

The Precautionary Approach in Coastal/Ocean Governance: Beacon of Hope, Sea of Confusion, Dilution and Illusion

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Introduction

- The Precautionary Approach / Principle Sounds Simple, Straightforward and Seems To Be Here To Stay!
- + Captures common sense notions evident in many cultures
 - An ounce of prevention is worth a pound of cure
 - A stitch in time saves nine
 - Look before you leap
 - Better safe than sorry
- + Provides critical guidance for making environmental decisions

Where there is scientific uncertainty as to environmental effects of a proposed exploitation/use, decision-makers should “err on the side of caution”

- + Seems here to stay
 - Precautionary principle/approach has been embraced in over 50 international legally-binding agreements and over 40 non-binding instruments

- Examples include:
 - * Montreal Protocol on Ozone Depleting Substances (1987)
 - * UN Framework Convention on Climate Change (1992)
 - * Convention on Biological Diversity (1992)
 - * FAO Code of Conduct for Responsible Fisheries (1995)
 - * UN Agreement on Straddling and Highly Migratory Fish Stocks (1995)
 - * Cartagena Biosafety Protocol (2000)
 - * Stockholm Convention on Persistent Organic Pollutants (2001)
 - * Rio Declaration on Environment and Development (1992)
 - * World Summit on Sustainable Development (WSSD) Plan of Implementation (2002)

- Four Images Help Capture How the Precautionary Approach / Principle Has Been Faring in Governance Practice

1. **Beacon of Hope**

2. **Sea of Confusion**

3. **Sea of Dilution**, Exemplified by Global Agreements and Initiatives Aimed at Controlling Toxic Chemicals

4. **Sea of Illusion**, Exemplified by the Performances of Three RFMOs with Management Responsibilities for Parts of the Atlantic (NASCO, NAFO, ICCAT)

1. Beacon of Hope



The precautionary principle/approach may be likened to a lighthouse beacon with various potentially powerful beams for avoiding the shoals of depleted resources, losses of biodiversity and harm to the marine environment

- Placing the Burden of Proof on Proponents of Development / Change
- + No approval should be granted unless the proponent establishes some standard of safety/acceptability
- + Examples of standards
 - No significant damage to the marine environment
 - No serious or irreversible harm to marine biodiversity
 - No unreasonable adverse effects on the marine environment

- Establishing Prohibitions (For Example, No Deliberate Introduction of Non-Indigenous Species, No Import or Production of Genetically Modified Organisms)
- Imposing Zero Discharge or Virtual Elimination Standards at Least for Toxic Substances That Are Persistent and Bioaccumulate
- Adopting “Reverse Listing” Where Only Substances Listed as Safe Can Be Manufactured or Marketed

- Legal “Revolution” to Strong Version Seen in Ocean Dumping Field
- + London Convention 1972 favours polluters and is permissive in approach

Anything can be dumped with a permit except substances on a “prohibited list”

- Mercury
- Cadmium
- Organohalogen compounds
- Persistent plastics
- Various oils
- Biological and chemical warfare materials
- Radioactive wastes
- Industrial wastes
- Incineration at sea of industrial wastes and sewage sludge



+ 1996 Protocol to London Convention adopts “reverse listing” approach where listing favours the environment and is precautionary

– Nothing can be dumped unless it is listed on a “safe list”

- * Dredged material
- * Sewage sludge
- * Fish wastes
- * Vessels and platforms or other man-made structures
- * Inert, inorganic geological material
- * Organic materials of natural origin
- * Bulky items primarily comprising iron, steel, concrete, and similarly unarmful materials for which concern is physical impact (limited to where wastes are generated at locations having no practicable access to disposal options other than dumping)
- * Sequestration of carbon dioxide (CO₂ under the seabed (adopted 2 November 2006, in force 10 February 2007))



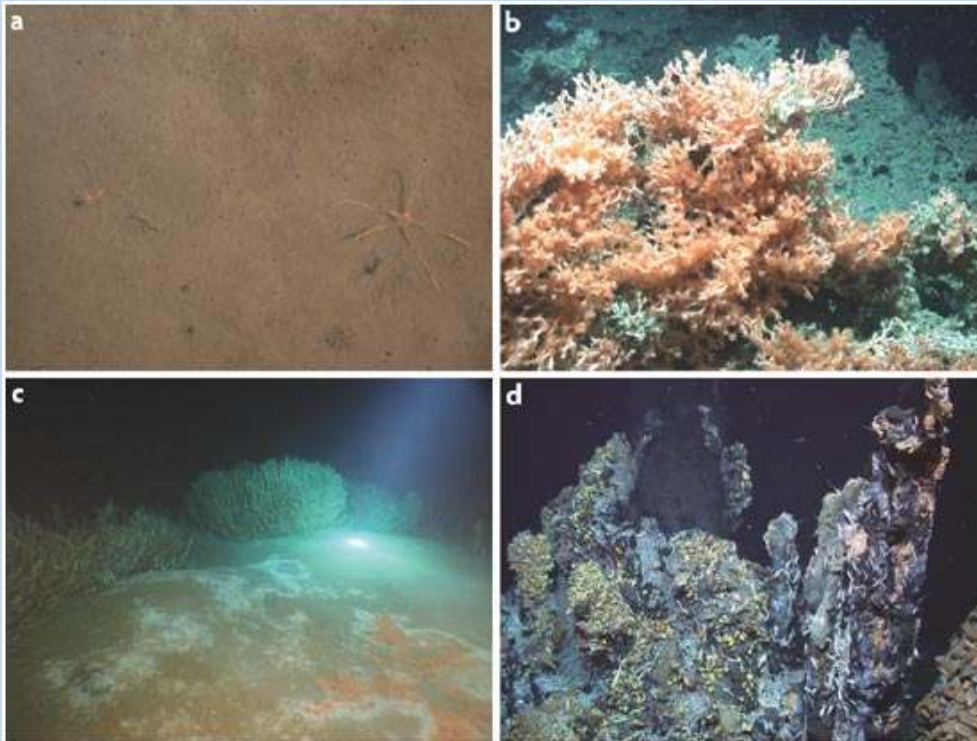
- The Reverse Onus of Proof Approach in International Fisheries Has Been Adopted on Occasion in Rather Narrow Circumstances
- + This “powerful beam” version of precaution in international fisheries is exemplified by the banning of large scale driftnets on the high seas
 - Moratoria on all large-scale pelagic driftnet fishing urged to be implemented by all States with moratoria lifting dependent on demonstration of effective conservation and management measures and ensurance (UN GA Res. 44/225 adopted December 1989)
 - Global moratorium on all large-scale pelagic drift-net fishing to be fully implemented the high seas, including enclosed and semi-enclosed seas by 31 December 1992 (UN GA Res. 46/215 adopted 20 December 1991)



http://weblog.greenpeace.org/deep-sea/images/hammerhead_grace.jpg

- + More recently, the global community has adopted a form of burden of proof reversal to bottom fishing activities
 - Through UN Sustainable Fisheries Resolution 61/105 in December 2006
 - * Calls upon Regional Fisheries Management Organizations (RFMOs)
 - > To close vulnerable marine ecosystems (VMEs), including seamounts, hydrothermal vents and cold water corals, to bottom fisheries
 - > To ensure bottom fishing activities do not proceed unless conservation and management measures have been established to prevent significant adverse impact on VMEs
 - * Urges States negotiating new RFMO/As, such as in the South Pacific, to adopt like precautionary measures on an interim basis

