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The Case of the Unwanted Salmon: Canada, Australia and Fresh Pacific Salmon

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The paper discusses aspects of the case of Canada v Australia (the Salmon case) AB-1998 – 5 (1998) WTO. The facts of the case and the parameters of the Panel's jurisdiction are considered. The 'reciprocity' and 'mutual advantage' principles established in GATT 1947, continuing in GATT 1994 and in the World Trade Organization are viewed in the general light of aspects of the commonly known current environmental global crisis: diminishing water supplies, decreasing supplies of natural food sources, increasing temperatures and increasing human population growth. The need to protect a wild fish species in the ocean (mariculture) and a cultivated fish species in fish farms (aquaculture) is considered in the light of the global trade environment. The paper posits that transactions in mariculture and aquaculture products need to firstly address their potential impact on the physical global environment, rather than the fiscal global environment. Thus it is asserted that the evidentiary rules under which the tribunal traditionally operates are too restrictive for the demands of present day globalisation. The paper proffers a possible remedy; the trade dispute resolution regime needs to be reconsidered in order to take account of 21st century global environmental realities.

Field of Research: World Trade Organization, Trade in Goods, International Arbitration Guidelines and Environmental Protection.

1. Milestones in Early 20th Century International Trade

Julius Stone[i](1943) points out that world organisation since the 16th century reveals a pattern of negation of organization, with territorial units claiming state sovereignty and ultimately showing absolute irresponsibility to any authority outside.
The resulting self-absorption can be seen as culminating in the self-protectionist attitude demonstrated by some nations in the 1930's and has been credited with having a causative role in the Great Depression. The leaders of England and

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America - Sir Winston Churchill and President Roosevelt - in their hope for a 'better future for the world'[ii] advocated the substitution of cooperation for competitiveness – 'to further the enjoyment by all states, great or small, victorious or vanquished, of access on equal terms to trade and to the raw materials of the world which are needed for their economic prosperity'[iii]. Thus the *Atlantic Charter* was born. Its fifth freedom[iv] - freedom from want through the removal of cultural and commercial barriers – sits comfortably with the notion of every nation having the right to expect its legitimate trade will not be destroyed by excessive tariffs or restrictions.
Brinkley and Facey-Crowther[v](1991) credit the *Atlantic Charter* with starting successive statements that progressed through to the United Nations Charter. This initiative set out to establish trade liberalisation and multilateral economic cooperation by a trio of entities: International Monetary Fund, the World Bank and the International Trade Organization: these three entities were to harmonize world trade.

However, the internal American political scene altered while the United Nations Charter was being developed: the US Senate veered to a protectionist philosophy. Thus, President Truman, fearing defeat, did not submit the Charter to his Senate for ratification.

2. Transitions: GATT 1947, GATT 1994 and WTO

2.1 GATT 1947

In 1947, a new attempt to defuse protectionism was made in the General Agreement on Trade and Tariffs: GATT 1947. This multilateral treaty attacks protectionism by introducing two key principles for negotiating customs, tariff reductions and other impediments to trade[vi]: 'reciprocity' and 'mutual advantage.'
It forbids trade discrimination by insisting that when imports are inside a nation state, they are treated in the same way as that nation state's local products.

Specifically, the GATT 1947 principles[vii] can be identified as:

- Forbidding trade discrimination
- Using only customs and tariffs to limit imports
- Publishing and making available trade regulations
- Preventing discrimination against 3rd party states under customs unions and free trade agreements
- Placing restrictions on levies for imported goods, for example introducing:
  - import tax equal to internal tax
  - 'antidumping duties' to compensate for imports being sold below locally produced goods
  - 'countervailing duties' to counteract foreign export subsidies
  - fees and charges for services rendered eg special exceptions
    - *serious/unexpected damage to domestic production
    - *need to promote economic development
    - *protection of domestic raw materials
    - *protection of domestic national security
    - *balance of payments de-equilibriums

These principles of 1947 GATT were accepted by 53 nation state members[viii].

2.2 GATT 1994

GATT 1994 has emerged out of GATT 1947 and while the1994 GATT is attached to the World Trade Organization, it contains essentially the same principles[ix].

Thus each GATT may be seen as the bed of seeds from which nation states have begun to grow the plant of globalisation. In 1947 it had become clear to leaders with foresight that the world of trade and commerce was changing. Increasingly, stasis was being challenged by phenomena such as population growth, democratisation of education, scientific and medical discoveries. Security seems to have become an increasingly mythical ideal rather than a goal to be achieved as evidenced by the concept of Rounds written into GATTs 1947 and 1994.

