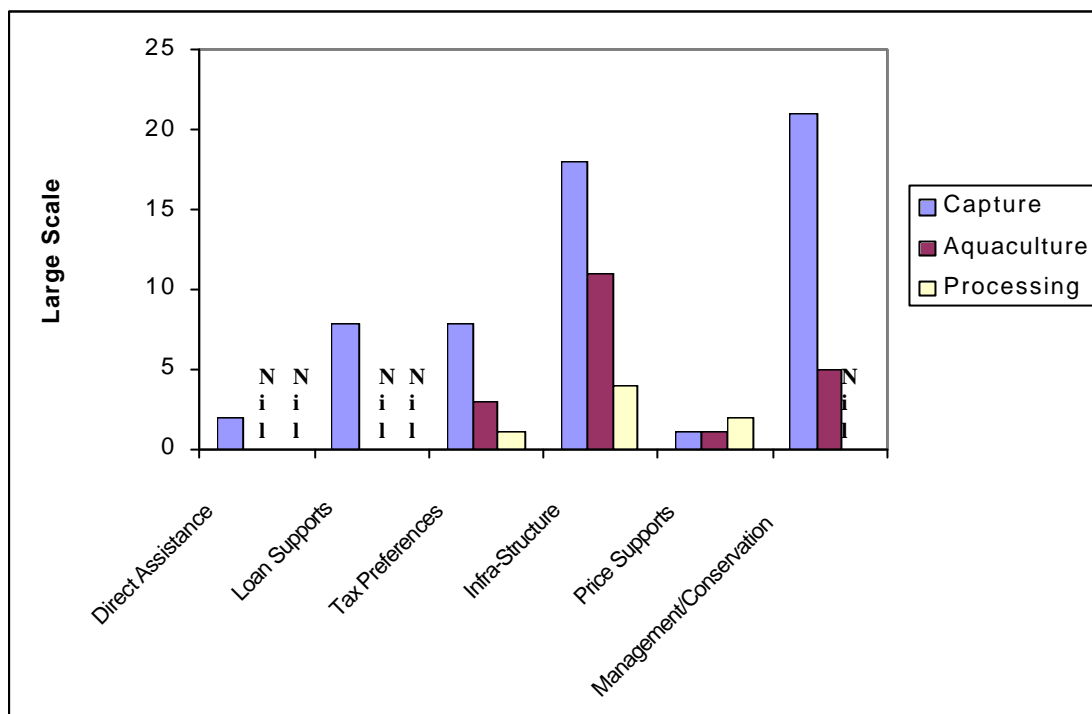
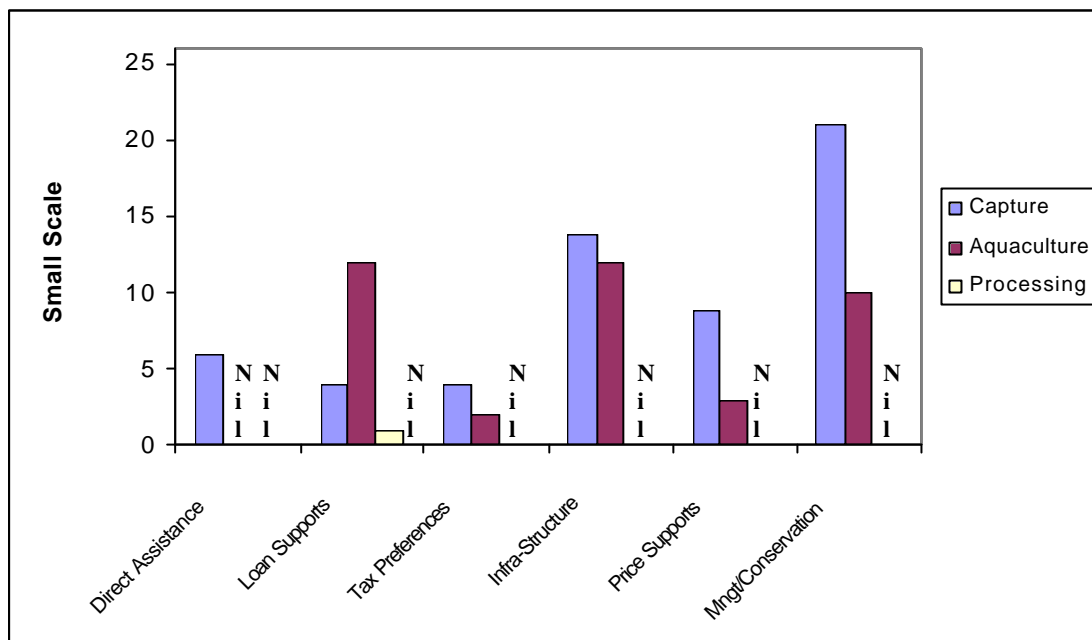


Exhibit 8
Current Profile of APEC Small Scale Funding Programs



5.0 Four Policy Model Options

Coming out of the presentations and discussions, the Seminar examined some specific options of policy models. These were initially based on three options presented at the Seminar by the PwC research team, but these were subsequently modified (as might be expected) in light of Seminar discussions, and a fourth option was also added.

