**International Environmental Law- Wold (Fall 2016)**

Sustainable development

1. Capitalist neoclassical economics (“trade liberalization”) v. regulated growth (sustainable development)
2. “Sustainable development is development that meets the needs of the present without compromising the ability of future generations to meet their own needs.” (Brundtland Report)
   1. Focus on intergenerational and intragenerational equity
   2. Brundtland Report focuses on meeting basic needs first
      1. Proffers that economic growth is the quickest method to achieving this end
      2. Implicitly accepts certain levels of environmental degradation, resource depletion
   3. Four categories of sustainability as defined through their treatment of capital (natural, manufactured, human)
      1. Weak- total capital depletion acceptable; all forms of capital may be substituted for another form with no meaningful consequence
      2. Intermediate- defines criticality of each form of capital; certain forms of capital may be depleted and substituted for other forms, within a limited degree
      3. Strong- natural and human capital are not substitutes for natural capital but complementary
      4. Absurdly strong- no capital may be depleted
3. Ecological economics
   1. Markets are a function of culture and the environment, not the other way around as neoclassical model would suggest
   2. Views the earth as an ostensibly closed thermodynamic system with only one meaningful input (solar energy)
   3. Focuses on *sustainable scale, fair distribution, and efficient allocation*
      1. Allocation
         1. Largely follow the goals set forth by traditional economics (supply=demand)
      2. Fair distribution
         1. Inequality must be limited to within some socially acceptable range
         2. Ensured through taxes and wealth transfers
      3. Sustainable scale
         1. Adjusting economic growth such that it can be maintained given environmental, resource constraints
         2. “its significance is relative to the natural capacities of the ecosystem to regenerate the inputs and absorb the waste outputs on a sustainable basis...It is clear that scale should not be determined by prices, but by a social decision reflecting ecological limits.” (Costanza)
   4. Scale must be addressed first to determine the reasonable bounds of human activity
   5. Just distribution is an input variable to efficient allocation as (or more) important as prices
4. National economic accounting measures
   1. Gross domestic product
      1. Sum of all economic activity within a polity
      2. Problematic in that it does not take into account the qualitative aspects of such activity
   2. Genuine progress indicator
      1. Subtracts the negative activities from GDP (e.g., crime, resource depletion, pollution, loss of leisure time, accidents) and accounts for activity associated with things like parenting, volunteer work, higher education
   3. Human development index
      1. Four variables- per capita GDP, life expectancy at birth, adult literacy rates, gross enrollment in education
   4. Environmental performance index
      1. Developed by Yale, Columbia
      2. Based on twenty variables covering five themes
         1. Current state of environment
         2. Efforts to reduce environmental stresses
         3. Efforts to reduce human vulnerability to environmental stresses
         4. Social, institutional capacity to address environmental problems
         5. Stewardship of resources
5. Appeal of sustainable development is in its ambiguity; its meanings contain a broad spectrum of principles

International trade and the environment

1. Comparative advantage- foundation of free trade advocacy
   1. Theoretically, one state may have a better capacity to create a product than its neighbor who, conversely, has better capacity to produce something else; trade specialization
   2. Assumes that capital (natural and manufactured) and labor are inherently immobile—they are not (especially capital)
      1. Therefore, if cheaper labor was the only true variable in comparative advantage, Bangladesh would be the world’s largest exporter
      2. Other factors are important: economies of scale, access to raw materials, access to markets, need for skilled labor, reliability of legal and economic systems
   3. Autarky- dearth of trade specialization
2. Principle 12 of the Rio Declaration (1992)
   1. “States should cooperate to promote a supportive and open international economic system that would lead to economic growth and sustainable development in all countries, to better address the problems of environmental degradation. Unilateral actions to deal with environmental challenges outside the jurisdiction of the importing country should be avoided. Environmental measures addressing transboundary or global environmental problems should, as far as possible, be based on an international consensus.”
3. Esty on trade liberalization’s effects on environment
   1. Scale and composition effects- it promotes unsustainable economic growth which depletes natural resources and creates untenable amounts of waste
   2. Regulatory effect- market rules may preempt environmental regulations unless proper precautions are in place
   3. Competitiveness effect- states with lax environmental standards may have competitive advantage over others with more stringent standards
4. Bhagwati’s response to Esty’s arguments
   1. Scale and composition effects- improved economic conditions beget improved environmental standards
   2. Regulatory effect- reduced trade barriers lead to technology transfers which mitigate environmental degradation
   3. Competitiveness effect- it doesn’t exist; environmental compliance costs are de minimis
   4. Kuznets curve- sulfur dioxide emissions go down as economic conditions improve
      1. Doesn’t apply to all pollutants
5. General Agreement on Tariffs and Trade (GATT) and the World Trade Organization (WTO)
   1. Dispute Settlement Body (DSB)
      1. Member state brings grievance against another
      2. First tried before ad hoc panel of three members
      3. Result may be appealed to Appellate Body, consisting of seven members elected to five year terms
      4. Winning party may impose trade sanctions against loser if the latter does not rectify initial issue
   2. GATT Core Articles
      1. Article 1- non-discriminatory obligation which precludes differential treatment of like products originating from various states (most favored nation)
      2. Article 3- must treat (tax, regulate) foreign products the same as “like” domestic products within domestic markets; cannot impose a “condition of sale” on a foreign product which does not apply to like domestic products (national treatment obligation)
         1. Art. 3:2, cl. 1- taxes on foreign products must not be higher than like domestic ones, no matter how small; because of this, like products in this context will be narrowly construed
         2. Art. 3:2, cl. 2- broadens scope of like products where restrictive measures are meant to benefit domestic industry
            1. Like products are those directly competitive or substitutable and not similarly taxed (suggests de minimis exception)
         3. Art. 3:4- governs regulation; like products broadly construed
         4. Ad Article 3- import tariffs may not be disguised as taxes
      3. Article 11- ban on import/export quotas, licenses (quantitative restrictions)
         1. May impose export excise taxes, import tariffs
      4. Article 20- exceptions
         1. Necessary to protect human, animal or plant life or health
         2. Relating to conservation of exhaustible natural resources, in conjunction with domestic efforts
         3. Necessary to protect public morals
   3. Most disputes arise out of alleged violations of Art. III or XI
      1. Art. 11 is a blanket proscription against activity
      2. Art. 3 issues require additional analysis of domestic products
   4. Variables in determining like products
      1. End uses
      2. Product characteristics
      3. Consumer preferences
      4. Tariff classification
   5. Process in determining “likeness” of products remains nebulous and subjective
   6. Cases dealing with Art. 3 disputes and like products
      1. Asbestos- mortality caused by inhalation considered a definitively differentiating characteristic from different fibers with similar uses
   7. Processes and production methods
      1. Non-product related PPMs- production method does not affect end product (e.g., methods of fishing)
      2. Product related PPMs- production method affects end product (e.g., pasteurization)
      3. *Tuna/Dolphin* disputes
         1. United States banned import of tuna caught with Purse-Seine nets
         2. GATT declined to accept US assertion that tuna caught with or without those nets were different products
      4. *Reformulated Gasoline*
         1. US domestic refiners had to reduce volatile organic compounds by set percentage (individual baseline); foreign refiners had to reduce VOCs to statutory baseline
         2. US claimed that, for Art. 3:4 purposes, the rule regulated similarly-situated domestic, foreign refiners the same
         3. Panel held that Art. 3:4 “does not allow less favourable treatment dependent on the characteristics of the producer and the nature of the data held by them.”
   8. Article 20 exceptions
      1. Art. 20(b)- measures “necessary to protect human, animal or plant life or health”
      2. *Tuna/Dolphin II* calculus
         1. Does the policy for which the disputed trade measure is invoked fall within the range of policies relating to the specific exception, such as the Article 20(g) provision for conservation measures relating to exhaustible natural resources?
         2. Does the disputed trade measure meet the requirements of the specific exception; i.e., is it “necessary” to protect human, animal, or plant life or health or does it “relate to” the conservation of exhaustible natural resources made effective “in conjunction” with restrictions on domestic production or consumption?
         3. Does the disputed measure conform to the chapeau of Article 20, namely that the measure is not applied in a manner that constitutes a means of arbitrary or unjustifiable discrimination between countries where the same conditions prevail or in a manner that constitutes a disguised restriction on international trade?
      3. ~~Necessity in the context of Art. 20(b)~~
         1. ~~Measure may only be necessary if no other alternative is reasonably available~~
         2. ~~Contracting parties are “bound to use…that which entails the least degree of inconsistency with other GATT provisions.” (least trade restrictive measure)~~
         3. ~~Measure most not require other countries to change their policies~~
      4. *Retreaded Tyres*
         1. Brazil proscribed importation of used, retreaded tires to reduce the amount of waste tires disposed domestically
         2. Brazil argued such a measure was necessary to prevent environmental degradation caused by leaching from tire landfills, mosquito-borne illnesses
         3. Panel concluded that country does not have to provide empirical evidence to support its conclusion that there exists a risk to health or life—it may be expressed in qualitative or quantitative terms
         4. Panel suggested a balancing of factors to determine necessity of measure
            1. Importance of the interests protected by the measure
            2. Contribution of the measure to the end pursued

“a function of the nature of the risk, the objective pursued, and the level of protection sought”