2.3 WTO

The WTO is a legal framework, an administrative organ[x]. Whereas GATT 1947 dealt only with trade in goods, the WTO Agreement 'separates the institutional concepts from the substantive rules'[xi]. This is evident in Annexure 1A Number 4, the *Agreement on Sanitary Phytosanitary Measures*[xii]with its essential principles aimed at safeguarding ecological-biological-environmental integrity in global conditions that are increasingly trade-mobile.

Attendant upon trade-mobility are the increased difficulties of finding agreement between an expanding group of states. The increased complexity may well stem from the fact that value systems upon custom and mores are not readily apparent to the uninitiated. Consequently, decision-making by consensus requires more time to seek out what the value system is and then to try to align it with the systems that are already in operation.

2.4 WTO dispute settlement resolution

The key features of the current dispute settlement mechanism of WTO, identified as the *Dispute Settlement Understanding* (DSU) are noted by Busch and Reinhardt (2003)[xiii] as:

- Formalizing a complainant's right to a Panel,
- Providing for the automatic adoption of Panel Reports (save for 'negative consensus')
- Affording appellate review and
- Establishing a mechanism with unified jurisdiction over all disputes arising under the covered Agreements.

These features, however, function within the ever-increasing pressures from business and commercial realities such as the struggle to increase profit margins, the need to remain competitive and environmental constraints caused by a continually shrinking natural resource pool.

3. Environmental Awareness in Trade

A nation is sovereign and therefore has the right to determine standards within its own borders. However, in the reality of a finite global environment, it could well be seen as being obligatory that each sovereign state looks beyond its own borders in regard to environmental impact. GATT Article XX(b) recognizes this to some extent by allowing nations to restrict imports in order to protect themselves against imported diseases and pests, so long as these requirements are necessary and scientifically justifiable[xiv].

M. R. Islam (2006)[xv] cautions that without the term 'necessary' being referenced against a measurable standard, domestic economic pressures ultimately dictate the extent and application of the measures, resulting in the trend to use SPS measures as non-tariff barriers to trade. M. R. Islam (2006) further[xvi]points out that the object of the *Standards Code*, a forerunner of the *SPS*, was to establish matters relevant to food safety and animal and plant health. The *Code's* failure to adequately address disputes required lengthy negotiations resulting in the *SPS Agreement*.

Does the *SPS Agreement* offer better protection for animal safety, plant safety and food safety than *the Standards Code*?
While *SPS* measures may relate to how a product is to be produced, processed, labelled, stored and transported[xvii], J. Sinner(1994) identifies a major flaw in putting this safeguard into practice: that trade measures based upon processes and production measures[xviii] are not allowed[xix].

John Howard Jackson (2000)[xx] relies on the 1998 *Shrimp-Turtle* case to demonstrate the WTO's developing jurisprudence on the process-production issue. Essentially, Jackson (2000)[xxi] points out that the Appellate Body determined that the WTO dispute settlement process must take into account policies other than those that are merely trade liberalizing. However, Jackson (2000)[xxii]notes that the Appellate Body's opinion and report in the *Shrimp-Turtle* case is silent about the product-process question, while nevertheless conceding that there ***may*** be circumstances when a country could justifiably prohibit the importation of goods because of the process used to harvest, develop or prepare the goods for commerce. In the *Shrimp-Turtle*[xxiii] case, the shrimp harvesting resulted in deaths of an endangered species of turtle.[xxiv]

4. Canada v Australia, AB-1998 – 5 (1998) WTO

4.1 The facts

Australian Quarantine Promulgation 86A("QP86A") of 30th June 1975 prohibits the importation into Australia of dead fish of the sub-order *Salmonida* unless…prior to that importation into Australia the fish or parts of the fish have been subject to …quarantine…"[xxv]

In 1994 Canada sought entry to the Australian market for fresh, chilled or frozen uncooked salmon. Thus, Australia conducted an import risk analysis for uncooked, wild, adult, ocean-caught Pacific salmon and the 1996 *Final Risk Analysis Report* recommended:

> "that the present quarantine policies for uncooked salmon products remain in place."[xxvi]

Based on that *Report,* the Australian Director of Quarantine decided on 13th December 1996 that the importation of such salmon should not be permitted on quarantine grounds[xxvii]. There were two aspects the Director of Quarantine balanced to come to that conclusion: these were the competing interests of Australia's international obligations and the Australian government's quarantine policy.[xxviii]

4.2 Canada's response to Australia's decision

Canada refused to accept that Australia's decision was bona fide based upon protecting the domestic piscatorial environment, alleging that it was arbitrary and disguised trade protectionism of the Australian trout and salmon industry. Canada requested a DSB Panel be established to hear its complaint against Australia. The Panel was established and duly concluded that Australia's decision to ban 'adult' 'wild' raw Pacific salmon flesh entry to Australia was arbitrary, unjustifiable and not based on scientific evidence.

