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COULD A MORE LIMITED ENVIRONMENTAL GOODS AGREEMENT RESOLVE CONTINUED ISSUES IN CITES COMPLIANCE?

ANDREW COCCOLI*

No longer does the giant sandworm roam free, producing the spice melange. The spice! Dune was noteworthy only as the source of melange, the only source. What an extraordinary substance. No laboratory has ever been able to duplicate it. And it is the most valuable substance humankind has ever found. . . . With it, I create Peace. They have had more than three thousand years of Leto’s Peace.1

In Frank Herbert’s Dune, the known universe is dependent on the single, renewable natural resource of the spice melange.2 The desert setting, the role of spice in facilitating space travel, and superficial parallels between Paul Atreides and T.E. Lawrence tempt critics to compare spice to oil.3 Yet this analogy runs as tepid as Denis Villeneuve’s attempt to fulfill the promise of David Lynch’s flawed masterpiece.4 One of the

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1 FRANK HERBERT, GOD EMPEROR OF DUNE 23 (1981).

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greater themes of *Dune* is how humanity uses and manages living, renewable natural resources that enable modern society and an enhanced quality of life.\(^5\)

Spice is, in large part, sustainably managed in *Dune*.\(^6\) Essential but small quantities of the commodity are extracted, while vast reserves of wilderness allow healthy sandworm populations.\(^7\) Throughout the series, spice production is almost always centrally managed, whether by a single, feudal House awarded a commercial monopoly or by the imperial administration of Leto II.\(^8\) Herbert demonstrates sensitivity to the diversity of stakeholders in spice—from Fremen, to smugglers, to industry, to local and universal politics—in further testament to his work’s status as a pioneering ecological novel.\(^9\)

Returning to twenty-first century Earth, if our world is to continue enjoying a modern, high quality of life, and if humanity is ever to travel to space and discover worlds such as Arrakis, it must learn to manage natural resources sustainably.\(^10\) International environmental law in its current form has evolved out of the struggle against climate change.\(^11\) It must also seek to develop a global natural resources law.\(^12\) An initial attempt was made by the Convention on International Trade in Endangered Species (“CITES”), but while administration of this treaty has increased in sophistication and found partners with other international
organizations, its narrow subject matter meant that it never achieved notoriety comparable to the other landmark treaties of the 1960s.\textsuperscript{13} While international environmental legal academia has long pined for a dedicated and global administrative entity for the environment, there are clear signals of only limited political commitment to new ventures at present.\textsuperscript{14} Instead, a global natural resources law should be developed using existing institutions.\textsuperscript{15} Because natural resources exist in relation to humans, essentially as internationally traded commodities, natural resources policymakers should more seriously consider what role the World Trade Organization ("WTO") should play.\textsuperscript{16}

The WTO, the CITES Conference of Parties ("CITES CoP"), and other multilateral environmental agreement secretariats should adopt new measures and establish new bodies with the goal of accomplishing three primary objectives. First, they should continue working towards transparent supply chains and a more complete global inventory of CITES-listed resources traded internationally. Second, they should use trade policy to incentivize a race to the top in the global supply of sustainably managed natural resources, both endangered and non-endangered. Third, they should design measures to promote future harmonization between international bodies and to encourage more regular, centralized management of total global supply.

This Note will adopt an economic perspective while advocating for the most sustainable practices in natural resources management. It will first conduct a series of case studies of natural resources for which there is transnational or international demand, but unsustainable management. While CITES-listed resources will be considered with particular attention, unlisted and more conventional resources will also be considered. In its second part, this Note will consider mechanisms currently available in international trade to accommodate environmental progress, then will set forth various new measures the WTO could adopt to incentivize sustainable management of the Part I resources. Part III will consider new


roles for CITES, U.N. bodies, and other international associations in working with the WTO to encourage sustainability. Finally, this Note will conclude by suggesting that environmental groups and trade associations in the developed world pressure their governments to consider using the WTO not only to liberalize global trade but to resolve environmental problems created by free trade.

I. RENEWABLE NATURAL RESOURCES IN NEED OF SUSTAINABLE MANAGEMENT

The CITES appendices cover a wide range of endangered flora and fauna that are traded internationally.\(^{17}\) CITES Appendix I includes “species threatened with extinction,” trade in which is “permitted only in exceptional circumstances.”\(^{18}\) Appendix II species face less imminent danger, but the CITES CoP has determined their “trade must be controlled in order to avoid utilization incompatible with their survival.”\(^{19}\)

Solutions to international trade in endangered species depend on all phases of the supply chain, from before the species taking, to end-consumer purchase.\(^{20}\) This implicates various ecological, economic, and political considerations; the following cases are representative of the dynamics of some of the most widely or notoriously traded endangered species.

A. Fisheries and Marine Life

1. Sea Turtles

Many species of sea, freshwater, and land turtles are listed in the CITES appendices.\(^ {21}\) Historical use of tortoiseshell resulted in magnificent pieces of cultural heritage, from Tokugawa Ieyasu’s eyeglasses to a


\(^{19}\) Id.