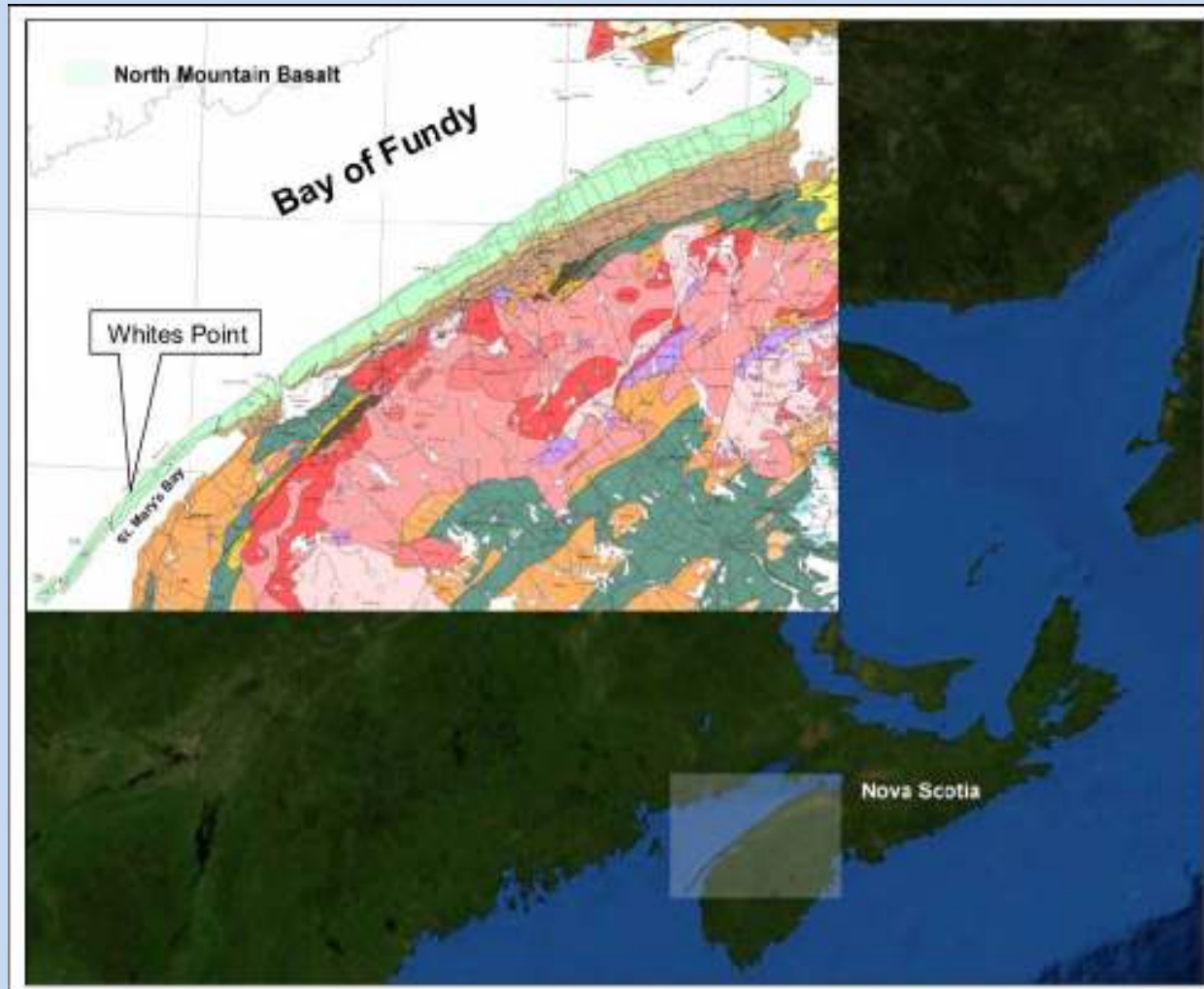
- Through International Guidelines for the Management of Deep-Sea Fisheries on the High Seas (2008) States and RFMO/As are urged to close VMEs until appropriate conservation and management measures have been adopted
 - * To prevent significant adverse impacts
 - * To ensure long-term conservation and sustainable use of deep-sea fish stocks



<http://www.nature.com/nrmicro/journal/v5/n10/images/nrmicro1745-i1.jpg>

- Precaution Has Potential To Powerfully Guide Local Governance
Also
- + Recent example from Province of Nova Scotia in Canada
- + A U.S. Corporation (Bilcon of Delaware)
proposed to develop a large rock quarry (basalt) at Whites Point in
Nova Scotia
 - Blasting/crushing about 2 million tonnes of rock per year for 50
years
 - Shipping about 40,000 tonnes of aggregate weekly, 44 to 50
times per year to New Jersey
 - Constructing a marine terminal

– Proposed Quarry Location on Nova Scotia's Fundy Coast



- + Many potential marine environmental effects, e.g.
 - Ships striking endangered North Atlantic right whales
 - * Only About 350 individuals remain
 - * Extremely vulnerable to increased ship traffic



Large bulk carrier similar to the vessel proposed for the Project

- Ships bringing invasive marine species from the United States to Canada via ballast water
 - * Special concern over parasitic lobster disease (decimating local lobster populations)
 - * Occurs in waters off New Jersey and New York but not in Canada
- Blasting/crushing noise
 - * Possibly disrupting migratory behavior of endangered inner Bay of Fundy salmon
 - * Possibly effecting marine mammals (whales, porpoises)
 - > Causing movements out of the area and losses to the whale watching industry
 - > Altering feeding and socializing behaviours
 - > Contributing to injury or death through pressure impacts
 - * Possibly causing crustaceans (such as lobsters and snow crabs) to alter movements

- + Many potential community / social effects
 - Displacement of fishers from the marine terminal area and potential destruction of gears from shipping movements
 - Interference with Aboriginal resource uses such as hunting, fishing and berry picking
 - Reduction in the high quality of rural life
 - * Many retirees and summer residents attracted to the area because of natural beauty and peaceful environment
 - * Many residents opposed an industrial-lifestyle model in favour of small local businesses (sustainable development as a core value)

- + A Joint Federal-Provincial Environmental Assessment Panel was appointed to review the proposal
 - Both federal and provincial environmental legislation call for a precautionary approach
 - *Canadian Environmental Assessment Act* was amended in 2003 to include precaution as a basic purpose (decision makers should ensure that proposed projects do not cause significant adverse effects to the environment)
 - Joint Panel took a strong precautionary stance (proponent bears the burden of showing the project will not have significant adverse environmental effects)

- In October 2007 Final Report, the Panel recommended rejection of the project on various grounds including
 - * Failure by the proponent to demonstrate significant adverse environmental effects would not be caused
 - * Inconsistency of the project with community “core values”

- Based upon Report, Nova Scotia’s Minister of the Environment subsequently refused to approve the project (November 20, 2007)
 - * The project poses the threat of unacceptable and significant adverse effects to the existing and future environmental, social and cultural conditions

- Federal Government subsequently rejected proposal also

2. Sea of Confusion

Various confusing currents (“quick eight”)

- Definitional Generalities
- Definitional Variations
- Uncertainty in Terminology
- Wide Spectrum of Precautionary Management Measures Available
- Differing Academic Views on Implications
- Limited and Varied Interpretations by National Tribunals/Courts
- Limited Interpretations by International Tribunals/Courts
- Ongoing Ethical Clashes over How Precautionary Societies Should Be



- Definitional Generalities

- + For example, Rio Declaration, Principle 15

In order to protect the environment, the precautionary approach shall be widely applied by States according to their capabilities. Where there are threats of serious or irreversible damage, lack of full scientific certainty shall not be used as a reason for postponing cost-effective measures to prevent environmental degradation.

- + Definition leaves considerable interpretive leeways

- What exactly are State capabilities?
- How should serious or irreversible damage be defined?
- What should be the role of science in determining risks?
- What are cost-effective measures?