* + - * 1. Trade impact of the measure
        2. Compare measure to other, reasonably available measures which provide equivalent contribution to objective

The burden is on the complaining party to proffer such alternatives

* + - 1. “In order to justify an import ban under Article 20(b), a panel must be satisfied that it brings about a material contribution to the achievement of its objective.”
         1. Necessary under Art. 20(b)
         2. Necessity may be demonstrated by “quantitative projections in the future, or qualitative reasoning based on a set of hypotheses that are tested and supported by sufficient evidence.”
    1. Art. 20(g)
       1. Trade restrictions may be justified if they are “relating to the conservation of exhaustible natural resources if such measures are made effective in conjunction with restrictions on domestic production or consumption.”
          1. Trade measure (means) should have a substantial relationship to conservation goal (ends)
          2. “Made effective in conjunction…” clause essentially means that there must be an even-handedness in the treatment of domestic, foreign entities
       2. *Shrimp/Turtle*
          1. US required that shrimp importers adopt the same regulatory scheme for conserving sea turtles
          2. Turtles and, by extension, other living organisms are exhaustible natural resources notwithstanding their reproduction rates
    2. Art. 20 chapeau
       1. “Subject to the requirement that such measures are not applied in a manner which would constitute a means of arbitrary or unjustifiable discrimination between countries where the same conditions prevail, or a disguised restriction on international trade, nothing in this Agreement shall be construed to prevent the adoption or enforcement by any contracting party of measures”
       2. Designed to prevent abuse of Art. 20 exceptions
       3. According to *Shrimp/Turtle*, it is the “expression of the principle of good faith” and abus de droit, which proscribes the abusive exercise of a member’s valid legal rights and requires the reasonable exercise of those rights
       4. Party invoking an Art. 20 exception has the burden to demonstrate that its measure comports with the chapeau
       5. Determination of compliance with the chapeau is made after concluding that a measure is valid under an enumerated exception
       6. “Unjustifiable discrimination” may occur where a state imposes unilateral trade restrictions absent an attempt at multilateral negotiations (*Reformulated Gasoline*, *Shrimp/Turtle*)
       7. GATT panels have suggested that proper disclosure of the purposes of trade restrictions may preclude them from being “disguised restrictions” on trade
       8. Appellate Body has ruled that measures enforced by processes which are not “transparent” or “predictable” may be arbitrarily discriminatory (*Shrimp/Turtle*, noting the “informal and casual” application process for certification and that applicant states had no opportunity to be heard)
       9. Recourse report to *Shrimp/Turtle* found that imposing the requirement that importing states have a regulatory scheme “comparable in effectiveness” was flexible so as to avoid being unjustifiable or arbitrary discrimination

International law

1. General principles of international law
2. International custom
   1. State practice
   2. *Opinio juris*
3. Treaties
4. Soft law
   1. Normative expressions of international significance
   2. Usually developed through proposals, reports, resolutions, protocols
   3. Not binding (as opposed to general principles, certain treaties, custom)
   4. May become binding through other mechanisms; as such, adoption of soft law principles may be contentious
   5. “In theory, one clearly phrased and strongly endorsed declaration at a near-universal diplomatic forum could be sufficient to establish new international law.”
   6. “It is characteristic that they are carefully negotiated and drafted statements, intended in many cases to have some normative significance despite their non-binding, non-treaty form. There is at least an element of good faith commitment, an expectation that they will be adhered to if possible, and in many cases, a desire to influence the development of state practice.”

Development of international environmental law

1. Liberation of colonial holdings by mid-century spurned discussions on equitable development
2. Stockholm Conference (1972)
   1. Articulated the national sovereignty over natural resources and the attendant duty to not cause extra-jurisdictional harm through the exploitation of those resources
3. Nairobi Declaration (1982)
   1. Created World Commission on Environment and Development which led to Brundtland Report (1987) on sustainable development
   2. Crystallized coalitions of developing nations
4. Rio Declaration (1992)
   1. Principle 2: state sovereignty to exploit natural resources; duty to not cause extra-jurisdictional damage
   2. Principle 3: emphasized a fundamental right to human development, even at the cost of environmental integrity
   3. Principle 4: environment must be considered in the course of development
   4. Principle 7: common but differentiated responsibilities
   5. Principle 9: strengthen endogenous capacity in developing states
   6. Principle 10: governments have obligation to produce, publish information related to environment; shall allow citizens access to environmental justice
   7. Principle 11: need for domestic environmental policies
   8. Principle 15: precautionary principle
   9. Principle 16: need to internalize costs; polluter pays principle

Principles of international environmental law

1. State sovereignty over natural resources
   1. Requirements of statehood according to Art. 1 of Montevideo Convention (declarative theory)
      1. Permanent population
      2. Government
      3. Defined territory
      4. Capacity to enter into relations with other states
   2. Constitutive theory- states must also be recognized by other states
   3. Sovereignty denotes “competence, independence, and legal equality of states”
      1. Independence includes the political, social, economic, and cultural spheres
      2. Territorial integrity is inviolable- territory includes overseas holdings, territorial seas (12 NM from coast; exclusive economic zones extend 200 NM beyond that)
   4. Permanent state sovereignty over natural resources is customary international law
   5. Inherent to this principle is the duty to (in the course of the exercise of the principle) not to infringe upon the exercise of the principle by other states
   6. UNGA Res. 2158 (1966)- developing states have right to “secure and increase their share in the administration of enterprises which are fully or partly operated by foreign capital” and states which are the sources of that capital should not interfere with that right
      1. Foreign firms should also assist developing states in capacity building
   7. Sovereignty may be ceded through international law procedures
2. Common heritage of humankind
   1. Natural resources which cannot feasibly be managed or controlled by a single state or entity
   2. Examples include: celestial bodies; seabed beyond territorial seas; atmosphere
   3. Five core elements
      1. Non-appropriation- cannot be owned by any one entity
      2. International management- must be regulated multilaterally
      3. Shared resource- benefits should be shared equitably
      4. Peaceful purposes- cannot militarize
      5. Future generations- preserve future integrity
3. Precautionary principle
   1. Lack of scientific certainty is not a reason to not take action
   2. Articulated in various, non-uniform applications
      1. May be “weak” (e.g., Rio Declaration which takes into account costs and does not mandate action) or “strong” (e.g., World Charter for Nature which states that benefits of activity outweigh costs and activity must be preceded by “exhaustive examination”)
      2. Because of varying definitions, cannot be considered to be customary international law
   3. Five commonalities to applications
      1. Requires that a risk be identified using plausible scientific assumptions (evaluation should show that desired level of protection for the environment or population could be jeopardized)
      2. Does not necessarily lead to specific results
      3. Implies that environmental harm should be minimized
      4. Harm need not be avoided at any cost (see, Principle 15 of Rio Declaration cabining principle in terms of cost)
      5. Shifts burden from environmental interests to proponents of economic activity
   4. Fish stocks agreement- where certain fish population thresholds trigger conservation measures
   5. US is opposed to adoption of principle as hard law; advocates calling it “precautionary approach”
4. Polluter pays principle
   1. Ostensibly ensures that costs of an economic activity are internalized such that pollution/environmental degradation created by the activity is included in those costs
   2. Arthur Pigou and Pigouvian taxes- quantification of pollution costs and attendant charges for them
   3. At its base, principle is about efficient cost allocation; unbridled capitalism incentivizes externalization
   4. OECD (Org. for Econ. Cooperation and Dev.)- “The principle to be used for allocating costs of pollution prevention and control measures to encourage rational use of scarce environmental resources and to avoid distortions in international trade and investment is the so-called ‘Polluter-Pays Principle.’”
      1. Standards for acceptable levels of cost internalization, according to OECD, are subjective; excessive marginal costs associated with abatement may justify some externalization
   5. Supreme Court of India has incorporated principle into federal common law
5. Common but differentiated responsibilities
   1. Principle of equity
   2. States have common responsibilities to protect the environment and promote sustainable development, but because of different social, economic, and ecological situations, countries must shoulder different responsibilities
   3. Contemplates different capacities of states to handle environmental issues
   4. Articulated in Principle 7 of Rio Declaration, Article 3(1) of UNFCCC
   5. Because of changing economic realities, certain states which had historically been low emitters may have to assume more responsibility as their ecological footprints expand
6. Duty not to cause transboundary environmental harm
   1. Principle 2 of Rio Declaration- States have…the responsibility to ensure that activities within their jurisdiction or control do not cause damage to the environment of other States or of areas beyond the limits of national jurisdiction.
   2. *Trail Smelter Case*
      1. Washington residents sought redress for environmental harm caused by British Columbian firm
      2. UN arbitration tribunal looked at Swiss law governing disputes between cantons and its treatment of sovereignty
         1. Looked at SCOTUS decision in *Missouri v. Illinois* regarding interstate water pollution
         2. Examined scholarship pertaining to international law
      3. “No State has the right to use or permit the use of its territory in such a manner as to cause injury…when the case is of serious consequence and the injury is established by clear and convincing evidence.”
      4. Tribunal imposed injunctive relief
7. Principle of prevention
   1. Analogous to previous principle and precautionary principle
   2. Based on premise that prevention is cheaper than reaction
      1. Creates minimum standards and employment of best available technology
   3. Principle 6 of Stockholm Declaration- The discharge of toxic substances or of other substances and the release of heat, in such quantities or concentrations as to exceed the capacity of the environment to render them harmless, must be halted in order to ensure that serious or irreversible damage is not inflicted upon ecosystems.
   4. UN Convention on the Law of the Sea (UNCLOS) states that “best practicable” methods should be used to prevent pollution, not that all pollution should be avoided (technology based standards)