Australia appealed against this finding and the Appeal Board agreed with the Panel's decision. The DSB adopted the Panel Report and the AB Report and Australia was instructed by a WTO arbitrator to adopt the decision with a deadline of 6th July 1999[xxix]. When Australia had not heeded the deadline, Canada requested the DSB to authorise retaliation against Australia[xxx] to the tune of 45 million Canadian dollars annually.

In a bid to retain harmony with Canada, its constitutional monarchy cousin, Australia introduced new quarantine measures. These measures stipulate specific processing requirements to be met and restrict the raw Canadian Pacific salmon entering Australia to come from 'a population that has been under a documented health surveillance area[xxxi].

Yet again Canada objected continuing the argument that Australia's requirements were trade restrictive. A WTO Panel again agreed with Canada; Canada and Australia currently have an arrangement requiring fish health certification prior to entry into Australia of wild and farmed salmon[xxxii].

5. The Legislative Instruments

5.1 Australia's domestic legislation

Australia's protective domestic legislation is the *Australian Quarantine Promulgation* 86A("QP86A") of 30th June 1975 which prohibits the importation into Australia of dead fish of the sub-order *Salmonida* unless…prior to that importation into Australia the fish or parts of the fish have been subject to …quarantine…".[xxxiii]

However there are two exceptions to this prohibition: they are heat-treated salmon products for human consumption and non-commercial quantities of other salmon primarily for scientific purposes.[xxxiv] The first exception accommodates dried fish and smoked fish. In both cases the salmon flesh has undergone processes and thus a

form of 'cooking'. The second exception, however, allows into Australia small quantities of fresh, chilled and uncooked salmon, 'primarily' for scientific purposes.

The word 'primarily' introduces a weakness. It makes a concession: while the main reason or the original reason for allowing in the fresh salmon without quarantine would be for scientific purposes, it can be inferred that some fresh salmon would be allowed in without quarantine for purposes other than scientific.

This could be an example of weak legislative drafting. If this is so, it sends a strong message to the bureaucrats in government administration to take their proof reading tasks seriously. On the other hand, it could be a deliberate semiotic ploy to pay lip service to the international fresh fish market. As such it could be implied by the international arena that Australia is not totally against the importation of unprocessed fish… the possibility for such trade remains. Whatever the reason, the grammar results in confusion; it opens the door to challenges to relieve doubt.

5.2 International legislative instrument

Australia's international obligations in this case are determined by the *Agreement on the Application of Sanitary and Phytosanitary Measures* (the *SPS Agreement*). The *SPS Agreement* defines the measures WTO members can take to protect human, animal and plant life and health[xxxv]. The Preamble to the *SPS Agreement* insists that states must not use the protective element as a pretext to restrict international trade[xxxvi], nor may they act arbitrarily to unjustifiably discriminate between states where identical or similar conditions exist[xxxvii].

As a safeguard to arbitrariness, the *SPS* requires that scientific evidence be available to support the measures[xxxviii]. Thus in order to implement the *SPS Agreement* there must be:

- Scientific evidence,
- Lack of arbitrariness,
- Absence of an attempt to foil or restrict trade.

6. The Critical Issue

From Australia's point of view, the critical issue appears not to be a matter of trade. Rather, it is a scientific matter based upon the aim of retaining a domestic fish stock that is free from introduced disease. Hence the *Report* provided by specialist scientists, biologists and zoologists is based upon the evidence. They seek, it would seem, to prevent an ecological disaster.

The notion of an ecological disaster is not new to scientists. Publius Vergilius Maro commonly known as Virgil, who lived in Italy from 70 BC to 19 AD, wrote *Georgics*, widely regarded as the first descriptive poem in Western Literature. Importantly, it provides an ecologically friendly model for both land and sea farming. The ancient Romans were aware of the reality and result of contamination between the species and the problems of misusing natural resources of the oceans and rivers. In fact, Virgil warns of earth's:

> '…hideous corruption, till men learn…'[xxxix]

The international trade aspect was not the consideration of the scientists who wrote the 1996 *Final Risk Analysis Report*: questions of profit, money and international trade were not part of their brief. The laws they applied were much the same as those exhorted by Virgil:

> '…the laws by Nature's hand imposed…'[xl]

Applying those laws of nature based on cautious protection, the scientists declared it was not in the best interests of the world's natural Pacific salmon population nor Australia's domestic Pacific salmon population, to allow un-quarantined fresh Pacific salmon flesh into Australia.