- + Definitional generality also hovers over international fisheries law, e.g.,
 - UN Agreement on Straddling and Highly Migratory Fish Stocks (1995) provides:

States shall be more cautious when information is uncertain, unreliable or inadequate. The absence of adequate scientific information shall not be used as a reason for postponing or failing to take conservation and management measures (Art. 6(2))
 - FAO Code of Conduct for Responsible Fisheries (1995) urges:

States should apply the precautionary approach widely to conservation, management and exploitation of living aquatic resources in order to protect them and preserve the aquatic environment. The absence of adequate scientific information should not be used as a reason for postponing or failing to take conservation and management measures (para. 7.5.1)

– FAO Technical Guidelines on the Precautionary Approach to Capture Fisheries and Species Introductions (1996) also overflow with generalities

* No clear allocation of burden of proof

Technical Guidelines call for “appropriate placement of the burden of proof” (para. 6(h)).

* Vague guidance on standard of proof

Technical Guidelines provide the standard of proof “should be commensurate with the potential risk to the resource, while also taking into account the expected benefits of the activities” (para. 7(d)).

- Definitional Variations

- + The “trigger” for precaution

- Threats of serious or irreversible damage (Rio Declaration)
- Likely to cause damage or harm (North Sea Ministerial Declarations)

- + The “scope” of activities covered

- Toxic, persistent, bioaccumulative substances (1987 London Declaration)
- All policy sectors (1990 Bergen Declaration on Sustainable Development)

In order to achieve sustainable development, policies must be based on the precautionary principle. Environmental measures must anticipate, prevent, and attack the causes of environmental degradation. Where there are threats of serious or irreversible damage, lack of full scientific certainty shall not be used as a reason for postponing measures to prevent environmental degradation.

+ The “cost-effective” limitation

- Rio Declaration calls for cost-effective measures
- Biodiversity Convention does not include the cost-effective limitation

Noting also that where there is a threat of significant reduction of loss of biological diversity, lack of full scientific certainty should not be used as a reason for postponing measures to avoid or minimize such a threat...

(Preamble)

- Uncertainty in Terminology

- + Approach vs. principle?

- + Is there a difference?

- No - The terms are interchangeable (for example, Rio Declaration uses both terms)

- Yes - The term approach is preferable because it

- * Better connotes the non-legally binding nature (US and Canada preference in *Beef Hormones* Case (1998) before the WTO Appellate Body)

- * Avoids extreme applications (FAO preference to avoid fishing moratoria and reversal in burden of proof to fishers to show “no harm”)

- * FAO Technical Guidelines on Precautionary Approach state:

- “[A]lthough the precautionary approach to fisheries may require cessation of fishing activities that have potentially serious adverse impacts, it does not imply that no fishing can take place until all potential impacts have been addressed and found to be negligible” (para.7(b)).

- Wide Spectrum of Precautionary Management Measures

- + Not just strong versions such as reversal in the “burden of proof”

- + Weaker versions also, e.g.

- Mandating regulators to apply the precautionary approach
- Requiring polluters to develop pollution prevention plans as a precondition to licensing
- Imposing a best available technology standard
- Following an adaptive management approach (learn by doing)
- Setting cautious standards to limit impacts (for example, margins of safety to protect children’s health)
- Placing the burden on regulators to justify taking precautionary measures through scientific risk assessment

- + A menu of fisheries management measures
 - Setting cautious quotas (For example, catch limits so as not to reduce average biomass of target/non-target species by more than 20%)
 - Terminating open access fisheries and developing management plans within certain time frames
 - Promoting selective fishing gears/methods
 - Requiring EIAs before opening new fisheries
 - Allowing fish to spawn at least once
 - Establishing limited take marine protected areas

- + 1995 UN Fish Stocks Agreement (Annex II) urges application of precautionary reference points to manage straddling and highly migratory stocks
 - Limit reference points
 - * Conservation thresholds that should not be exceeded to ensure harvesting is within safe biological limits
 - * Maximum sustainable yield should be regarded as a minimum standard for limit reference points
 - * Example would be setting a precautionary level for spawning stock biomass below which it should not fall

– Target reference points

- * Intended to meet management objectives

- * No examples of types of management objectives given

- * Example might be setting a target of returning a stock biomass to a healthy historical level

– Precautionary reference points shall be used to trigger pre-agreed conservation and management actions (for example, a recovery plan where a stock falls below the limit reference point)

- Differing Academic Views on Implications
- + Enthusiastic and “little doubt” about precautionary approach in environmental governance
 - Richard C. Hildreth et al.

[The precautionary approach entails a reversal of the burden of proof. Reversing the burden of proof requires shifting the burden from those who seek to regulate an activity to those who propose and would benefit from the activity.

(“Roles for a Precautionary Approach in Marine Resources Management” (2005) 19 *Ocean Yearbook* 33, 36).

- + Skeptical and “lots of doubt” about PP providing guidance
 - Jaye Ellis and Alison FitzGerald

The precautionary principle “does not tell decision-makers or individual actors what to do or when; it does not reverse the burden of proof; and it does not place environmental concerns ahead of social and economic ones.”

(“The Precautionary Principle in International Law: Lessons from Fuller’s Internal Morality” (2004) 49 *McGill L.J.* 779, 782)

- Limited and Varied Interpretations by National Tribunals / Courts
- + Courts in majority of countries have yet to address interpretation and jurisprudential implications of the precautionary principle / approach
- + Varied national interpretations / approaches to precaution with courts / tribunals displaying a spectrum from strong to weak embraces (over 100 cases in commonwealth countries alone)
 - Example of strong embrace
 - * India Supreme Court case – The high point of judicial activism
 - * *Case Against Cultured Shrimp (S. Jagannath v. Union of India and Others*, [1996] INSC 1629 (11 December 1996)
 - * Public interest lawsuit brought by non-governmental organization, seeking to
 - > Ensure enforcement of a national coastal zone regulation prohibiting intensive shrimp culture farms within 500 metres of the high tide mark

- > Force application of pollution control and environmental assessment laws to commercial shrimp farms outside the prohibited zone

- * Supreme Court of India enthusiastically embraced the precautionary principle
 - > Indicated that the precautionary principle is an essential feature of the concept of sustainable development which has been accepted as part of customary international law (though its salient features have yet to be finalized by international law jurists)

> Interpreted what the precautionary principle means in the context of domestic law

† Governmental environment measures must anticipate, prevent and attack the causes of environmental degradation

† Where there are threats of serious and irreversible damage, lack of scientific certainty should not be used as a reason for postponing measures to prevent environmental degradation

† The “onus of proof” is on the actor or the developer / industrialist to show that his / her action is environmentally benign

> Issued various orders/directions including

† Removal of all shrimp culture ponds from 500 metre coastal prohibited zone

† Establishment by the central government of a regulatory authority to ensure precautionary pollution controls and EIA of shrimp industrial developments outside the prohibited area

– Case representing “weak” version of precaution

- * *Homalco Indian Band v. British Columbia (Minister of Agriculture, Food and Fisheries)* (2005), 39 B.C.L.R. (4th) 263 (British Columbia Supreme Court)
- * Indian band challenged governmental grant of approval to raise Atlantic salmon on a fish farm instead of previously stocked Pacific salmon
- * Grounds of challenge included government failure to adequately consult with the Indian band and failure to properly apply the precautionary principle

> Indian band argued strong “reverse onus” approach to precaution

† No approval of farming Atlantic salmon should be granted until the British Columbia ministry and industry proponent can prove there is no risk to wild salmon

† Gaps in scientific knowledge and research make such proof impossible

† Therefore, no approval should be allowed

> British Columbia Ministry and aquaculture proponent argued

† Against a strong “reverse onus” approach

† In favour of a weakened version

“[T]he principle really means that lack of scientific knowledge is not a basis for failing to pass regulations or controls to avoid potential serious or irreversible damage to the environment”

† We have already passed precautionary regulations, for example, regarding escape prevention requirements through technical standards for net pens