Montreal Protocol

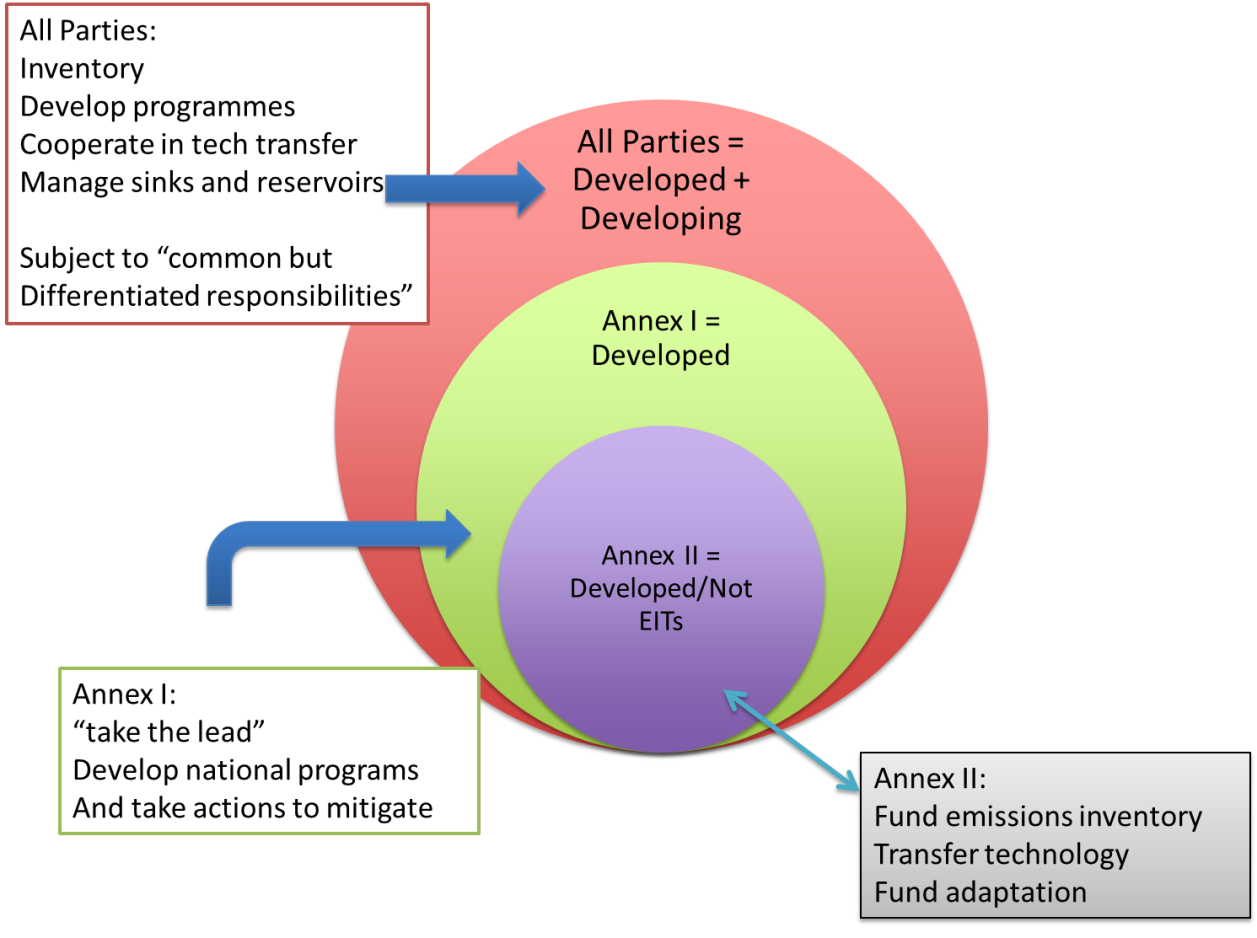
1. Early issues
   1. Science was inconclusive as to actual effects of ozone depleting substances (ODSs)
   2. US and EC conflicted over exact mitigation measures
      1. US, whose production mainly went towards domestic consumption, desired restrictions on use
      2. EC producers, who were large exporters, wanted production cuts
   3. Developed and developing states (who had yet to see ubiquitous use of ODSs) argued over mitigation efforts
   4. Skeptics used lack of scientific consensus to effectively stonewall regulation implementation
2. Vienna Convention for the Protection of the Ozone Layer (1985)
   1. Initiated prior to conclusive scientific evidence of ozone depletion
   2. Instituted a framework of non-binding obligations
   3. Established regime of scientific cooperation, analysis and development of ODS alternatives
   4. Laid foundation for further agreements, dispute settlement
   5. Two months after Convention adjourned, the Antarctic ozone “hole” was discovered
3. Montreal Protocol on Substances that Deplete the Ozone Layer (1987)
   1. Art. 1- definitions
      1. Controlled substance- listed substances, excludes those substances in other products
      2. Production- ODSs produced times their ozone-depleting potential (ODP) minus the amount of ODSs destroyed
      3. Consumption- imports plus production minus exports
   2. Art. 2- control measures
      1. Differing benchmarks for developed and developing (Art. 5) states
      2. Set timelines out to June, 1999
      3. 8(a)- allows for joint fulfillment
      4. 9(c)- adjustment approval methods (two-thirds vote of present parties representing at least fifty percent of consumption of ODSs); affects phasedown of ODSs
      5. Adding new substances requires approval of two-thirds of parties
      6. Called for eventual phase-out of all controlled substances
   3. Art. 4- control of trade with non-parties
      1. Banned exports and imports to and from non-Protocol states; banned export of products containing ODSs to non-Protocol states
      2. Banned transfer of technology to produce ODSs to non-Protocol states
   4. Art. 5- special situation of developing countries
      1. Developing parties defined as those consuming <0.3 kg/capita of ODSs
      2. Enjoined developed parties to provide technology for ODS replacements
   5. Art. 7- reporting of data
      1. Requires reporting of production, imports, exports
4. London Amendments (1990)
   1. Established the Multi-Lateral Fund (MLF) (Decision II/8)
      1. Developed parties would subsidize Art. 5 parties’ incremental costs to mitigate ODS use; incremental costs are those associated with projects that go beyond the course of business as usual
      2. China and India are large beneficiaries of the MLF
   2. Feedstock ODSs are not counted towards production; feedstock ODSs are those used in the production of other chemicals
   3. Created essential use exceptions (e.g., medical inhalers)
5. Non-compliance procedure
   1. Implemented through Copenhagen Amendment (1992)
   2. If another party has “reservations” with respect to another’s alleged non-compliance (never used)
   3. Secretariat, in the course of preparing reports, may not non-compliance
   4. Parties, upon discovering that they will be in non-compliance, may submit their own finding and will delineate the circumstances causing it
   5. Non-compliance findings are submitted to an Implementation Committee
   6. Implementation Committee identifies causes, further facts; then makes recommendations to the MoP which then decides on appropriate action
   7. MoP may then determine appropriate assistance, issue a caution, and/or suspend a party from benefits associated with Protocol
6. Climate change and the Montreal Protocol
   1. The Vienna Convention did not explicitly preclude the regulation of ODS substitutes which do not contribute to ozone depletion
   2. Montreal Protocol and subsequent amendments dealt with ODSs that also had ancillary climate warming effects (some semblance of precedent)
   3. Amendments specifically call for ODS replacements that “minimize environmental impacts, in particular impacts on climate…taking into account global-warming potential” (Decision XIX/6: Adjustments to the Montreal Protocol with Regard to Annex C, Group I, Substances (HCFCs))
   4. Art. I definition of controlled substance includes “isomers” of controlled substance (includes HCFC)
   5. North America, Micronesia proposed to add HFCs as controlled substances
      1. As of October 14, 2016, HFCs are now covered by Protocol