The conclusion reached by M. R. Islam (2006) that 'clearly in the salmon dispute, Australia lacked consistency in its quarantine policies, a sound scientific basis to justify the risk involved and a rational and orderly process of risk assessment for quarantine purposes',[xli] is harsh.

It is essential to remember that Australia's quarantine regulations had been in place since 1975, yet Canada's objection to them surfaced nineteen years into their effect. Thus the context of the Canadian objection must be investigated.

What was fuelling Canada's determination to export adult 'wild' uncooked Pacific salmon to Australia from 1994? Three contextual issues are of relevance. These are:

- Overfishing and depletion of the Pacific fisheries,
- Patriotism, product and country linkage
- Australia's entry into aquaculture

7. Relevant Contextual Issues in the Salmon Case

7.1 Overfishing and depletion of the Pacific fisheries

The Pacific fisheries are characterised by degrees of overcapacity in harvesting, leading to extensive pressure on fish stocks particularly in the traditional salmon, halibut and herring roe fisheries[xlii]. Wild Pacific Salmon have increasingly suffered from overfishing.

The Canadian government sought to address the overcapitalisation of the salmon fisheries with buybacks under the 'salmon revitalisation program' ie the Miflin Plan: it aimed to reduce the number of the salmon fleet by 50%[xliii].

Carlyle Mitchell and Roger Stacey[xliv](2003) identify a decline in the contribution of the ocean sector to Canada's gross domestic product between 1988 and 2000. Consequent upon the decline in Canada's ocean fish catch is the reduction in employment in the fishing industry. This factor is borne out by Mitchell and Stacey[xlv](2003) with commercial fishing figures that reveal the reduction in both the value of the catch and employment in the fishing industry over a twelve-year period:

Year	Value of output	employment
1988	14.9	23.9
2000	12.9	17.4

Figure 1: Commercial fishing vs employment, Canada[xlvi]

The usual economic value or objective is maximization of the average national income per head[xlvii]. Presumably, therefore, Canada's primary concern would be the impact of her reduced salmon market on the average income of her nationals. The people immediately involved – such as fishermen, fish factory workers, together with secondary workers such as carriers, would suffer reduced incomes and job loss, with the reduction of the salmon catch.

This reduction of the salmon catch could well be reflected in the statistics[xlviii] for canned fish imports into Australia from Canada shown below. However, fish other than Pacific salmon are included in these figures.

95-96	96-97	97-98	98-99	99-00	00-01	01-02
28853000	18901000	20268000	26392000	22434000	25207000	20797000

Figure 2 Canned fish imports from Canada to Australia[xlix]

The internal economic and social impact of these fluctuations would have been severe in Canada. Hence, loss of incoming dollars and cents may have driven the protests against Australia's decision.

7.2 Patriotism, product and country linkage

The identification of a product with its country of origin is a phenomenon well-known in consumers. The associated phenomenon of linkage between a product and a country is discussed by Jaffe and Nebenzahl[l](2001). It reveals an interesting, parallel hypothesis when applied to the *Canada v Australia* salmon case.

Wall and Heslop[li] (1986) identify product and country linkage as 'patriotic bias'[lii]. Their empirical research[liii] shows that approximately half of the Canadian respondents surveyed:

> (1) prefer Canadian products to foreign products and
> (2) buy Canadian products even if higher priced in preference to equal quality foreign products.

Okechuku's[liv](1994) specific commodity research also identifies patriotic bias, revealing that Canadian consumers prefer television sets and car radios made in Canada. Thus, 'product image' a concept defined by Kotler[lv] (1997) as 'the set of beliefs, ideas, and impressions that a person holds regarding an object,' seems likely to be linked with patriotism.

Patriotism appears to be such a strong motivation in consumer behaviour that it drives buyers to purchase items of an inferior quality if they are made in their 'own' country[lvi]. If patriotism motivates purchasers in this irrational manner, could it not also be inferred that patriotism motivates nation-state producers to irrationally see themselves as having unique and sole rights of production of a specific product?

This inference gives rise to the question: Did the Pacific salmon product assume a nationalistic or patriotic bias, to the extent that Canada saw itself as being one with the product Pacific salmon? Hence, did Canada perceive itself as being the sole Pacific salmon producer with exclusive marketing rights in this product?

7.3 Australia's entry into salmon aquaculture

It is common knowledge that 'aquaculture is an alternative to harvesting naturally occurring fish stocks, its major benefit being sustainability[lvii]. In the current global climate of increased stress upon 'wild' populations, aquaculture is a critical method of production to protect fish stocks, and indeed to ensure adequate food for the human population.