> British Columbia Supreme Court agreed with the government / industry position on precaution

† The precautionary principle does not require governments to halt all activity which may pose some risk to the environment until that can be proven otherwise

† The decisions on what activity to allow and how to control it often require a balancing of interests and concerns and a weighing of risks. Court suggested an adaptive management approach would be a proper means of accommodation which should be the topic of further discussions / consultations

> British Columbia Court found there had not been adequate consultation with the Indian band

† Court left it to Department of Fisheries and Oceans to further consult with the Indian band



<http://www.agf.gov.bc.ca/fisheries/images/bcsalm1.jpg>

- Limited Interpretation by International Tribunals / Courts, Four Fast Examples

- + *New Zealand v. France* (International Court of Justice, 1995)

- Underground nuclear testing in the South Pacific

- New Zealand arguing precautionary principle meant French obligation to undertake an EIA before nuclear testing and French burden of proof to demonstrate no environmental contamination

- No decision on merits because of lack of jurisdiction

- Dissenting opinion of Geoffrey Palmer suggested the precautionary principle may be a principle of customary international law but did not flesh out what the content might be

- + *Southern Bluefin Tuna Case(s)* (International Tribunal for the Law of the Sea, 1999)
 - Australia and New Zealand arguing Japan should be stopped, based on the precautionary principle, from unilaterally increasing catch levels of Southern Bluefin Tuna
 - Tribunal ordered Japan to refrain from further “experimental fishing” (except with agreement of Parties or under experimental catch counted against its annual quota)
 - While Tribunal’s decision did not expressly mention the precautionary approach, at least 2 judges indicated the provisional measures ordered were based on precaution
 - Judge Laing raised question of whether the precautionary principle should reverse onus of proof to Party wishing to increase catch levels, but felt question should be left to full arbitration
 - Arbitral Tribunal ultimately declined jurisdiction (Award of 4 August 2000)

- + The *MOX Plant Case* (Ireland v. United Kingdom) (International Tribunal for the Law of the Sea, 2001)
 - Ireland seeking provisional measures from ITLOS to stop UK commissioning of nuclear fuel reprocessing facility in Sellafield and to require further EIA and procedural steps (for example, more information on pollution threats and further consultations)
 - Ireland invoked the precautionary principle in support of its case, i.e. burden should be on UK to establish that commissioning of the MOX plant would not cause serious harm to the marine environment
 - Law of the Sea Tribunal did not prescribe the precautionary provisional measures requested by Ireland because of a lack of urgency (UK assured Tribunal that no imports or exports of MOX fuel to the plant would occur before an arbitral tribunal would consider the case on the merits)

– While not explicitly referring to the precautionary principle nor delving into jurisprudential details, the Tribunal did grant provisional measures based upon the fundamental duty to cooperate in the prevention of pollution of the marine environment

* Tribunal required Ireland and the UK to cooperate in various ways

> Exchanging further information regarding possible consequences for the Irish Sea arising from commissioning of the MOX plant

> Monitoring risks or effects of the operation of the MOX plant for the Irish Sea

> Devising, as appropriate, measures to prevent pollution of the marine environment which might result from operation of the MOX plant

- * Tribunal stated “[P]rudence and caution require that Ireland and the United Kingdom cooperate in exchanging information concerning risks or effects of operation of the MOX plant and in devising ways to deal with these, as appropriate.”
- Judge Wolfrum in a Separate Opinion did discuss the precautionary principle
 - * He noted there is no general agreement as to the consequences flowing from the principle’s implementation other than the fact that the burden of proof concerning the possible impact of a given activity is reversed (A State interested in undertaking or continuing a particular activity has to prove that such activity will not result in any harm, rather than the other side having to prove it will result in harm).

- * He justified not granting Ireland the “injunctive relief” sought in light of
 - > Exceptional nature of provisional measures (such limitation cannot be overruled by invoking the precautionary principle)
 - > Lack of some evidence of marine environmental risk in time period before arbitral tribunal consideration in light of UK assurances

+ *Case Concerning Pulp Mills on the River Uruguay* (Argentina v. Uruguay) (ICJ, 2010)

– Argentina contesting the construction of two pulp mills in Uruguay on a transboundary river

* Various procedural violations of the Statute of the River Uruguay (1975 Treaty) argued including shortcomings in notifications and consultations

* Various substantive obligation breaches also argued such as the prevention of pollution

- Argentina, as a key proposition, argued the precautionary approach should place the burden of proof on Uruguay to establish that the mills will not cause significant damage to the environment
- The majority of the ICJ, avoiding any detailed discussion of the precautionary approach, simply concluded in para. 164
 - * A precautionary approach may be relevant in the interpretation and application of the provisions of the Statute
 - * It does not follow that the precautionary approach operates as a reversal of the burden of proof
- Judge Concado Trindade, in a Separate Opinion, lamented over the missed opportunity for the ICJ to affirm and elaborate on the general principles of International Environmental Law
 - * “It escapes my comprehension why the ICJ has so far had so much precaution with the precautionary principle.” (para. 67)

- * He did delve into detailed discussion on the legal sources and parameters of key principles such as prevention and precaution
- * He opened up a “fundamental question” regarding the jurisprudential sources of the precautionary principle:

Is the precautionary principle based upon natural law?

- > The third major source of international law recognized in Art. 38 of the Statute of the International Court of Justice is general principles of law recognized by civilized nations

- > Scholarly debate has occurred over whether that category opens the door to principles derived from outside state consent and negotiation
 - † General principles based upon human reason and common sense
 - † General principles recognizing the laws of nature (environmental limits and thresholds)

- > Some scholars have viewed the category as limited to drawing out legal principles common in domestic legal systems around the globe

- + Various other international cases have also only “tangentially touched” on precaution, e.g.
 - *Case Concerning Gabčíkovo-Nagymaros Project* (Hungary v. Slovakia) (ICJ, 1997)
 - *Case Concerning Land Reclamation by Singapore in and around the Straits of Johor* (Malaysia v. Singapore) (ITLOS, 2003)

- Ongoing Ethical Clashes Over How Precautionary Societies Should Be

Ethical clashes are at heart of many environmental disputes

+ Eco-centric world views

- Wishing to impact nature as little as possible
- Being risk adverse
- Questioning or rejecting use of cost-benefit or risk-benefit analysis in decision-making
- Advocating fundamental human rights, for example, right to clean, healthy environment

+ Utilitarian mindsets

- Viewing nature as set of resources to be exploited
- Supporting risk taking
- Placing “great faith” in science and technology
- Favouring cost-benefit and risk-benefit analysis
- Willing to trade off environmental values for socio-economic gains

- + Various terms describe ethical tensions, for example
 - Immanent vs. transcendent
 - Prohibitory vs. regulatory
 - Trial without error vs. trial and error
 - Deep green vs. light / shallow green
 - “Organic” mentality vs. better living through chemistry (biology)
- + Ethical viewpoints in a struggle to interpret precaution strongly vs. weakly

- + The beauty of precaution may be in the eye of the beholder
 - Those with eco-centric perspectives tend to see “wonderful beauty” in the precautionary principle
 - * A shift towards an ecological society
 - > Clean production processes
 - > Environmentally friendly industries (for example eco-forestry, organic agriculture, eco-tourism)
 - > Sustainable community economies (M’Gonigle 1999)
 - * A liberation from expert systems and top-down decision-making
 - * A just world where environmental values and human values are taken seriously

- Those with utilitarian perspectives tend to see an “ugly concept” needing to be contained
 - * Precaution may stifle innovation
 - * Precaution may devalue or sideline science
 - * Precaution may interfere with trade
 - * Precaution may thwart development
 - * Precaution may have paradoxical perils (for example by not allowing pest-resistant plant biotechnology, greater pesticide use may be encouraged)