UNFCCC

1. Political paradigm- fundamentally addressing how economies operate and the proper avenues of development
   1. Dyads
      1. North-South
      2. G77-G8
      3. Disparate interest amongst developing nations (AOSIS-OPEC; BRICS-everyone else)
      4. EU-US
         1. Joint implementation v. emissions trading
   2. Limited number of states responsible for cumulative concentrations of GHGs
   3. Developing nations see themselves as possessing the right to attain parity in standards of living
   4. Sector-based interests as an impetus for (or a hindrance to) action
      1. Land use vs. industrial sources
   5. Economies in transition- former Soviet states wanted incentives to not increase emissions to Cold War levels
2. Preamble
   1. Reiterates certain principles: common concern; state sovereignty and duty; sustainable development; common but differentiated responsibilities
3. Article 1: Definitions
   1. Emissions- release of GHGs or GHG precursors into atmosphere over specific area and time
   2. GHG- all except those covered by Montreal Protocol
   3. Reservoir- natural mode of GHG storage
   4. Sink- process, activity or mechanism which removes GHG from atmosphere
   5. Source- any process or activity which releases GHG into atmosphere
4. Article 2: Objectives
   1. “Stabilization of GHG concentrations in the atmosphere at a level that would prevent dangerous anthropogenic interference with the climate system within a time-frame sufficient to allow ecosystems to adapt naturally to climate change, to ensure that food production is not threatened and to enable economic development to proceed in a sustainable manner.”
5. Article 4: Commitments
   1. Divided according to party designation
      1. Annex I- developed parties and former Soviet states
      2. Annex II- developed parties
   2. Art. 4.1- covers all parties; recognizes common but differentiated responsibilities and disparate capacities
      1. (a) Prepare, maintain inventories of sources and sinks
      2. (b) Develop, monitor domestic measures to mitigate the effects of and adapt to climate change
      3. (c) Promote and participate in technology transfer
      4. (d) Promote sustainable management of sinks, reservoirs
      5. (j) Communicate to COP relevant information to implementation
         1. Art. 12.1 required disclosures- applicable to all parties
            1. National inventories of sources and sinks
            2. Steps taken to implement commitments
            3. Any other relevant information
   3. Art. 4.2- covers Annex I parties
      1. (a) Enact policies and measures to limit anthropogenic emissions (e.g., sectoral mitigation) and protect, enhance sinks and reservoirs; parties may joint implement policies and measures (e.g., European Union)
      2. (b) Explicitly calls for a return to 1990 emission levels at an undetermined date
      3. (d) Review adequacy of current commitments
      4. Must “take the lead” in innovating mitigation strategies
   4. Art. 4.3- covers Annex II parties
      1. Subsidize costs of reporting requirements of Art. 12 for all parties
      2. Subsidize technology transfers to assist mitigation and adaptation measures
6. Article 7- Structure
   1. Delegates represent parties
7. Article 8- Secretariat
   1. Arrange COPs
   2. Compile, transmit reports
   3. Subsidiary bodies- scientific and technology advisory committees
8. Articles 15, 17- Amendments and protocols
   1. Amendments- any party may propose; communicated at least six months before COP; requires ¾ party participation
   2. Protocols- only parties to UNFCCC may be part of protocol

United Nations Framework Convention on Climate Change (Powers edition)

1. Preamble
   1. Reiterates certain principles: common concern; state sovereignty and duty; sustainable development; common but differentiated responsibilities
2. Article 1: Definitions
   1. Emissions- release of GHGs or GHG precursors into atmosphere over specific area and time
   2. GHG- all except those covered by Montreal Protocol
   3. Reservoir- natural mode of GHG storage
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3. Article 2: Objectives
   1. “Stabilization of GHG concentrations in the atmosphere at a level that would prevent dangerous anthropogenic interference with the climate system within a time-frame sufficient to allow ecosystems to adapt naturally to climate change, to ensure that food production is not threatened and to enable economic development to proceed in a sustainable manner.”
4. Article 4: Commitments
   1. Divided according to category of party
      1. Annex I- developed parties and former Soviet states (economies in transition)
      2. Annex II- developed parties



* 1. No binding commitments
  2. Art. 4.1- covers all parties; recognizes common but differentiated responsibilities and disparate capacities
     1. (a) Prepare, maintain inventories of sources and sinks
     2. (b) Develop, monitor domestic measures to mitigate the effects of and adapt to climate change
     3. (c) Promote and participate in technology transfer
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     2. (b) Explicitly calls for a return to 1990 emission levels at an undetermined date—not necessarily binding
     3. (d) Review adequacy of current commitments
     4. Must “take the lead” in innovating mitigation strategies
  4. Art. 4.3- covers Annex II parties
     1. Subsidize costs of reporting requirements of Art. 12 for all parties
     2. Subsidize technology transfers to assist mitigation and adaptation measures
  5. Art. 4.7- developing parties’ mitigation commitments are dependent upon Annex II parties fulfilling obligations

1. Article 7- Structure
   1. Delegates represent parties
   2. Establish COPs
2. Article 8- Secretariat
   1. Arrange COPs (meeting every year); MOPs are meetings of parties to specific protocols, treaties
   2. Compile, transmit reports
   3. Subsidiary bodies- scientific and technology advisory committees
3. Articles 15, 17- Amendments and protocols
   1. Amendments- any party may propose; communicated at least six months before COP; requires ¾ parties present must approve
      1. Later treaties may modify existing treaties
   2. Protocols- only parties to UNFCCC may be part of protocol
4. Entry into force, withdrawal
   1. Entry- 90 days after deposit of 50th instrument of ratification
   2. Withdrawal- (1) written notice; (2) effective one year after service of notice
      1. Identical to Kyoto Protocol
5. Important aspects
   1. Categorical designation of parties
   2. Funding mechanisms; obligations of Annex II parties to developing parties
   3. Reporting requirements
   4. Negotiating framework for future agreements
   5. Definition of targeted pollutants

Kyoto Protocol

1. Annex I (Annex B under Kyoto Protocol) parties committed to targets and timetables (QELROs)
   1. Committed to 5.2 percent collective reduction below 1990 levels during reporting period (2008-2012)
2. Definitions
   1. Assigned amounts- allowable emissions
   2. Assigned Amount Units (AAUs)- measured in ton of CO2eq (tCO2eq)
   3. Emission Reduction Units (ERUs)- credit for emission reductions; measured in tCO2eq
   4. Certified Emission Reduction (CERs)- accumulated through clean development mechanism projects
   5. Removal Unit- emissions eliminated by sinks
3. Adopted flexibility mechanisms
   1. Joint fulfillment (EU bubble)- AAUs may be reallocated
   2. Emissions trading- AAUs may be swapped
   3. Joint implementation- ERUs generated and swapped between developed parties
   4. Climate development mechanism- investment by more developed into less developed unit into a mitigation project; CERs used
4. Art. 3: Targets and Timetables
   1. Art. 3(1)- Annex B parties should reduce emissions at least five percent below 1990 levels during commitment period (2008-2012)
      1. Gases include CO2, methane, nitrous oxide, HFCs, PFCs. SF6
   2. Art. 3(2)- Annex B parties must show demonstrable progress toward commitments by 2005
   3. Art. 3(7)- baselines differ between parties
      1. Reductions must be made over commitment period
      2. Therefore, party could exceed baseline in any given year, but the average of the five years should be lower than baseline
      3. Baselines for human made GHGs (HFCs et al) were set at later date than 1990
      4. “Hot air”- former Soviet republics were allowed to emit full amount of 1990 emissions based on the premise that their emissions had dropped so precipitously after the collapse of the Union (but were expected to rise again)
         1. Under emissions trading, developed countries (i.e., United States) sought to acquire these allowances cheaply and make no domestic attempt to curtail emissions
   4. Art. 3(10)-(13)- Accounting
      1. Allowed for AAU transfer, acquisition of ERUs and CERs
      2. Trading of AAUs and ERUs is a zero sum endeavor; CERs are infinite and unregulated
      3. Allowed for banking of AAUs
      4. Parties are assigned a registry containing their assigned amount
5. Flexibility mechanisms (see: slide 35 of Climate Change Day 7 powerpoint)
   1. Art. 4- Joint fulfillment (EU bubble)
      1. Reallocate AAs between states participating in joint venture
      2. Parties form subdivision of states to cooperatively meet aggregate emissions reductions
      3. European Community formed- included EU states as of Kyoto Protocol
      4. All parties within subdivision are liable for their collective goals; subdivision goal supplants Kyoto commitments
      5. If group fails to meet aggregate obligations under Protocol, then Protocol requirements apply to individual parties
   2. Art. 17- Emissions trading
      1. Market transfer of AAUs
      2. Must be supplemented by domestic measures
      3. Parties may allow private industry to participate (Decision 11); party establishes an account for private entities which they may use to trade internationally
      4. Participation limited to Annex B parties and must be supplemented by domestic actions
   3. Art. 6- Joint implementation
      1. Project-based emissions trading
      2. Must be additional and supplemental to domestic measures
      3. Must demonstrate that project is completed
      4. Must comply with Art. 5, 7 accounting prescriptions
      5. ERUs are generated and traded in a zero sum arrangement
      6. Track 1- Host party meets all eligibility requirements and verifies additionality
      7. Track 2- Host party does not meet all eligibility requirements but receives verification from independent entity
      8. Private firms may implement projects; must obtain approval of party states
      9. Removal units may be earned through reforestation, afforestation projects
      10. For projects started in 2000, credits start being earned in 2008
   4. Art. 12- Clean development mechanism
      1. Annex I parties may commission emission-reduction projects in non-Annex I parties
      2. Non-Annex I parties benefit from projects through sustainable development and technology transfers
      3. CDM limited to emission reduction projects, not carbon removal (excludes reforestation, afforestation projects)
      4. Non-Annex I parties may initiate CDM projects unilaterally and then sell CERs
      5. Projects started in 2000 started earning credits immediately
      6. Participation in CDM projects must be voluntary, have real and measurable and long-term benefits, and must be additional to the status quo
      7. Executive board established to monitor, implement program
      8. Implementation
         1. Applicant develops Project Design Document (PDD) and present it to Designated National Authority (DNA) who then issues approval
         2. Designated Operational Entity (DOE) is then certified to:
            1. Review methodology
            2. Validate proposals
            3. Verify emissions reductions
            4. Solicit comments from stakeholders
            5. Monitors compliance
         3. DOE is typically third party contractor
         4. DOE issues report to Executive Board and CERs are granted
      9. Conflicts of interest may arise with DOE
      10. Appeals process is muddled
      11. Over-allocation of credits may result from:
          1. Technological limitations associated with quantifying emissions
          2. Outside variables affecting emissions (e.g., market forces reducing demand)
          3. Using general methodologies which ignore local exigencies
      12. Leakage- measurable emissions increase caused by project but outside boundary of project
          1. Spillover is the positive equivalent of leakage
          2. Parties are required to assess, subtract leakage from reductions totals
   5. Supplementarity
      1. Parties were conflicted as to what degree flexibility mechanisms should account for emissions reductions as opposed to domestic measures
      2. Some wanted a minimum of fifty percent reductions from domestic measures; others wanted no requirement (i.e., US)
      3. Ultimately, parties agreed that domestic action shall constitute a significant element of the effort made by each Annex I party
      4. Issues of enforcement persist
   6. Additionality
      1. Briefly, the concept states that projects should result in emissions reductions that would not occur but for the project
      2. Three problems: establishing baselines, proving additionality, dealing with leakage
      3. Baselines- ordered by preference
         1. Approach A- based on existing actual or historical emissions; used where existing activities are most likely to continue
         2. Approach B- using economic rationality, calculate emissions from the most economically attractive alternative to project; used for projects involving activities which do not exist already (e.g., building additional energy infrastructure)
         3. Approach C- average of emissions of “top twenty percent” of similar projects or activities over last five years; considers social, economic, environmental and technological circumstances
      4. Proving additionality- determines whether project would have been created without CDM assistance
         1. Identify CDM project and alternatives
         2. Determine whether project was viable absent CDM assistance (investment and barrier analysis); if yes, then it is additional
         3. Common practice analysis- is CDM project like other projects in the area