Australia's increase in fish trade is based on aquaculture.
The increase in Australian salmon aquaculture[lviii] can be seen in the figure below:

1999 - 2000	2000 - 2001	2001- 2002
10,907 tonnes	12724 tonnes	14356 tonnes
$84.8mil gross	$99.2mil gross	$112.1mil gross

Figure 3 Increase in Australian salmon acquaculture[lix]

Records from the Australian Bureau of Statistics reveal that in:

- 2001 – 2002 the gross value of Australian aquaculture production was $733 million, an increase of 4% from 2000 – 2001, due to $12.9million (13%) increase in the value of salmon production[lx], and in

- 2001 – 2002 salmon production in Australia was 14,356 tonnes (13% increase on the previous year)[lxi]

Statistics issued by the Food and Agricultural Organization of the United Nations for the period 1996 - 2003[lxii] reveal that Australia is not considered a major fish harvesting-producing country. However, USA, Thailand, Denmark and Canada are recognised as such[lxiii].

Nevertheless, Australia's entry into Pacific salmon aquaculture could have been identified by Canada as potential "foreign trade competition"[lxiv]and thus provided fuel for the protests against Australia's decision.

While in human real-life situations such behaviour is often identified as jealousy, this behaviour in nation-states might well be taken to be an anti-competitive tactic.

8. Consideration of the Panel's Decision

8.1 The foundation of the Panel's decision

The Panel applied the three-point test from the *European Communities – Hormones (1998) Report* [lxv]. This test requires three elements to be present to ground a finding that a member has acted inconsistently with Article 5.5. The three elements are:

- Different levels of sanitary protection in several 'different situations'
- 'Arbitrary or unjustifiable' differences
- A result that is 'discrimination or a disguised restriction on international trade.'

The Panel found that Australia acted 'inconsistently' by refusing
Canada's uncooked, wild, adult, ocean-caught Pacific salmon while allowing imports of:

- uncooked Pacific herring, cod, haddock, Japanese eel and plaice for human consumption
- uncooked Pacific herring, Atlantic and Pacific cod, haddock, European and Japanese eel and Dover sole for human consumption
- herring in whole, frozen form as bait (herring used as bait)
- live ornamental finfish[lxvi]

The Panel found this to be an application of arbitrary and unjustifiable distinctions, resulting in discrimination or a disguised restriction of international trade[lxvii].

8.2 Similar and comparable aspects

The *European Communities – Hormones* (1998) *Report* states "situations…cannot, of course, be compared, unless they are comparable, that is, unless they present some common element or elements sufficient to render them comparable"[lxviii].

Clearly, the two indices common to each of the four examples are:

- finned and
- entering Australia in an uncooked or raw condition.

However, the Panel appears not to have addressed two critical major variations. These are:

- 'wild' and
- 'adult' .

In the four categories of fish relied upon to demonstrate 'comparable different situations' in accordance with Article 5.5 of the *SPS Agreement*, there is no indication whether the uncooked, finned fish Australia allowed to be imported were:

- 'wild' fish, as distinct from being acquacultured or maricultured or
- 'adult' fish

In arguing against the Panel's decision, Australia focussed on the impact of the decision, that is, that the decision diminished the nation's right of self-protection; in particular, Article 2.1 of the *SPS Agreement*, wherein measures to protect animal life or health are not dependent upon positive scientific evidence of disease detection[lxix].

However Australia did not take issue with the two unique aspects of the Canadian export: 'adult' and 'wild'. Most probably this is because, according to J. Sinner (1994)[lxx] processes and production methods cannot be used as the basis for trade restrictions.

Nevertheless, it would seem that now, in the 21st century, processes and production methods should properly be considered in trade between nation states.[lxxi] For example, in the salmon scenario, the taking of 'adult' wild fish in ocean fishing is inherently risky. With an increasing human population and increasing stress upon sea species, the aspect of selecting only 'adult' 'Pacific salmon' fish from the batch of fish drawn up from the ocean bed, while rejecting the immature fish, fails to take into account the impact of shock upon the rejected fish. There is no evidence of any consideration of the subsequent impact of this 'out of ocean' experience upon growth or the possibility of it resulting in mortality of rejected immature Pacific salmon or other rejected fish (by-catch).