3. Sea of Precautionary Dilution, Exemplified by Global Agreements and Initiatives Targeting Toxic Chemicals



<http://s1.e-monsite.com/2009/02/04/80274650dilution1111-jpg>

- The Two Main Global Treaties for Controlling Toxic Chemicals Represent a “Far Cry” from Strong Precautionary Versions

- + 1998 Convention of the Prior Informed Consent Procedure for Certain Hazardous Chemicals and Pesticides in International Trade (Rotterdam Convention) Is “Nearly Vacuous” Regarding Precaution



- No explicit mention of the precautionary principle/approach (Preamble merely recalls the pertinent provisions of the Rio Declaration on Environment and Development)
- Only specifically addresses 40 chemicals (29 pesticides, including 4 severely hazardous pesticide formulations, and 11 industrial chemicals)

- Focus on trade controls not prohibitions
 - * For chemicals listed in Annex 3, a prior informed consent procedure is to apply
 - > Countries of potential import are given option of consenting or prohibiting imports
 - > States of export are to ensure exporters within their jurisdiction comply with importing State decisions (Arts.10,11)
 - * For chemicals not on the PIC list that are banned or severely restricted by a party, an export notification is required to importing parties (Art. 12)
 - * Exporting States are to ensure chemicals exported have adequate labelling regarding risks / hazards to human health and the environment and information should, as far as practicable, be given in one or more of the official languages of the importing party (Art.13)

- Rather cumbersome procedures for adding chemicals to the PIC list (Arts. 5,7)
 - * Notification needed from two regions of final regulatory actions to ban or severely restrict a chemical
 - * Review by Chemical Review Committee (must ensure final regulatory actions based on scientific risk evaluations)
 - * Committee must prepare a draft decision guidance document for recommended listings
 - * Conference of the Parties must approve PIC listing by consensus

- Additional listing of chemicals in fact has become a major challenge
 - * One of the major battles has been over the proposed listing of chrysotile asbestos on Annex III
 - > Canada is one of the major producers of chrysotile asbestos and has opposed listing
 - > Chemical Review Committee recommended listing to 3rd COP in 2006 based upon multiple notifications on bans or severe restrictions from around the globe (Australia, Chile, EU) but no consensus could be reached on listing so COP decided to place listing issue on COP 4 agenda
 - > At COP 4 in October 2008, parties again could not reach consensus and deferred listing question to COP 5 in 2011



- * Similar situation for endosulfan (a pesticide) – no consensus yet on listing
- * A further listing limitation is getting two notifications from two different regions of final regulatory actions necessary to trigger a recommendation for listing
 - > At COP 4 Parties highlighted the problem
 - > Some 177 chemicals were notified by one country as banned or severely restricted
 - > COP 4 urged States to give priority to assessing the 177 notified chemicals so listing could move forward where appropriate (Decision RC-4/1)



+ Stockholm Convention on Persistent Organic Pollutants (POPS)
(May 2001) Is “Thin” on Precaution



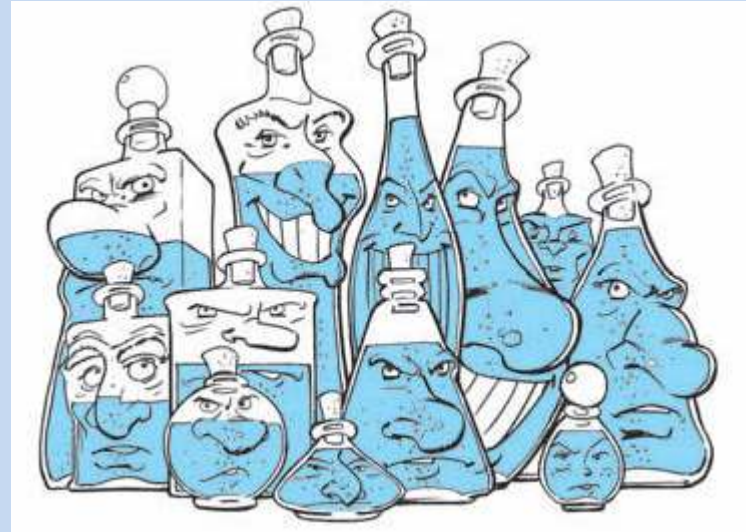
– Precaution is explicitly mentioned but weakly

* Preamble acknowledges that “precaution underlines the concern of all the Parties and is embedded within this Convention...”

* Art. 1 states that the Parties are “Mindful of the precautionary approach as set forth in Principle 15 of the Rio Declaration...”

– Only 12 chemicals, the “dirty dozen” initially targeted

- * DDT
- * Aldrin
- * Dieldrin
- * Endrin
- * Chlordane
- * Heptachlor
- * Hexachlorobenzene
- * Mirex
- * Toxaphene
- * Polychlorinated Biphenyls (PCBs)
- * Dioxins and Furans



– 9 chemicals listed in Annex A for elimination, but various exemptions allowed

- * Only 2 chemicals immediately banned from use (endrin and toxaphene)
- * Countries to make “determined efforts” to phase out use of PCB containing equipment by 2025

- * Countries permitted to register for initial five year exemptions specific uses for 6 pesticides (e.g., use of chlordane, heptachlor and mirex for fighting termites)
- For DDT listed in Annex B as a restricted substance, countries are allowed to continue production and use for disease control purposes in accord with WHO guidelines
- For unintentional by-products listed in Annex C (dioxins and furans, hexachlorobenzene and PCBs) countries pledge to minimize and, where feasible, to eliminate releases and to develop action plans for release reduction (Art.5)

- Rather cumbersome process established for adding POPs to the Annexes based on scientific risk assessment (Art. 8)
 - * A Party must submit a listing proposal meeting information requirements set out in Annex D (evidence of persistence, bio-accumulation, potential for long-range transport and adverse effects data)
 - * Review by the Persistent Organic Pollutants Review Committee (before a listing recommendation can be given the Committee must prepare a risk profile in accord with Annex E and a risk management evaluation in accord with Annex F)
 - * The Conference of the Parties shall decide “in a precautionary manner” whether to list a chemical
- A non-precautionary “loophole” exists for a Party not wishing to be bound by new chemical listings
(A Party can declare that it will only be bound by new listings through express consent to “opt in”, Art. 25(4))

- Nine additional chemicals were added to the lists through decisions at the 4th COP in May 2009
 - * Annex A (elimination)
 - > Chlordecone
 - > Hexabromobiphenyl
 - > Hexabromodiphenyl ether and heptabromodiphenyl ether
 - > Alpha hexachlorocyclohexane
 - > Beta hexachlorocyclohexane
 - > Lindane
 - > Tetrabromodiphenyl ether and pentabromodiphenyl ether
 - * Annex A and C (unintentional production)
 - > Pentachlorobenzene
 - * Annex B (restriction)
 - > Perfluorooctane sulfonic acid (PFOS), its salts and perfluorooctane sulfonyl fluoride (PFOS-F)

- The Strategic Approach to International Chemicals Management (SAICM), a Voluntary Global Initiative Launched in 2006 To Better Manage Chemicals, Also Promotes “Diluted Precaution” Through Its Three Components



- + Dubai Declaration on International Chemicals Management
 - Highlights the need for concerted action to address the lack of capacity for managing chemicals in developing countries
 - Emphasizes the insufficient progress in international chemicals management
 - Avoids an explicit requirement to follow a precautionary approach
 - Advocates “taking into account” the weak version of precaution in Principle 15 of the Rio Declaration

+ Overarching Policy Strategy

- Sets overall objective of achieving the sound management of chemicals throughout their life-cycle so that, by 2020, chemicals are used and produced in ways that lead to the minimization of significant adverse effects on human health and the environment
- Rejects a strong precautionary approach in favour of a science-based risk assessment approach