Kyoto to Paris

1. Bali Action Plan (2007)- committed to establishing post-Kyoto agreement by 2009
   1. Kyoto Protocol entered into force by 2005
   2. Sovereignty-first approach with respect to major emitters
   3. G8 desired participation of all major emitters including India, China, Brazil (through nationally appropriate mitigation actions NAMAs)
   4. Stated that parties needed to develop “shared vision for long-term cooperative action”; requiring consensus
   5. Agreement
      1. Developed countries- QELROs (maintaining KP AAUs); measurable reportable verifiable commitments
      2. Developing- develop NAMAs
2. Copenhagen Accord (2009)
   1. Developing nations desired that Annex I parties continue to take lead, desired that nationally appropriate mitigation actions (NAMAs) be non-binding
   2. US was intransigent in stance that China, India be included in emissions reductions
   3. Agreement
      1. Stabilize GHG concentrations at level that will prevent dangerous anthropogenic interference with climate system (<2’C temperature rise)
      2. Emissions should peak as soon as possible
      3. Increased adaptation efforts in least developed, island nations
      4. Annex I parties to set economy wide targets by 2020; non-Annex I parties to submit NAMAs (both at later dates)
      5. Increase funding to 100$b/year by 2020
      6. Established bottom up, party specific goal structure used by Paris Agreement; however, commitments were toothless, largely meaningless
      7. Reassess accord by 2015
3. Varying approaches
   1. Intensity targets- reduce amount of carbon per unit of GDP
      1. May be more pragmatic than emissions reductions (which may fluctuate based on extrinsic economic factors)
   2. Policies and measures (PAMs)
      1. Headroom targets
      2. Policy focused instead of purely results-focused emissions reductions
4. After Copenhagen
   1. Meetings in Cancun, Durban (RSA), Doha (Qatar), Warsaw, Lima, Paris
5. Kyoto Protocol II (2013-2020)
   1. Basically consists only of Europe, non-Annex I, Australia
   2. US, Canada, Japan, Russia, New Zealand have all essentially extricated themselves from agreement
   3. Targets and timetables instituted by Copenhagen Accord, adjusted to uniform baseline
   4. Flexibility mechanisms
      1. Non-KP II parties can still participate in CDM, joint implementation but do not receive credits any longer
   5. Credits have basically been banked, are in limbo
6. Pre-Paris concerns
   1. What are adequate reporting requirements (measurement, reporting, verification—MRV)
      1. Some developing countries oppose being subject to requirements under premise of sovereignty
   2. Adaptation- national adaptation programs of actions (NAPAs), tactics; national adaptation plans (NAPs), implementation plans
   3. Green Climate Fund- independent, more representative than World Bank
7. Lima Accord (2012)
   1. Parties agreed to submit Intended Nationally Determined Contributions (INDCs)
      1. Domestic commitments🡪multilateral agreement
   2. INDCs reinforced common but differentiated responsibilities, disparate capabilities
      1. Became NDCs after Paris Agreement came into force

Paris Agreement (2015)

1. Art. 2- Goals
   1. “(a) Holding the increase in the global average temperature to well below 2°C above pre-industrial levels and to pursue efforts to limit the temperature increase to 1.5 °C above pre-industrial levels, recognizing that this would significantly reduce the risks and impacts of climate change;
   2. (b) Increasing the ability to adapt to the adverse impacts of climate change and foster climate resilience and low greenhouse gas emissions development, in a manner that does not threaten food production;
   3. (c) Making finance flows consistent with a pathway towards low greenhouse gas emissions and climate-resilient development.”
   4. Sustainability- three pillars: environment, equity, economics
2. Art. 4- Mitigation
   1. Art. 4.1- peak emissions and obtain carbon neutral global economy
   2. Art. 4.2, 3- subsequent Nationally Determined Contributions (NDCs) must be progressive to prior ones and must reflect the highest ambition under common but differentiated responsibilities
   3. Art. 4.4- developed parties must establish economy wide caps; developing parties eventually work toward this
   4. Art. 4.5- developed parties offer support to developing parties to that end
   5. Art. 4.7- ancillary benefits to adaptation measures may count towards mitigation goals
   6. Art. 4.9, 12- NDCs to be submitted and published every five years
   7. Art. 4.13- avoid double counting contributions
   8. Art. 4.16-18- formally blesses EU Bubble (now with 100% less UK, maybe)
   9. Art. 4.19- parties should formulate low emission, long term development plans
3. Art. 6- Cooperation
   1. Art. 6.2- avoid double counting internationally transferred mitigation outcomes (ITMOs)
      1. Different from CDM in that credits can no longer be generated a la CERs; trading is purely a zero sum game
      2. CDM is dead
      3. Will be formally resolved in Marrakech CoP/MoP
   2. Art. 6.3- participation in ITMOs should be voluntary
   3. Art. 6.4- sets up mechanism, administrative body
      1. (a) To promote the mitigation of greenhouse gas emissions while fostering sustainable development;
      2. (b) To incentivize and facilitate participation in the mitigation of greenhouse gas emissions by public and private entities authorized by a Party;
      3. (c) To contribute to the reduction of emission levels in the host Party, which will benefit from mitigation activities resulting in emission reductions that can also be used by another Party to fulfil its nationally determined contribution; and
      4. (d) To deliver an overall mitigation in global emissions.
   4. Art. 6.5- avoid double counting
   5. Art. 6.6- proceeds should cover administrative costs and help pay for adaptation
   6. Art. 6.8- encourages non-market approaches
4. Art. 7- Adaptation
   1. Art. 7.1- “Parties hereby establish the global goal on adaptation of enhancing adaptive capacity, strengthening resilience and reducing vulnerability to climate change, with a view to contributing to sustainable development and ensuring an adequate adaptation response in the context of the temperature goal referred to in Article 2.”
   2. Art. 7.4- mitigation can lead to less of a need for adaptation
   3. Art. 7.5- adaptation measures should be socially equitable and based on best available science
   4. Art. 7.9- each party is ultimately responsible for adaptation and planning
5. Art. 9- Funding
   1. Art. 9.1- developed parties should help developing
   2. Art. 9.3- funding should come from diverse sources
   3. Art. 9.4- balance funding between mitigation and adaptation
6. Art. 10- Technology transfer
   1. Art. 10.1- global goal is to enhance adaptive capacity, resilience, and sustainable development
   2. Art. 10.4- more mitigation reduces need for more adaptation
   3. Art. 10.5- adaptation should be country-driven, gender-responsive, participatory, transparent, etc. (don’t use adaptation as excuse for bad social policy)
   4. Art. 10.9- each party is responsible for adaptation and planning
7. Art. 11- Capacity building
   1. Country driven and help developing parties
8. Art. 14- Global stocktake
   1. Art. 14.1- parties periodically assess implementation to determine progress
   2. Art. 14.2- first assessment to take place 2023 and every five years thereafter
   3. Art. 14.3- will inform parties with respect to NDCs
9. Art. 20- Ratification
   1. Deadline is April 21, 2017 for ratification, acceptance or approval
   2. “Acceptance or approval” allows US to ratify without going through Senate
10. Art. 21- Entry into force
    1. After 55 parties accounting for 55 percent of GHG emissions
    2. ALMOST THERE (update: WE’RE THERE)