Although these four developments are options, they are not mutually exclusive, i.e. they could all be adopted.

5.1 Contextual Trends

Before considering the specific policy models developed at the Seminar, some contextual trends should be explained briefly in order to clarify some concepts and the use of specific expressions.

First, there is already a trend towards lower real prices in the fisheries sector of APEC. This was referenced by the papers from Japan, Korea, and China among others. Accordingly, the expression “lower real prices” from the EVSL initiative should be interpreted as something beyond current trends. Moreover, the emphasis on real prices should be noted; i.e. the Seminar did not consider inflation. Second, fisheries does not exist in isolation; to a certain extent the fisheries sector competes against other sectors in common market places, for example, competition with the agriculture sector in food markets. The prices in this discussion should be understood as relative; it is a question of comparing fisheries sector prices against competitors.

This should be borne in mind by the reader in case of specific circumstances among member economies. Suppose a particular economy suffers a bout of general monetary inflation; readers familiar with that economy may become doubtful of the expression “lower prices”. Accordingly, it is real prices that are meant here. Similarly, suppose real food prices rise, owing to (say) increased real costs of energy in farming. It is quite conceivable fisheries sector products, competing in at least some common market places with agricultural ones, would rise in

Fisheries Management

A paper from the Canadian Department of Fisheries and Oceans provided a case study on one aspect of fisheries management – in this case, structural adjustment measures in Canada’s Pacific Fisheries. The OECD suggests that Canada directs a relatively large amount of government financial transfers at the fishers sector, but the Canadian paper indicated how this is for facilitating structural adjustment. Moreover, such structural adjustment can be fully compatible with trade liberalization, and actually help sustainability.

The Canadian strategy has overall many elements: voluntary license retirement; non-licensing measures such as area licenses and gear licenses; and various program elements such as capacity reduction and training and adjustment programs for displaced workers. The Canadian government views these strategic and program elements as very successful in preserving a sustainable Pacific fishery. The money was well-spent.

unison. “Lower prices” would look doubtful again. But relatively speaking, the fisheries prices likely still would be. The reader is simply cautioned to bear such details in mind.

5.2 Supposing EVSL: How to Accommodate Policy Conflicts

Let us suppose EVSL were to be implemented across the APEC region. In the absence of off-setting policies, we have already seen from the results of the Seminar that there would likely be employment dislocation (to be more precise, accelerated employment dislocation) among fishers and in particular the artisanal and small business categories (which is most of the employment in the sector), and there could be increased pressure on marine resources, certainly for capture fisheries, leading to deteriorating sustainability, even if this cannot be determined for sure at this point.

Other possible difficulties include lack of financial resources with which to invest in aquaculture alternatives, and particularly lack of both financial and technical resources with which to develop expandable marine resources in developing economies, regardless of being based on capture fisheries species not fully developed for commercial purposes or on aquaculture.

In Exhibits 9 through 11, we provide a go-forward “critical path” for policy evolution. This critical path was presented at the Seminar, to act as a basis for developing specific policy models.

Some key factors and assumptions underpinning this critical path are:

To make the long-term objectives of Trade Liberalization credible, economies should take steps to limit any real price rises up to the medium-term (7-12 years). For example, economies could reduce tariff and other barriers to encourage imports in case of rising real prices domestically.

In the short run, price stability is desirable to limit inefficiencies in the supply chain, and demonstrate long-term credibility of Trade Liberalization, but also to facilitate key social optimization indicator of stable employment.

Trade liberalization should not impair sustainability of capture fisheries resources. Using key indicator of capture fisheries production, APEC annual total should be approximately stable at 70-80 million tons.

In the short-term (5-10 years), social optimization policies are likely to have to be continued in light of structural factors such as the limited capability of artisanal and small business fishers to switch to new activity.

As well, approximate price stability in the short run is desirable so as to not discourage aquaculture expansion – probably necessary to meet long-term social optimization goal of fisheries sustainability. As well, using price stability will help diversification from capture fisheries to aquaculture at all levels.