The Strategy aims to ensure by 2020:

That chemicals or chemical uses that pose an unreasonable and otherwise unmanageable risk to human health or the environment based on a science-based risk assessment and taking into account the costs and benefits as well as the availability of safer substitutes and their efficacy, are no longer produced or used for such uses ...
(para. 14(d)(i))

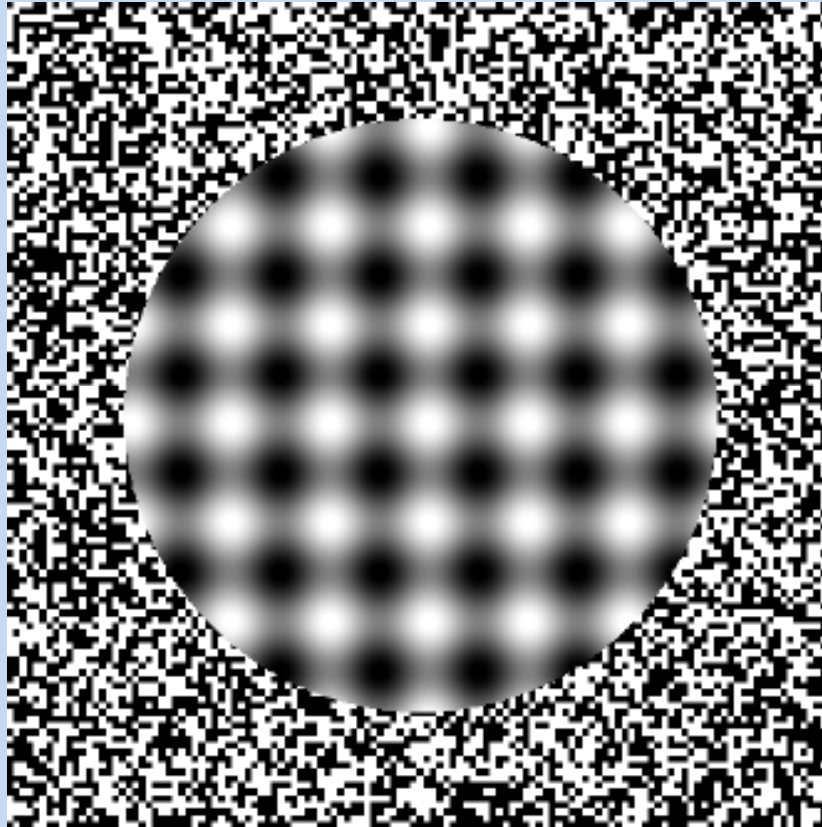
- Promises to mobilize additional financial resources to support capacity-building for chemicals management through the Quick Start Programme
- Calls for the convening of the International Conference on Chemicals Management
 - * To undertake periodic reviews of the Strategic Approach
 - * Sessions should be held in 2009, 2012, 2015 and 2020
 - * Second session of the International Conference held from 11 to 15 May 2009 in Geneva

+ Global Plan of Action

- Suggests over 250 activities for addressing chemicals management, e.g.
 - * Development of national action plans for the sound management of chemicals (# 1)
 - * Promote, when necessary, the further development of international agreements relating to chemicals (# 176)

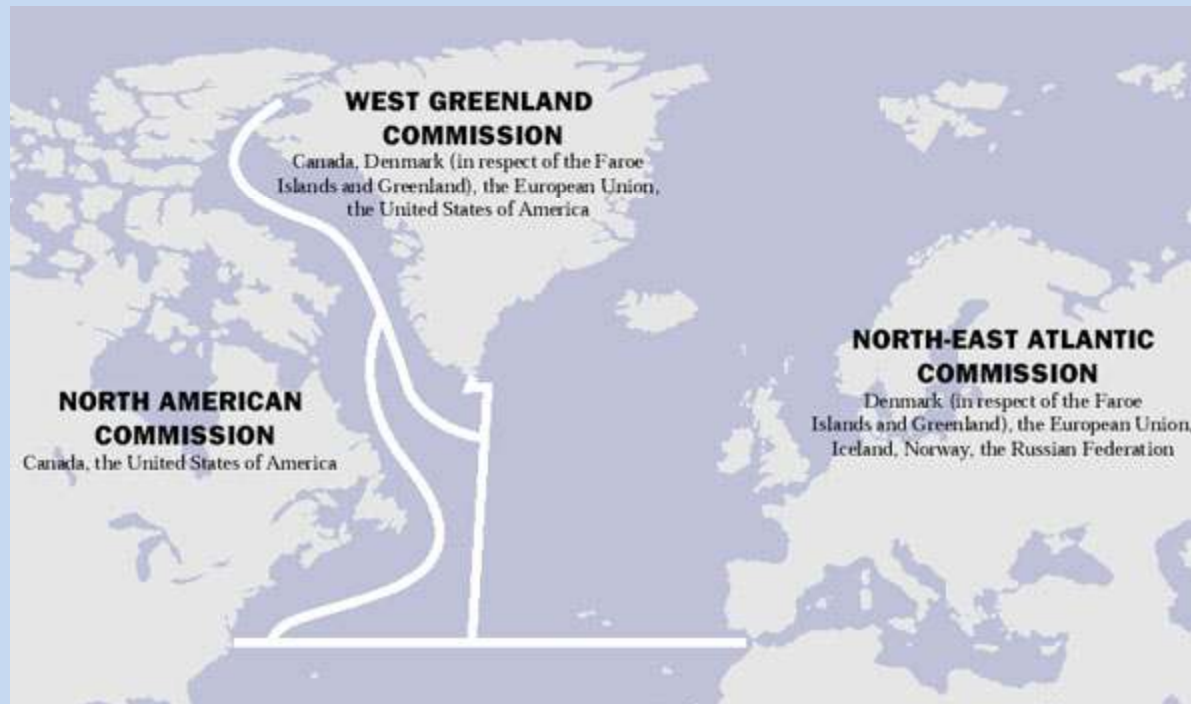
- Only one activity (# 133) explicitly mentions the precautionary approach, and the further development of science-based methodologies for risk assessment and risk management is encouraged not consideration of broader social, cultural and ethical values

4. Sea of Illusion, Exemplified by the Performances of Three RFMOs With Management Responsibilities for Parts of the Atlantic (NASCO, NAFO, ICCAT)



<http://www.tommytrc.com/sparkatopia/wp-content/uploads/HLIC/c5f19fdf77e42e34a1df2de7d3d2f8ce.png>

- North Atlantic Salmon Conservation Organization (NASCO)