United Nations Convention on the Law of the Sea

1. History
   1. Hugo Grotius- *Mare Liberum* (1609)
      1. Natural law foreclosed the possession of the sea by any single sovereign
      2. Implied that open sea navigation, fishing was a common good and right
   2. Cannon shot rule- sovereigns controlled the extent of the ocean as far as they could fire (usually about three miles)
   3. Beginning of UN cooperation
      1. Under Truman administration, US extended its sovereign jurisdiction over the abutting continental shelf (~200 miles)
      2. Many other states in western hemisphere followed suit
      3. Gulf states claimed 12 mile territorial seas after WWII
      4. Philippines, Indonesia claimed the interstitial waters covering their archipelago
      5. Conflicts between fishing fleets (Cod War between Iceland, UK)
   4. Treaties negotiated in 1958
   5. UNCLOS
      1. Maltese ambassador Arvid Pardo addressed UNGA in 1967
      2. Highlighting Cold War, environmental/natural resource concerns
      3. Negotiations began in 1973, culminated in 1982
      4. Treaty addressed navigational rights; territorial, economic jurisdictional limits; allocation, governance of resources; marine ecosystem conservation; dispute settlement procedures
2. Jurisdictional zones
   1. Baseline- low water line along coastal areas
      1. Different rules exist for archipelagic states
   2. Internal waters- littoral areas such as ports, rivers, inlets (all landward of the baseline)
      1. States have absolute sovereignty over internal waters
   3. Territorial seas- up to 12 nautical miles seaward from the baseline
      1. Ad coelum- extend from subsoil to the air above
      2. Subject to right of innocent passage
      3. Similar rules for archipelagic states
   4. Contiguous zone- up to 24 nautical miles seaward from baseline
      1. States exercise jurisdiction over customs, immigration, national security
   5. Exclusive economic zone- up to 200 nautical miles from baseline, starting at end of territorial seas (212 miles)
      1. States exercise enhanced enforcement rights
      2. States have sovereign right to explore, exploit, conserve, manage natural resources, subject to some principles of conservation
      3. Right of innocent passage in EEZ
   6. High seas- area between EEZs
      1. In areas where no EEZ exists (e.g., Mediterranean Sea) high seas begin beyond territorial seas
      2. Resources in high seas are available to all
      3. Equal rights apply to all states; only limitation is to not inhibit other’s rights
   7. Continental shelf- by default, same as EEZ
      1. States may contend that it extends further
      2. Two maximum limitations- 350 nautical miles from baseline or 100 nautical miles from 2500m isobath (depth) line
      3. States have sovereign rights over resources; other states must obtain consent to exploit
   8. The area- seabed, subsoil of high seas
      1. Common heritage of humankind; cannot be claimed by any one state
      2. Preservation, management subject to separate legal regime
   9. Nationality of ships (Art. 91)- a “genuine link” between flag state and vessel must exist
      1. A genuine link is “tied to nationality of vessel’s crew or owners as well as” flag state’s ability to exercise effective control
      2. Unless expressly stated otherwise, flag states have exclusive jurisdiction over its vessels operating on the high seas
      3. Ships may not change flags while underway
      4. Duties of flag state (Art. 94)
         1. Flag states must maintain registry, ensure seaworthiness and proper training (and regularly maintain standards)
         2. Any incident involving loss of life or damage to foreign installations must be cooperatively investigated
      5. Piracy (Art. 101)
         1. “Any illegal acts of violence or detention, or any act of depredation, committed for private ends by the crew or the passengers of a private ship or a private aircraft” occurring on the high seas against another ship, aircraft, or persons/property thereon
3. Right of innocent passage
   1. Definition of passage (Art. 18)- travel through territorial sea “without entering internal waters” or making port outside internal waters
      1. Must be “continuous and expeditious”; may weigh anchor only for purposes of ordinary navigation; if necessitated by force, duress; to render aid
   2. Definition of innocent (Art. 19)- “not prejudicial to the peace, good order or security of the coastal state”
      1. Activities which are per se prejudicial:
      2. Threat or use of force against sovereignty, territorial integrity, or political independence
      3. Any exercise of any weapon
      4. Launching or transfer of any “military device”
      5. Any act of “willful and serious pollution”
      6. Any fishing activities
      7. “Any other activity not having a direct bearing on passage”
   3. Legal authority of coastal states- may make laws pertaining to:
      1. Safety of navigation, traffic
      2. Conservation of *living* resources
      3. Preventing infringement of fishing regulations
      4. Preservation of environment and pollution regulation
      5. Scientific research
   4. Negative duties of coastal states- shall not:
      1. Impose requirements having practical effect of denying, impairing right of innocent passage
      2. Discriminate against other states
4. Pollution control, enforcement
   1. UNCLOS comprehensively addressed pollution from various sources- supplemented by subsequent agreements addressing specific sources, types
   2. Enforcement authority depends upon where violation occurred
   3. General obligation (Art. 192)- protect and preserve marine environment
   4. Sovereign right of coastal states to exploit natural resources (Art. 193)
   5. Best practicable measures (Art. 194)- taking into account capabilities, coastal states *shall* take measures “necessary to prevent, reduce, and control pollution” from any source
      1. States shall not pollute neighboring waters
      2. States shall have measures in place to prevent accidents, deal with marine emergencies
   6. States cannot transform pollutants from one form to another or transfer pollution from one area to another
   7. Monitoring requirements (Art. 204)- must be done to the furthest extent practicable
      1. States must surveil all permitted activities
      2. States are required to publish these findings (Art. 205)
   8. Environmental assessments (Art. 206)- any planned, permitted activities which may be reasonably believed to result in “substantial pollution or significant and harmful changes to marine environment” must be evaluated beforehand and then assessed afterwards by the coastal state
   9. Coastal states may regulate pollution from vessels so long as it does not interfere with innocent passage (Art. 211)
   10. Flag state enforcement (Art. 217)
       1. Flag states have duty to ensure that vessels carrying their flag maintain with compliance with applicable law, irrespective of vessel location
       2. Flag states have duty to ensure that vessels which cannot comply are not allowed to get underway
       3. Compliance must be continuously verified through certificates, licenses
       4. Violations (actual and alleged) by vessels must be investigated by flag states
       5. Penalties must be severe enough to deter
   11. Coastal state enforcement (Art. 220)
       1. May institute actions for violations occurring in territorial sea/EEZ when vessels have made port
       2. May inspect, detain vessels in territorial seas when clear grounds for violation exist
       3. May request information from vessels when clear grounds for violation occurring in EEZ exists (when vessel is traversing terr. seas or EEZ)
       4. If vessel refuses to give information and clear grounds exist showing discharge/significant pollution, states may board, inspect vessels traversing terr. seas or EEZ
       5. States may detain vessel where “clear, objective evidence” exists of discharge in EEZ
   12. Investigation of vessels (Art. 226)
       1. Inspection is limited to essential purposes (examination of records/certificates) unless
          1. Clear grounds exist to suggest that vessel’s state does not comport with documentation
          2. Contents of documents are not sufficient to make a determination
          3. Vessel is not carrying valid documentation
       2. Bonded vessels must be released from detention
       3. Vessels which need repairs to ensure compliance may be directed to do so
   13. Preemption by flag states (Art. 228)- if a flag state instigates an enforcement proceeding within six months of a coastal state doing the same, then the latter’s proceeding is suspended (and may be eventually terminated)
       1. Does not apply where “major damage” has occurred
       2. Three-year statute of limitations on proceedings brought by coastal states
5. Resource management
   1. States have sovereign rights over natural resources in EEZ (Art. 56)
   2. Conservation (Art. 61)
      1. Coastal states shall determine allowable catch in EEZ
      2. Coastal states (taking into account best available scientific evidence) shall ensure that living resources in EEZ are not over-exploited
      3. When determining maximum sustainable yield, coastal states may consider economic variables
      4. Must also consider ecosystem effects of fishing on dependent species
   3. Use (Art. 62)
      1. Without violating Art. 61, coastal states must ensure the optimum utilization of living resources
      2. Where coastal states cannot obtain the entirety of the allowable catch in the EEZ, they *must* allow other states to help
      3. Other states fishing in EEZ must comply with coastal state conservation measures
   4. Stocks located in multiple areas or multiple EEZs (Art. 63)
      1. States must coordinate in conservation
   5. Migratory species (Art. 64)- cooperation is mandatory amongst states
   6. High seas
      1. Freedom to fish, duty to not interfere with others rights (Art. 87, 116)
      2. Objective is optimum utilization (use up to maximum sustainable yield)
      3. States must adopt domestic measures, coordinate with others in conservation (Art. 117, 118)
      4. Allowable catch should be based on best available scientific evidence and should lead to maximum sustainable yield and consider dependent species (Art. 119)
   7. Illegal, unreported, unregulated (IUU) fishing
      1. Adversely affects efforts to determine standards of sustainability
      2. Regional fisheries management organizations (RFMOs)
         1. “Intended to effectuate the UNCLOS duty to cooperate with respect to straddling and highly migratory fish stocks”
         2. Largely ineffectual
         3. Fish Stocks Agreement (1995)
            1. Only parties to RFMOs have access to stocks governed by them
            2. Flag states have obligation to investigate, prosecute
            3. Penalties for violations must be sufficient to deter
            4. Where coastal state has reasonable grounds for believing a violation occurred, it may notify flag state and they shall cooperate
            5. Boarding vessels must be clearly marked as government vessels
            6. After boarding and when clear grounds exist, boarding vessel may secure evidence and shall notify flag state

Flag states have three days to respond and may either investigate themselves or authorize investigation

If clear grounds for “serious violation” exist, boarding state may direct vessel to port for further inspection