8.3 Research emphasizing fish vulnerability

There is still much that is unknown about fish in the wild. Research emphasises environmental caution in determining fish maturation. Campbell, Dickey and Swanson[lxxii](2003), researching maturation in male salmonoids, found that it varies, occurring from the age of 1 to 6 years, and being influenced by growth during critical periods. They acknowledge that the endocrine mechanisms controlling the process and its impact on growth are poorly understood. In fact this research conducted by Campbell, Dickey and Swanson[lxxiii](2003) was the first of its kind to produce data-linked pituitary evidence for maturity in the following year. Surely such acknowledgement of lack of scientific understanding ought to act as a caution to international fishing for the 'adults' of either gender of a wild population.

A similar warning of the problems attached to *ad hoc* human intervention with 'wild' populations is found in the study conducted by Sharp, Lellis, Butler, Herrnkind, Hunt, Ardee-Woodring and Matthews[lxxiv](2000). Their research revealed that first-stage-tagged juveniles had lower growth rates than untagged lobsters and a 25% post-tagging mortality rate[lxxv]. While that study was for a different wild species - Caribbean spiny lobster - in the absence of contradictory evidence it can be taken as potentially applicable to the 'taking' of immature 'wild' Pacific salmon, rejecting them, and subsequently returning such 'by-catch' to the ocean. Again, in the absence of evidence to the contrary, it seems reasonable to assume there may well be a wastage of the natural population.

Moberly[lxxvi](1992) considered the implications of mixed harvest in a research project involving marking techniques to facilitate selective fishing methods, and had concerns over the status of wild stocks of Pacific salmon and the mixed stock harvest.

Schroeder, Knudsen and Volk's[lxxvii](1997) experiments involving rapid mass marking of salmonid fry with strontium chloride solutions to increase ease of catch, is an example of the attendant risks associated with intervention of young fish: it also involves the practice of an aqua-cultural technique, thereby taking the resulting catch out of the 'wild' category.

Relevant research such as that cited above emphasises the disturbing impact of what could well be termed process and production methods. It also cautions against degradation of the sea population.

The research also underpins an apparent inconsistency seemingly overlooked by the Panel and Australia on appeal. Aquaculture is defined as the cultivation or rearing of aquatic plants or animals[lxxviii]. Thus it would seem that there were genuine grounds on which Australia could have developed a powerful argument showing that the Canadian Pacific salmon catch was neither 'wild' - because it entailed intervention in the natural population and application of harvesting techniques - nor 'adult' – because the catch included a by-catch of immature salmon, as well as other species. Consequently, a more rigorous examination of the 'comparable-different situations' required under 5.5 of the *SPS Agreement* may well have resulted in a happier situation for the wild Pacific salmon population and more ready accepted of Australia's quarantine policy.

9. Is Australia's Level of Protection 'Arbitrary'?

The Panel argues on the facts that there were different levels of protection for Australia's allowable situations and these are 'arbitrary or unjustifiable', with the actual diseases in the herring bait and live ornamental finfish being a greater risk than the risk from ocean-caught Pacific salmon[lxxix]. This argument on the facts appears flawed in that it seemingly assumes that the dead herring bait would harbour the same diseases as those to be expected on wild Pacific salmon. This assumption overlooks the different fish types, their different regions of origin and whether or not they are 'wild' or 'farmed' fish.

To this end, there is evidence that the aquaculture techniques employed by Australia and other countries in salmon cultivation, produce an environmental output different from that of a 'wild' salmon population. For example, Wildish, Hargrave, MacLeod and Crawford[lxxx](2003) found evidence of organic enrichment near salmon-net pens in both Canada and Australia.

Further, the Panel appears not to have been concerned with whether the ornamental finfish allowed into Australia were from saltwater or freshwater nor with the temperature of the water in which the fish would have lived. These factors without doubt increase the expectation of finding a different set of potential and actual diseases from those of the wild Pacific salmon. For example, the team comprising Kent, Andree, Bartholomew, El-Matbouli, Desser, Evlin, Feist, Hedrick, Hoffmann, Khattra, Allett, Lester, Longshaw and Palenzeula[lxxxi](2001) identified differences in the marine taxa at the genus level branch separately from genera that usually infect freshwater fishes. Consequently, scientific evidence can be seen to caution against the view that the problems associated with the importation of freshwater fish will be the same as those associated with the importation of salt-water fish.

10. Conclusion: Seeking an Ecologically Desirable Result

Current symptoms of environmental stress include global warming, diminishing water supplies, impaired air quality, increasing global human population and decreasing food supplies. Is it not, therefore, ecologically desirable for trade disputes to put environmental issues in priority to money?