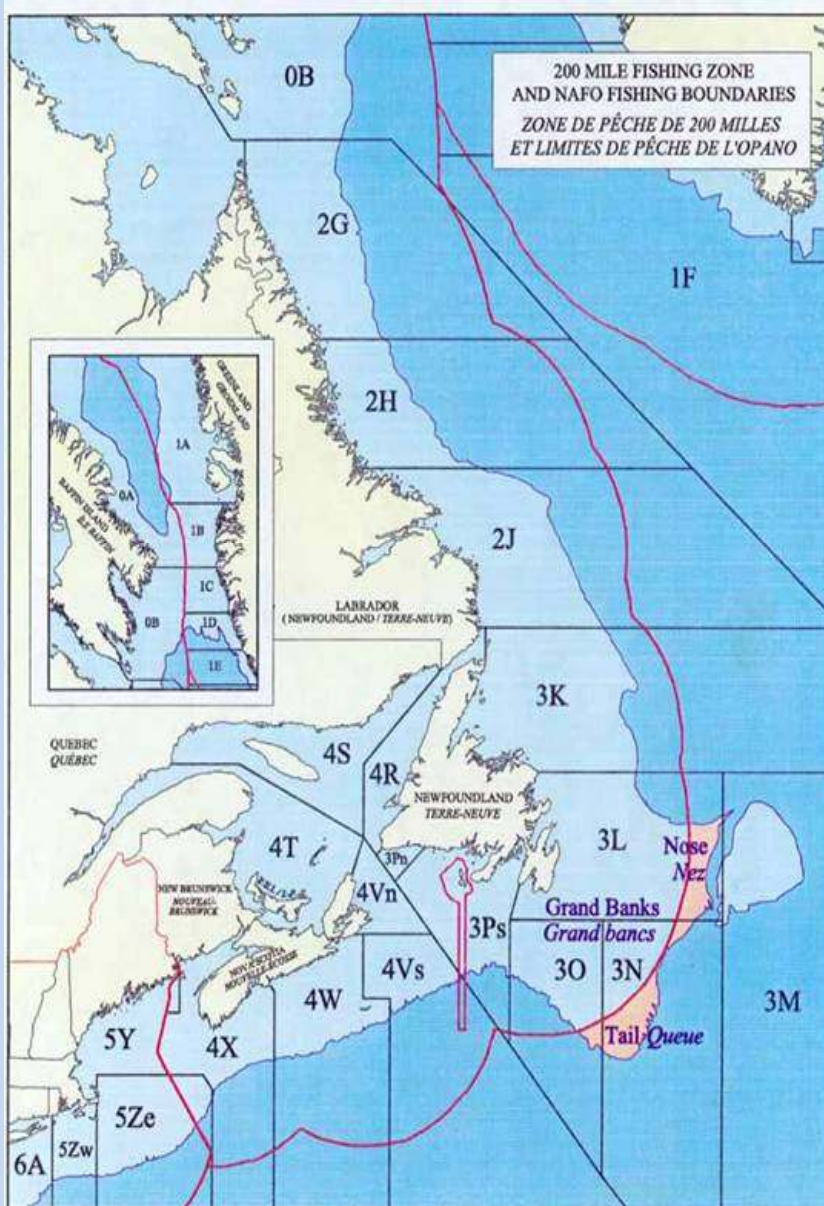
<http://www.nasco.int/about.htm>

- + North Atlantic Salmon Conservation Organization (NASCO) adopted a precautionary approach to salmon fisheries management in 1998
- + Salmon fishery off West Greenland represents one “precautionary illusion”
 - Precautionary scientific advice given in 2007 recommended no catch on the wild salmon stocks Off West Greenland for the years 2007, 2008, 2009 because of the poor state of salmon populations, especially in North America which contribute to the West Greenland fishery
 - * Salmon in eight Maine rivers (USA) were listed as endangered
 - * Salmon in 32 Inner Bay of Fundy rivers have been listed as endangered

- NASCO nevertheless approved for the years 2007 and 2008 a subsistence catch of salmon off West Greenland, estimated to be about 20 tons,
 - * Especially worrisome from a precautionary stand point is the estimated annual 10 ton unreported salmon catch in Greenland

- + St Pierre & Miquelon fisheries is a second “rough water” example
 - St Pierre & Miquelon fisheries took about 3.6 tonnes of salmon in 2006 with North American depressed salmon stocks contributing to the harvestings
 - NASCO has not been able to effectively invoke the precautionary approach to the St Pierre & Miquelon fishery since France (responsible for its dependent islands) has not become a party to NASCO on behalf of St Pierre & Miquelon

- Northwest Atlantic Fisheries Organization (NAFO)



http://www.parl.gc.ca/39/1/parlbus/commbus/senate/com-e/fish-e/rep-e/rep06feb07-e_files/image002.jpg

- + Has embraced the precautionary approach in principle
 - NAFO formally adopted the precautionary approach through a 1999 Resolution (Res. 2/99)
 - Scientific Council has developed a NAFO precautionary approach framework as summarized in a 2004 document NAFO/FC Doc. 04/18
 - At its 29th Annual Meeting in September 2007, NAFO adopted Convention amendments
 - * Contracting Parties agree to apply the precautionary approach in accordance with Article 6 of the 1995 Fish Stocks Agreement
 - * Text needs to be ratified by at least three-fourths of the NAFO Contracting Parties

- + However, precaution has foundered on three main fronts
 - Setting substantial quotas even when scientific data is limited, e.g.
 - * Redfish for Area 30
 - The Scientific Council in its 2007 advice stated
 - > There is insufficient information on which to base predictions of annual yield potential
 - > Stock dynamics and recruitment patterns are poorly understood
 - > Not possible to advise on an appropriate TAC in 2008, 2009 and 2010
 - * Nevertheless, the Fisheries Commission approved a TAC of 20,000 tonnes for 2008, 2009 and 2010

- Common over-riding of scientific advice as exemplified in various 2009 quotas
 - * 13,500 tonne thorny skate TAC in Divisions 3LNO (6,000 T scientific advice)
 - * 8,500 T white hake TAC in Div. 3NO (scientific advice that such a TAC is not sustainable)
 - * 8,500 T redfish TAC in Div. 3M (scientific advice that TAC should not exceed 5,000 T)

- Leaving a considerable number of fish species unmanaged
 - * NAFO only manages 11 out of some 25 commercial species
 - * While northern and spotted wolffish are listed as threatened under Canada's *Species at Risk Act*, NAFO has not imposed conservation measures for wolffish