* + - * 1. Exclusive list of “serious violations”

Unlicensed or unpermitted fishing

Failure to maintain catch records

Fishing in prohibited area

Fishing for prohibited species

Using prohibited gear

Falsifying identity

Tampering, disposing of evidence

Multiple violations cumulating in serious disregard

* + - * 1. Inspecting state must release vessel at flag state’s request
    1. Coastal states’ right to protect Art. 56 sovereignty (Art. 73)
       1. May take measures “necessary to ensure compliance” such as boarding, inspection, arrest, and judicial proceedings
       2. Bonded vessels must be released
       3. Can only institute civil penalties and may not imprison
    2. Flags of convenience- FAO states that “root cause of IUU fishing” is flag state’s incompetence/malfeasance
       1. Hot pursuit (Art. 111)- may be commenced when foreign vessel is in internal waters, territorial sea, archipelagic waters, or contiguous zone on suspicion of violation of laws
          1. May be continued into extra-jurisdictional waters if it is uninterrupted; must cease when vessel enters territorial seas of another sovereign
          2. Pursuing craft must be clearly marked as government

Basel Convention on Transboundary Movements of Hazardous Waste

1. International regime governing chemicals
   1. Basel Convention- comprehensive prescriptive procedures governing international transfer of wastes
   2. Rotterdam Convention- establishing prior informed consent for the trade of certain chemicals
   3. Stockholm Convention- covers persistent organic pollutants; does not govern trade but contains certain commitments to the reduction of supply and use of certain pollutants
   4. Basel, Rotterdam, Stockholm Conventions are now administered by same Secretariat
   5. Minamata Convention- bans new mercury mines; calls for phase out of existing ones; regulates artisanal, small-scale gold mining
   6. Remarkable majority of lawful international trade (96%) in hazardous waste takes place between developed states; nevertheless, transfer of waste from develop to developing nations remains a pervasively salient issue of equity, justice
2. Basel Convention
   1. Progeny of agreement between OECD states governing import/export/transfer of hazardous wastes
   2. Hazardous waste (Art. 1)
      1. 1.1(a)- substances in Annex I, assuming they have an Annex III characteristic
      2. 1.1(b)- substances deemed hazardous by any of the parties involved in the transfer (by domestic legislation)
      3. 1.2- household waste is “other waste”; nearly all provisions covering hazardous wastes include other wastes
      4. 1.3- radioactive waste, if covered by another agreement, is exempt
      5. 1.4- ship discharge, if covered by another agreement, is exempt
   3. Disposal (Annex IV)
      1. Covers disposal and recover methods
      2. Disposal generally encompasses impoundment, storage, incineration
   4. General obligations (Art. 4)
      1. 1(a), (b)- parties may prohibit import, so long as they notify other parties; other parties will then prohibit export
      2. 1(c)- requires written consent
      3. 2(a), (d)- parties should reduce generation of wastes “to a minimum”; transboundary movement should be reduced to a minimum as well
      4. 2(g)- importers should prevent import if they believe that wastes will not be managed in an environmentally sound matter
      5. 4- parties should enact punitive legislation to punish bad actors
      6. 5- bans export/import to and from non-parties
      7. 6- no dumping in Antarctica, South Sea
      8. 7- licensing, labelling, tracking requirements
         1. Requires chain of custody documentation
      9. 9- prescriptive conditions prior to movement (i.e., exporters may only export if)
         1. (a)- exporter does not have capacity to dispose OR
         2. (b)- importer requires material for recycling OR
         3. (c)- catch-all provision; allows movement if parties establish criteria “not differ[ing] from the objectives of this Convention.”
   5. Procedure (Art. 6)
      1. 1- requiring written notification of “any proposed transboundary movement”
      2. 2- potential importers must respond in writing consenting, denying, or requesting further information
      3. 3- exporters may not commence movement until it has (1) received written consent and (2) confirmation of existence of contract between exporter and disposer “specifying environmentally sound management of the wastes”
      4. 4- transit parties should respond within sixty days; it is unclear the precise bounds of transit jurisdiction (some say it extends to EEZ, others are more limiting)
      5. 9- documentation
      6. 11- exporters to carry insurance required by transit parties or importers
   6. Movement to/from non-parties (Art. 7, 11)
      1. Parties may enter into agreements with non-parties to allow for transfer assuming agreements “do not derogate from the environmentally sound management” required by Convention
      2. Members of these agreements decide if the agreement is in with compliance with Convention; not subject to oversight
   7. Return to sender (Art. 8)
      1. In the case of a failed agreement to legally trade
      2. To be done within ninety days and executed by exporter; originating party should not hinder efforts to return
   8. Compliance- committee formed in subsequent CoPs
      1. Compliance enforcement at the party level has been largely toothless, limited to data disclosure
      2. Illegal traffic (Art. 9)
         1. Categories- no notification; no consent; consent obtained through fraud or misrepresentation; resulting in deliberate disposal in contravention of Convention or international law
         2. Caused by exporter- exporter’s government should ensure that the waste is taken back or (if impracticable) disposed of in accordance with Convention within thirty days
         3. Caused by importer- importer’s government should ensure waste is disposed of within thirty days
         4. Unplaced blame- coordination between parties to dispose of wastes as soon as possible
         5. In all cases, disposal and handling must be done in an environmentally sound manner
         6. Parties must enact domestic legislation to prevent and punish illegal traffic
   9. Bilateral agreements (Art. 11)
      1. Allows parties to enter into agreements (with other parties or non-parties) so long as those agreements are “compatible with the environmentally sound management” of wastes required by Convention
      2. May allow for contravention of Basel Ban
3. Basel Ban (Decision III/1)
   1. Prohibits transboundary movement of hazardous waste (not “other wastes”) for disposal (Annex IV-A activities) from developed parties (Annex VII- OECD, EU) to non-Annex VII parties
   2. Called for phaseout of transboundary movement of hazardous waste (as listed in Annex I) for recycling (Annex IV-B activities) from Annex VII parties to non-Annex VII parties by 1998
   3. Amendments (Art. 17.5)- “Acceptance of three-fourths of those parties that were parties at the time of the adoption of the amendment is required for the entry into force of such amendment.
   4. Ban has still not entered into force

Convention on Biological Diversity

1. Background
   1. Since start of agriculture, humans have practiced conservation (usually at local scale)
   2. First session of Governing Council of UNEP (1973) identified conservation as a priority
   3. Several UN programs and treaties during 1970s (e.g., CITES, World Heritage Convention) identified conservation as goal
   4. Brundtland Report (1987) emphasized sustainability and conservation
   5. CBD adopted in 1992 as part of Agenda 21 (part of UN Conf. on Environment and Dev.)
   6. CBD addresses biodiversity on multiple levels: genetic, species, ecosystem
   7. Current extinction rate is ~1000 times greater than natural rate
2. Biodiversity, generally
   1. Hotspot approach- 2.3% of earth’s land surface contains at least 50% of its vascular plant species and 42% of terrestrial vertebrates
   2. Species-specific approach- protecting wide-ranging species to preserve large swaths of habitat
   3. Value- wildlife uses; ecosystem services; agriculture and food security; drugs and medicines; aesthetic value
   4. Causes of loss- habitat loss and degradation; invasive species; over-exploitation; pollution; climate change
   5. Muir (preservation) v. Pinchot (exploitation); in international context, exemplified by difficulties in determining, maintaining sustainable yield
   6. CBD is anthropocentric and its purpose is sustainable development
3. Preamble, objectives, definitions
   1. CBD represents the balance between cooperative conservation and sovereign rights of exploitation
   2. Biological diversity is common concern of humankind
   3. Precautionary principle applies
   4. Objectives (Art. 1)- conservation of biodiversity; sustainable use; equitable sharing of genetic resources; technology transfer
   5. Definitions (Art. 2)
      1. Biological resources- includes genetics, parts of organisms, with actual or potential use or value for humans
      2. Sustainable use- does not lead to long term decline of biodiversity
      3. Genetic material- any material of an organism containing functional units of heredity
      4. Genetic resources- genetic material of actual or potential value
4. Obligations and other provisions
   1. Implementation of most obligations is determined at a national level according to domestic capability and practicability
   2. CBD contains no enforcement, compliance provisions
   3. Parties must, in consideration of national capabilities and conditions, develop national BD sustainability programs and integrate, as far as possible, conservation and sustainability of BD into economic planning (Art. 6)
   4. Parties must identify components of BD and monitor activities adversely affecting them (Art. 7)
   5. In-situ conservation (Art. 8)
      1. Done to the extent possible and with consideration of capability
      2. Parties must establish a system whereby it creates protected areas to conserve BD
      3. Regulate BD in or outside of protected areas
      4. Implement programs to rehabilitate and restore degraded ecosystems and threatened species
      5. Establish means to regulate risks associated with use of modified organisms which are likely to have adverse effects on BD/environment
      6. Prevent release of and eradicate invasive species that threaten BD
      7. Preserve knowledge of indigenous peoples and equitably share benefits of that knowledge with them
      8. Develop *necessary* domestic measures to protect threatened species
   6. Ex-situ conservation (Art. 9)
      1. Done to the extent possible and predominantly to complement in-situ conservation
      2. Preferably, ex-situ conservation should be done in the country of origin
      3. Ex-situ conservation should not threaten in-situ populations
      4. Cooperate with developing parties to ensure adequate facilities exist
   7. Environmental impact assessments (EIAs) and mitigation (Art. 14)
      1. Done to the extent possible
      2. Enact domestic procedures for preparing EIAs for projects that are “likely to have significant adverse effects on BD” and allow public participation in EIAs
      3. Consider impacts on BD of government programs and policies
      4. Notify and consult with other states when taking action that would adversely affect BD in those states, including establishing multilateral agreements to that end
      5. Notify immediately when actions would result in imminent or grave danger/damage
      6. Prepare emergency responses
5. Nagoya Protocol and bioprospecting/biopiracy
   1. Western firms go into remote, pristine areas and, in consultation with local indigenous people, extricate valuable genetic material and knowledge without adequately compensation
   2. At time of CBD, genetic resources were considered common heritage of humankind, not subject to original ownership
      1. Western firms sought to protect this and preserve robust intellectual property rights
   3. Access and benefit sharing (ABS)
      1. Access to genetic resources (Art. 15)
         1. Originating parties have sovereign rights to determine access
         2. Originating parties should create conditions which allow environmentally sound uses of genetic resources by other parties
         3. Access should only be on mutually agreed terms, subject to prior informed consent
         4. Scientific research by external party should be conducted with full participation of originating party
         5. Benefits should be shared equitably
      2. Technology transfer (Art. 16)
         1. Technology transfer is essential to elements of CBD
         2. Transfer to developing parties should be done under the most favorable terms while still preserving intellectual property rights
         3. Domestic intellectual property rights should not run counter to Convention
      3. Benefit sharing (Art. 19)
         1. Originating states should be able to participate in research and have advance priority access to benefits
   4. Nagoya Protocol (2014)
      1. Western parties were slow to implement ABS provisions
      2. Access to genetic resources is subject to prior informed consent and the benefits derived therefrom should be shared fairly and equitably
      3. Definitions (Art. 2)
         1. Utilization of genetic resources- research on genetic, biochemical composition of genetic resources
         2. Biotechnology- uses biological system, living organisms, or derivatives thereof to make or modify products
         3. Derivative- naturally occurring biochemical compound resulting from genetic expression or metabolism of organism, even if it does not contain functional units of heredity
      4. Benefit sharing (Art. 5)
         1. Done fairly and equitably with originating party
         2. Enact domestic measures to protect rights of indigenous people
      5. Access (Art. 6)
         1. Subject to prior informed consent at national and local level
         2. Establish procedures respecting consent, report them to Access and Benefit-sharing Clearing House
         3. Procedures should include dispute settlement
         4. Access to knowledge of indigenous people subject to prior informed consent (Art. 7)
         5. Originating parties should establish domestic regimes in conjunction with indigenous people (Art. 12)