When there is an environmental risk by a particular process or method of production - as Australia's experts cautioned in the salmon case - surely that ought to be sufficient for a nation state to refuse the importation of that product. In fact, Australia's refusal to accept Canada's raw wild adult Pacific salmon could well be seen as a representative action taken on behalf of the global environment. As M. R. Islam (2006)[lxxxii] points out 'the preservation of Australia's pristine environment, unique biodiversity and pest and disease-free status necessitates that it prevents incursions by potentially dangerous species.' If this requires Australia to remind other nations to put the environment as a priority over economic growth, so be it. At this time, in the global reality of the 21st century, it is time to remove the blinkers and see reality. Environmentally protective measures must take priority over business practices, trade expansion and economic goals for the sake of intergenerational equity.

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[i] Julius Stone (1943) *The Atlantic Charter New Worlds for Old*, Angus and Robertson, Sydney @ 99

[ii] *The Atlantic Charter*, U.S. No. 3(1941) Cmd. 6321 in Julius Stone 1945 *The Atlantic Charter*: Sydney, Current Book Distributors @Appendix

[iii] *The Atlantic Charter* in Julius Stone (1945) @ Appendix

[iv] Julius Stone(1945) @33, The other four freedoms being freedom from fear through disarmament, freedom of information, freedom of religion and freedom of expression

[v] Douglas Brinkley and David R. Facey-Crowther (1991) (eds) *The Atlantic Charter*, London, Macmillan Press @146

[vi] Ray August (2004) *International Business Law: text, cases and readings* (4th edn) Pearson, Australia 2004 @355

[vii] Ray August (2004) at 355 - 356

[viii] Ray August (2004) at 354

[ix] Ray August (2004) at 356

[x] Ray August (2004) at 359.

[xi] Ray August (2004) at 359, quoting the testimony of John H. Jackson

[xii] *Phytosanitary Agreement* on site www.wto.org/wto/legal/legal.htm. Visited 15/11/2006

[xiii] Marc L. Busch and Eric Reinhardt(2003) 'The Evolution of GATT/WTO Dispute Settlement' html version from http:/qsilver.queensu.ca/~buschm/Documents/TPR2003_Busch_Reinhardt.p located on http://scholar?hl=en&lr=&q=cache:LaLdnbgx21EJ;qsilver.queens… @ 3 visited 15/11/2006

[xiv] J. Sinner(1994) 'Trade and the environment: efficiency, equity and sovereignty considerations' in *Australian Journal of Agricultural Economics*, Vol 38 No 2 (Aug 1994) @ 177
[xv] M. R. Islam (2006*) International Trade Law of the WTO*, Oxford University Press, Melbourne @ 104
[xvi] M. R. Islam (2006) @104: *The Standards Code or Agreement on Technical Barriers to Trade* was developed in the Tokyo Round, 1973 - 1979
[xvii] M. R. Islam (2006) @106
[xviii] J. Sinner (1994) @ 178
[xix] In the *salmon case*, *Canada v Australia*, AB-1998 – 5 (1998) WTO, it could be submitted that the terms 'adult' and 'wild' are aspects of 'quality.'
[xx] John Howard Jackson (2000) 'The Role and Effectiveness of the WTO Dispute Settlement Mechanism' in *Brookings Trade Forum* 2000(2000) 170 – 219 @ 14 – 15 on http://muse.jhu.edu/journals/brookings_trade_forum/v2000.1jackson.html visited 15/11/2006
[xxi] John Howard Jackson (2000) at 14 - 15
[xxii] John Howard Jackson (2000) @ 15
[xxiii] John Howard Jackson (2000) @ 15
[xxiv]WTO: May 1998, 'Understanding the WTO Agreement on Sanitary and Phytosanitary Measures' www.wto.org/english/tratop_e/sps/_e/spsund_e.htm site visited 16/11/2006, The WTO website explanation of the *SPS Agreement* states that for food items, quality and packagings are generally not considered to be sanitary or phytosanitary measures, and hence are normally subject to the *Trade Barriers Agreement.*
[xxv] Ray August (2004) at 395
[xxvi] Ray August (2004) at 395 quoting Department of Primary Industries and Energy, *Salmon Import Risk Analysis: An assessment by the Australian Government of quarantine controls on uncooked, wild, adult, ocean-caught Pacific salmonoid product sourced from the USA and Canada*, Final Report, December 1996
[xxvii] Ray August (2004) at 395
[xxviii] Ray August (2004) at 395
[xxix] M. R. Islam, (2006) @ 127
[xxx] M. R. Islam (2006) @ 127
[xxxi] M. R. Islam (2006) @ 127
[xxxii] M. R. Islam (2006) @ 127 relying on http://www.dfait-maeci.gc.ca/tna-nac/salmon-backgrounder-en.asp and http://www.dfat.gov.au/trade/negotiations/environment/salmon1.html visited on 7 March 2006
[xxxiii] Ray August (2004) at 395
[xxxiv] Ray August (2004) at 395
[xxxv] Ray August (2004) at 397
[xxxvi] Ray August (2004) at 394 quoting the *Preamble* and para 20 (1994) of *SPS Agreement*
[xxxvii] Ray August (2004) at 394 quoting para 7 (1994) of *SPS Agreement*
[xxxviii] Ray August (2004) at 394 – but in the absence of conclusive scientific evidence, provisional measures can be adopted, paras 6 and 22.
[xxxix] Virgil,(44BC) *Eclogues and Georgics*, James Rhoades Translation, Dover Publications, (2005) Inc. Mineola at 82
[xl] Virgil, *Georgic l*, at 37
[xli] M. R. Islam (2006) @127
[xlii] Mitchell Carlyle (2003) at 61