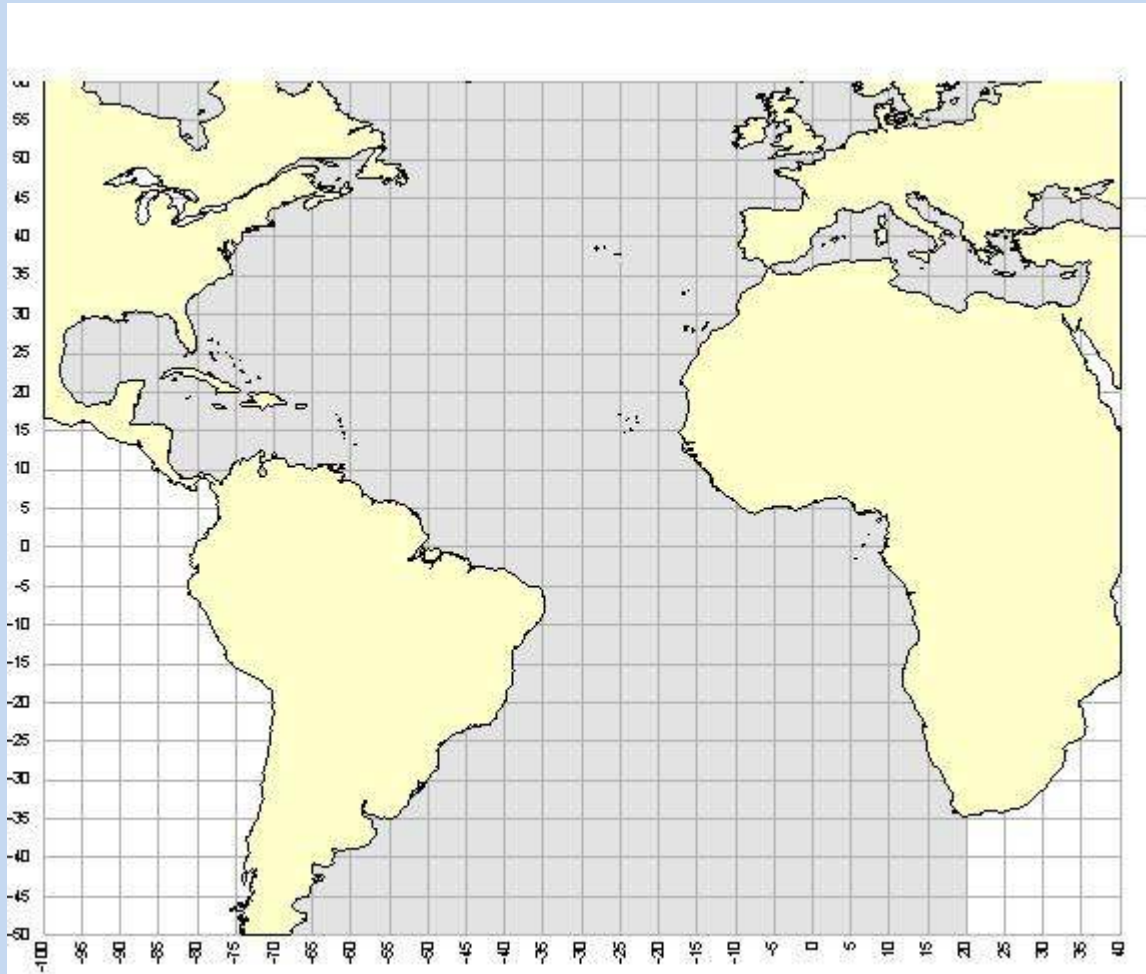


http://www.dfo-mpo.gc.ca/species-especies/news/news_01062004bac_f.asp



http://www.seawater.no/fauna/Fisk/images/CRW_7396.jpg

- International Commission for the Conservation of Atlantic Tunas



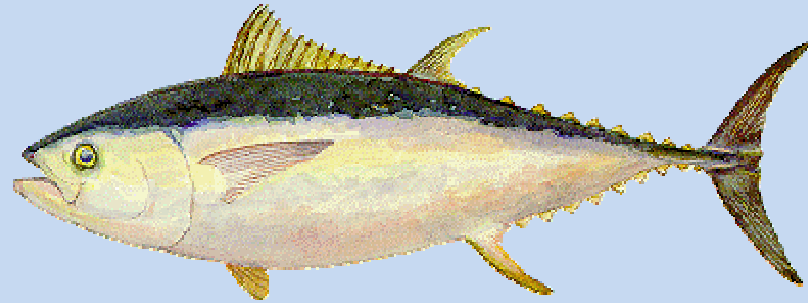
<http://www.iccat.int/Images/misc/ConvArea.jpg>

- + ICCAT Has placed precaution on the “radar screen”
 - The Ad Hoc Working Group on the Precautionary Approach was established in 1997 and a 1999 report made various recommendations to further facilitate implementation of the precautionary approach, e.g.
 - * Improving catch and bycatch information
 - * Increasing funding at all levels including data collection, monitoring, enforcement and possibly large tagging experiments

- The Ad Hoc Working Group on the Precautionary Approach might be described as “dormant”
 - * WG not presently listed on the organizational charts available on the ICCAT website
 - * Canada convened a precautionary approach workshop focusing on western bluefin tuna during the week of March 17, 2008 but not under the auspices of the Ad Hoc WG on the Precautionary Approach

- + However, ICCAT has largely ignored precaution in practice
 - The ICCAT Convention is at odds with the precautionary approach advocated by the 1995 UN Fish Stocks Agreement
 - * The Convention elevates maximum sustainable yield as the overall management target (the point to aspire to)
 - * The Fish Stocks Agreement suggests MSY as a limit reference point (the point to avoid)

- ICCAT has notoriously failed to follow its own scientific advice for conserving bluefin tuna in the Eastern Atlantic and Mediterranean Sea



<http://www.iccat.int/Images/species/bft1.gif>

- * In 2007, ICCAT scientists advised the short-term MSY catch level would be on the order *15,000 Tonnes*
- * SCRS scientists expressed great concerns regarding the over-fishing and under-reporting of bluefin catches and indicated the 2003-2004 mortality rate may have been more than three times the level permitting the stock to stabilize at the MSY reference point

- * The Contracting Parties adopted a 15 Year recovery plan for bluefin tuna in the East Atlantic and Mediterranean (Recommendation 06-05) starting in 2007

- * TACs set at 29,500t (2007), 28,500t (2008), 27,500t (2009) and 25,500t (2010)

- * Such high TACs in light of uncertainties over catch rates and biological parameters caused considerable critiques from NGOs
 - > Recovery plan is in fact a “collapse plan” (Dr. Sergi Tudela, Head of Fisheries Programme, WWF Mediterranean)
 - > ICCAT might be called “the International Conspiracy To Catch All Tuna” (Carl Safina, Blue Ocean Institute)

- * In 2008, ICCAT recommended further reduction of the “recovery plan” TACs
 - > 22,000 T for 2009, 19,950 T for 2010, 18,500 T for 2011
 - > But still not in accord with scientific advice
- * USA announced it would support Monaco’s proposal to list Atlantic bluefin tuna under CITES to prohibit international trade unless strong and definitive actions were taken at the November 2009 ICCAT meeting in Brazil such as
 - > Setting responsible science-based quotas
 - > Ensuring stronger enforcement of quotas
- * At November 2009 Annual ICCAT Meeting, Commission agreed to lower the 2010 TAC to 13,500 tons (too little, too late?)
- * In March 2010, the CITES meeting rejected listing bluefin tuna in Appendix I (where commercial trade would be prohibited)

Discussion Questions

1. Has the precautionary approach/principle been incorporated in your country's laws and policies and if so, how?
2. What are the main constraints in national implementation of the precautionary approach/principle?
3. What reforms might be suggested in light of the precautionary approach /principle to the global legal framework addressing toxic chemicals?
4. What reforms in relation to RFMOs might be considered to more effectively put precaution into practice?

Concluding Cautions About Precaution

- The Precautionary Principle / Approach Is Not a Panacea (A “Quick Fix” To the World’s Legal, Policy and Practical Woes)
- + Does not fill the numerous global “governance gaps”, e.g.
 - No Convention on Land-Based Pollution/Activities (“Soft” Global Programme of Action for the Protection of the Marine Environment From Land-Based Activities, 1995)
 - No Comprehensive Convention on Sea-Bed Activities (MARPOL 73/78 only covers oily platform drainage [not to exceed 15 ppm] and garbage disposal from rigs [no disposal except for ground food wastes if more than 12 n.m. from land])
 - No global forests convention
 - No comprehensive chemicals convention
 - No global agreement on heavy metals
 - No global agreement on Post-Kyoto climate change commitments
 - No integrated management arrangements for the high seas

+ Does not fix weak international environmental standards that exist, for example

- Sewage from ships

- MARPOL Convention's Annex IV continues an antiquated, non-precautionary distance from land approach

 - * Allows ships to discharge comminuted and disinfected sewage (from approved systems) at a distance of more than 3 nautical miles from land

 - * Allows sewage which is not comminuted or disinfected to be discharged at a distance of more than 12 nautical miles from land

- Does not ensure political will for countries to adopt and implement international agreements promoting the precautionary approach, e.g.
 - + 1996 Protocol to the London Convention
 - Only 37 Contracting Parties as of 31 March 2010
 - Among Caribbean Island States, only Barbados, Saint Kitts and Nevis, and Trinidad and Tobago listed as Parties as of 31 March 2010
 - + 1995 UN Fish Stocks Agreement
 - Only 77 Parties as of 01 March 2010
 - Among Caribbean Island States, only Bahamas, Barbados, Saint Lucia, and Trinidad and Tobago listed as Parties as of 01 March 2010

- + Does not “swim alone”
 - Numerous other principles of sustainable development must also be put into practice
 - Those principles include
 - * The ecosystem approach
 - * Public participation
 - * Social equity
 - * Intergenerational equity
 - * Integration (Especially integrated coastal and ocean management)
 - * Polluter pays
 - * Environmental impact assessment
 - * Pollution prevention
- Nevertheless, Precaution Continues To Be a Fundamental Principle and Aspirational Beacon in the Global Quest for Sustainable Seas and Healthy Coastal Communities!