International Convention for the Regulation of Whaling

1. Scientific Committee meets every two years; largely politicized
2. Commission consists of individual members representing states
3. Scope of authority- “applies to factory ships, land stations, and whale catchers under the jurisdiction of the [parties], and to all water in which whaling is prosecuted” (Art. 1.2)
   1. Does not specify the precise scope of covered species
4. Preamble- Purposes
   1. Preserve whaling populations to achieve the “optimum level” necessary for “utilization”
   2. The sanctioning of whaling as an inherent purpose of the convention creates tension with conservation measures enacted purely for conservation reasons
5. Art. 5- amendments (“regulations”)
   1. Regulations require approval of three-fourths of voting members and are limited to serving the conservation and utilization of whales
   2. Recommendations require only simple majority
   3. Regulations based on scientific findings, necessary to “provide for the conservation, development, and optimum utilization” and “take into consideration the interests of the consumers.” Additionally, they may not impose quotas (Art. 5.2)
   4. Objections (Art. 5.3)
      1. Approved amendments become applicable within ninety days unless a party objects, another party joins
      2. Thereafter, the amendment will not apply to the objecting parties
6. Moratorium on commercial whaling
   1. Passed, in large part, due to the influx of anti-whaling states into the Convention
   2. Passed in 1982 as an indefinite moratorium; to be reviewed in 1990
   3. Several states objected, all withdrew except Russia, Norway (Iceland withdrew from the Convention altogether, later ratified again with a reservation)
   4. Revised Management Procedure (RMP)
      1. Use catch limit algorithm to determine catch limits
      2. Stocks should not fall below fifty four percent of carrying capacity
      3. Not formally adopted
   5. Revised Management Scheme (RMS)
      1. Inspection and observation scheme
      2. Arrangements to ensure catches are within prescribed limits
      3. Create Compliance Review Committee
      4. Incorporate RMS, RMP into Schedule
      5. Not formally adopted
   6. RMP and RMS intended to be compromise to lift moratorium
7. Art. 8- whaling for scientific research
   1. Creates complete exemption for whaling “for purposes of scientific research subject to such restrictions as to number and subject to such other conditions as the [party] thinks fit”
   2. Parties conducting this research will submit their findings to the Commission at least every year (that is, parties must demonstrate the scientific viability of its research)
   3. Resolution 1986-2- parties conducting research must demonstrate that that cannot “practically and scientifically feasibl[y]” conduct the research in a non-lethal manner
      1. Must prove that lethality is required
8. *Australia v. Japan* (I.C.J. 2014)
   1. With New Zealand intervening on behalf of Australia
   2. Court determined that the standard of review of the scientific merits of a particular research program is an objective one
   3. The central purpose of a program must be scientific research; not adequate to merely be conducting scientific research in the course of commercial whaling
   4. “Whether the design and implementation of [a program] is reasonable in relation to achieving its stated objectives.”
   5. Japan failed to give due regard for Commission resolutions
   6. Japan formulated promulgated new research plan (NEWREP-A); still conducting whaling

Convention on International Trade in Endangered Species of Wild Fauna and Flora

1. General principles
   1. Appendix I
   2. Appendix II
2. Permits
   1. Appendix I species
      1. Import permit findings- (1) must be for purposes that are not detrimental to survival of species; (2) living specimens must be shown due care (“minimize the risk of injury, damage to health or cruel treatment”); (3) specimen must not be used for primarily commercial purposes
      2. Export permit findings- (1) act of export must not be detrimental to survival of species; (2) specimen must not have been obtained in contravention of laws of exporting state; (3) living specimens must be shown due care; (4) an import permit must have been granted
      3. Re-export- all above findings are applicable with the exception of the first export permit finding
      4. Introduction from the sea- identical to import permit findings; species were caught on high seas
   2. Appendix II species
      1. Only export findings apply (same as first three App. I species required findings)
   3. Non-detrimental finding criteria (Resolution Conferences 10.3, 16.7)
      1. Review need only be “based on the scientific review of available information”; additional research is not required
      2. NDF should “consider whether the species would be maintained throughout its range at a level consistent with its role in the ecosystem”
      3. Other factors in NDFs include: population status; distribution; population trend; harvest; other biological and ecological factors; trade information
   4. Primarily commercial
      1. Resolution 5.10- any transaction not wholly non-commercial is per se commercial
      2. Non-commercial aspects of a use must predominate or that use will be considered primarily commercial
   5. Adequacy of permit findings
      1. Importing states have considerable discretion in determining whether export permits were proper
      2. For example, US authorities looking at evidence extrinsic to exporting permit; UK authorities declining to do the same
   6. Pre-convention stock exception- no permit required for specimens “acquired before [CITES] applied to that specimen”
   7. Personal and household exception (Art. 7.3)
      1. Appendix I species- *does not apply* where specimen was acquired outside of the person’s usual state of residence and the person is attempting to import the specimen into that state
      2. Appendix II species- does not apply under same conditions of Appendix I species *and* where the originating state requires an export permit
3. Implementation of national legislation (Art. 6)- requires parties to enact legislation implementing the Convention, at risk of trade sanctions
4. CITES and sustainable use
   1. Resolution 16.6 recognized that species listings may adversely affect local economies
   2. Zimbabwe and CAMPFIRE- program whereby local communities set take quotas on communal land, and fees associated with takes repatriated to community
   3. Annotations
      1. Created “Appendix II(a)” listings through which species are downgraded from Appendix I to II, subject to qualifications
      2. Qualifications usually encompass some sort of trade restriction (e.g., harvesting, treatment of vicunas)
      3. Done to allow local communities to sustainably and commercially exploit local species
      4. Usually predicated upon conserving populations
   4. Southern Africa and elephants
      1. Certain states petitioned for, received annotated listing for elephants
      2. One-off consignment sales were conducted in legally-acquired ivory
      3. Poaching has since skyrocketed (due to policy or regional instability?)
      4. Result- most African elephant populations are in Appendix I; other populations are covered by annotations
   5. Quotas (CoP 16)- important that they be accompanied by comprehensive, sound non-detriment findings
      1. Quotas are a presumptive representation of the number of specimens that can be taken without endangering the survival of the species
      2. Primary purpose of export quotas are economic benefits to local human populations; conservation is not an explicit goal
      3. Documentation (e.g., tags) is crucial for ensuring that specimens are compliant with quotas
   6. Ranching- taking juveniles or embryos from the wild to rear them to maturity
      1. Primary purpose of ranching is conservation of local wild populations
      2. Used mostly with reptiles
      3. Documentation associated with ranched specimens is also vital
   7. Captive breeding- may be done for purely commercial purposes; many facilities exist outside of natural range of animals being bred