[xliii] Mitchell Carlyle (2003) at 61
[xliv] Carlyle L. Mitchell and Roger A. Stacey (2003) *Canada's Ocean Industries: Contribution to the Economy 1988 – 2000*, Ocean Policy Division, Department of Fisheries and Oceans, Canada at 5
[xlv] Carlyle L. Mitchell and Roger A. Stacey (2003) at 71
[xlvi] Figures derived from Carlyle and Mitchell (2003) @ 71
[xlvii] Gottfried Haberler (1961) *A Survey of International Trade Theory*, Princeton, Uni Press US @52
[xlviii] Dennis Trewin, (2004*) Year Book Australia*, Australian Bureau of Statistics, Table 113
[xlix] Dennis Trewin (2004)
[l] Eugene D. Jaffe and Israel D. Nebenzahl (2001)
[li] M Wall and LA Heslop (1986) "Consumer attitudes toward Canadian made versus Imported Products" *Journal of the Academy of Marketing Science*, 14, 2, 27 – 36 in Jaffe and Nebenzahl (2001) @73
[lii] Other consumer biases identified by Wall and Heslop (1986) quoted in Jaffe and Nebenzahl (2001) @ 71 were 'cosmopolitan' where buyers saw all products on an equal basis, 'traitors' who preferred imported products rather than local goods and 'hostiles' who refused to purchase products from countries whose behaviour in specific areas they disliked, eg environmental practices.
[liii] M. Wall and LA Heslop (1986) in Jaffe and Nebenzahl (2001) @ 73
[liv] Chike Okechuku (1994) "The importance of Product Country of Origin: a conjoint analysis of the United Sates, Canada, Germany and The Netherlands," *European Journal of Marketing*, 28, 4, 5 -19 in Jaffe and Nebenzahl (2001) @73
[lv] Philip Kotler (1997) *Marketing Management: analysis, planning implementation and control* (9th edn) Upper Sable River NJ, Prentice Hall @ 607 quoted in Jaffe and Nebenzahl (2001) @12
[lvi] Jaffe and Nebenzahl (2001) @71
[lvii] Dennis Trewin, (2004) *Year Book Australia*, Australian Bureau of Statistics, Canberra @ 468
[lviii] Dennis Trewin (2004) at 469 figures
[lix] Dennis Trewin (2004) at 469
[lx] Dennis Trewin (2004) @ 469
[lxi] Dennis Trewin (2004) at 469
[lxii]Food and Agricultural Organization of the United Nations *FISHSTAT – PC 1996 – 2000* and *FISHSTAT – PC2000 – 2003*
[lxiii] Food and Agricultural Organization of the United Nations *FISHSTAT – PC 1996 – 2000* and *FISHSTAT – PC2000 - 2003*
[lxiv] Gottfried Haberler (1961) @ 55
[lxv] *European Communities – Hormones(1998) Report*, adopted 13th February 1998, WT/DS26/AB/R,WT/DS48/AB/R para 214 in Ray August (2004) at 396
[lxvi] Ray August (2004) at 396
[lxvii] Ray August (2004) at 395
[lxviii] Adopted 13th February 1998, WT/DS26?AB/R,WT/DS48/AB/R para.217 in Ray August (2004) at 396
[lxix] Ray August (2004) at 396
[lxx] J. Sinner (1994) 'Trade and the environment: efficiency, equity and sovereign considerations,' *Australian Journal of Agricultural Economics*, Vol 38 No 2 (August 1994) @ 186

[lxxi] If, however the priority remains, to remove 'unnecessary obstacles to international trade' according to the Preamble to the *Agreement on Technical Barriers to Trade,* discussed in *M. Rafiql Islam (2006) @ 155*, a 'processes and production methods' argument is likely to have little chance of success.

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[lxxxii] M. R. Islam (2006) @ 131