In the long term, declining real prices for fisheries production implies greater efficiencies are required in both capture fisheries and aquaculture.

In the long term, artisanal and small business fishers may have to rationalize in order to preserve key social optimization goal of employment.

Exhibit 9
Illustrative Decision Tree I: Towards EVSL Policies Priorities

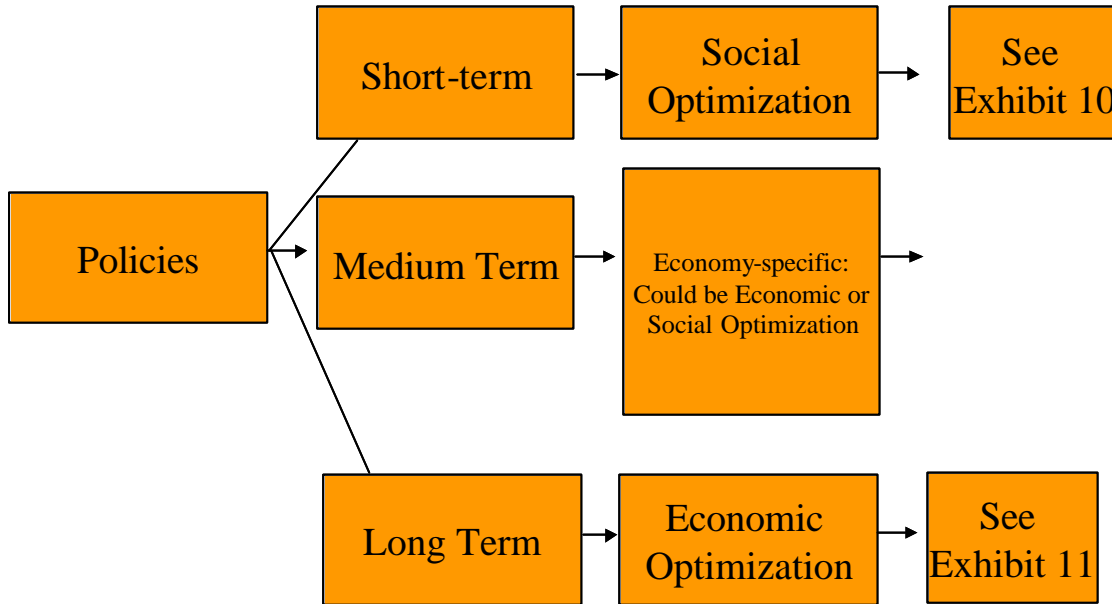


Exhibit 10
Illustrative Decision Tree II: Short-term Social Optimization

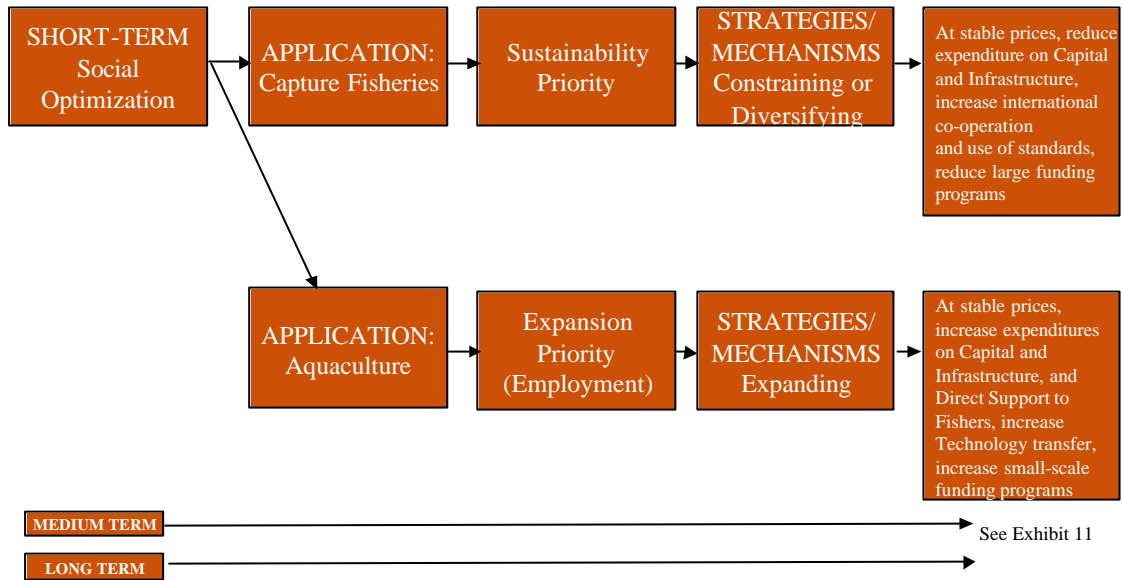
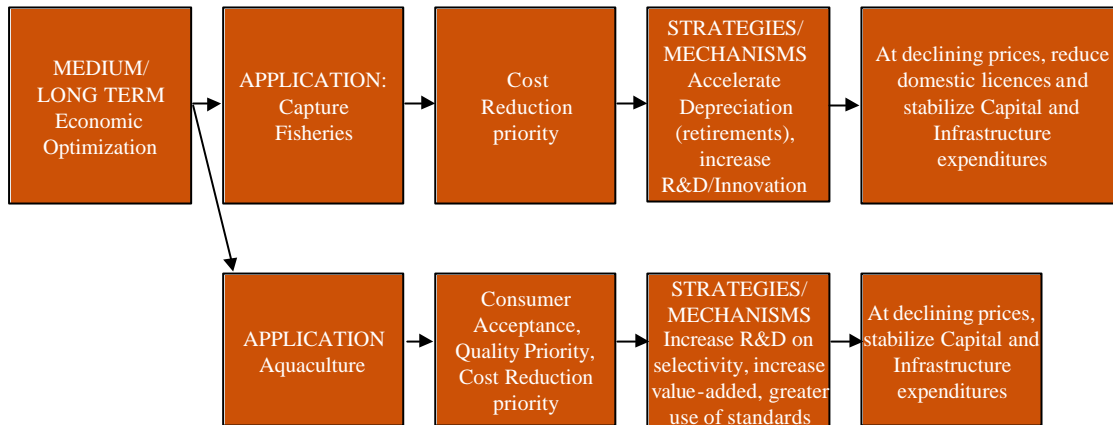


Exhibit 11
Illustrative Decision Tree III: Medium and Long Term Economic Optimization



5.3 Seminar Recommendations

The Seminar participants did reach consensus on many important points.

First, they agreed that any set of fisheries policies had to respect certain key guidelines and conditions:

- maintaining the sustainability of fisheries resources;
- ensuring effective fisheries management;
- conserving the heritage of people involved in the fisheries sector;
- making available up-to-date technology transfer and tool kits; and,
- the need for timely policy action to respect the APEC Early Voluntary Sectoral Liberalization (EVSL) objective.

Second, the Seminar participants agreed that the broad objectives of policy that come from this set of key guidelines and conditions would have to include:

- Policy to facilitate necessary adjustments for fishers according to the conditions in each economy;
- Policy to support transfer of environmentally-sustainable technology to developing economies;
- Policy to evaluate the impact of EVSL (with special reference to the impact on communities);
- Policy to support an educational program on EVSL; and,
- Policy to emphasize the harmonization of standards.

Third, the Seminar participants agreed that, within the context of these general objectives, some specific recommendations should be:

1. Increase levels of international co-operation on fisheries management, through:
 - a. information exchange, international research, and technology transfer;
 - b. voluntary co-operation and agreement on specific management issues such as targets for production;
 - c. multi-lateral agreements on fisheries management; and
 - d. establishing an APEC “Eco-tech” fund.
2. Re-balance government support programs to the fisheries sector in stages, such as:
 - e. more funding for Fisheries Management and Direct Assistance to Fishers and less to Capital and Infrastructure support;
 - f. within remaining Capital and Infrastructure Support Programs, more funding to Aquaculture from Capture Fisheries;
 - g. more small-scale funding programs and less large-scale programs;
 - h. for government support programs affecting Industrial Fishers, moving to a cost-recovery basis (re-balance from government to industry); and,
 - i. for developed economies, moving both Capital and Infrastructure Programs and Fisheries Management Support towards relatively greater use of international programs.
3. Encouraging staged industrial rationalization in the sector, harmonious with social optimization, through:
 - j. encouraging creation of larger business units for the artisanal and small business fishers categories;
 - k. expecting industrial fishers to carry all costs related to their share of fisheries management and infrastructure; and,
 - l. at all levels, fishers developing, or inward transferring, international standards to guide product qualities and production process.
4. Develop a process for ensuring on-going input from the stakeholder community through:
 - m. Establishing a stakeholder forum that will meet prior to, but in conjunction with the events/meetings of the APEC Fisheries Working Group (FWG).