\(^{21}\) CITES, supra note 17, at 48.
violin bow by Charles Nicolas Bazin for the Exposition Universelle of 1889. Demand for tortoises and tortoise products for purposes of artisanal materials, pets, food, and medicine persists, primarily in U.S. and East Asian markets. Consumer attitudes can be difficult to address due to the anthropological and psychological reasons for demand in tortoiseshell. Preconvention stock, while legal, may support demand for illegal material by artificially prolonging retail markets. As with its cousin, prestige material ivory, poaching and smuggling are the principal issues in the international trade of endangered turtles.

2. Overfishing of Non-endangered Species

Many commercial species, such as tuna, are not listed in the CITES appendices. Nevertheless, sustainable management of fisheries is a significant economic, international, legal, and environmental area of research and discussion. It has also been the subject of federal statutes, such as the Magnuson-Stevens Fisheries Act, designed to strengthen U.S. enforcement of fishing in the more distant reaches of its Exclusive Economic Zone.


27 CITES, supra note 17, at 1–78.


Pacific fisheries have evoked concern over sustainability. As with CITES-listed species, transparency and supply chain integrity are central themes in promoting sustainable practices.

Comparable to CITES-listed resources, tuna suffers from illegal, unregulated, and unreported fishing. In the Indian Ocean, developing nations’ tuna fisheries have benefitted from regional fishery management organizations (“RFMOs”), which channel both best practices guidance by developed nations and eco-labelling initiatives by NGOs and trade associations. However, guidance from other nations, and industry in particular, also leads to concerns over political and financial maneuvering. Despite their benefits, RFMOs can result in greater fragmentation of international environmental law and are vulnerable equally to regional political jockeying as well as movements in the greater global market.

Sustainable management of fisheries could be promoted in general through the WTO by reducing its constraints on domestic regulation, modifying or eliminating subsidies to induce best practices, and improving the dispute resolution mechanism. The General Agreement on Tariffs and Trade (“GATT”) could also be reinterpreted to better afford states the ability to enforce governmental eco-labelling. While these approaches may be successful, they open the door to further fragmentation by targeting domestic law; however, a new Environmental Goods Agreement that addresses the fringes of CITES enforcement as well as broader natural resources management problems would provide a more comprehensive solution.


31 Boon, supra note 30, at 35; Walton et al., supra note 30, at 1.


33 Id. at 8–9.

34 Id. at 10–11.

35 Id. at 10–12.


38 See discussion *infra* Parts II–IV; cf. Boon, supra note 30, at 29–32 (discussing another sort of incentive scheme through RFMOs, but which differs from the Generalized Systems of Preferences (“GSP”) model).
3. International Trade in Whales and Whale Products

All members of the *Cetacea* infraorder—whales, dolphins, and porpoises—are listed in CITES Appendix II, and several specific species are listed in Appendix I.\(^{39}\) Japan is the primary market for internationally traded whale meat.\(^{40}\) It finds willing trade partners principally in Norway and Iceland.\(^{41}\) While some former trade partners, such as Russia, have now banned whaling and whale capture due to domestic environmentalist pressure,\(^{42}\) Japan left the International Whaling Commission in 2019.\(^{43}\) In 2017, Japan imported one-third of its whale meat.\(^{44}\) Though consumption of whale meat has declined, whaling has remained a cultural cause célèbre and unit of political currency in Japan.\(^{45}\) Domestic whaling practices resulted in Japanese liability before the International Court of Justice in 2014.\(^{46}\) Therefore, the most difficult issue of international environmental law as it pertains to whaling is Japan’s national policy of non-compliance.\(^{47}\)

\(^{39}\) CITES, *supra* note 17, at 14.


\(^{41}\) ANIMAL WELFARE INST., *supra* note 40.


B. Forests

1. Rosewood

Rosewood is a generic term used for any of the members of the *Dalbergia* genus. The genus contains over 250 species across Central and South America, Africa, and Asia. The entire genus is listed in CITES Appendix II, with exceptions for finished products under ten kilograms and finished musical instruments; *Dalbergia nigra*, a Brazilian species, is listed in Appendix I.

Demand for rosewood comes from the western guitar industry and the Chinese furniture industry. The guitar industry has vigorously opposed CITES’s listings of rosewood, as well as similar species of beautiful exotic wood, used in all musical instruments. For example, in a 2019 statement to the CITES CoP, a consortium of guitar making and violin making associations stated that rosewood was essential, not only to guitars, but to violins. While this is demonstrably false according to long-standing and well-known practice in the violin trade, it was likely due to the guitar industry’s much larger economic and cultural power that it was able to enlist violin makers to its cause. The 2011 and 2012 Gibson raids, while stirring concerns over the Lacey Act’s consequences for unlimited guitar production, exposed the institutional reliance in the music industry on CITES-illegal supply chains. American production is not

49 Id.
50 CITES, supra note 17, at 69–70.
53 Id.
the only malfeasor; Chinese factory production of low-quality instruments, meant more to be ordered online than to be played for long periods, is also a significant problem for the music trade.57 While most of the rosewood for more expensive guitars now comes from India or Madagascar, the historic use of Brazilian rosewood by great makers such as Louis Panormo has resulted in niche demand for *Dalbergia nigra* in particular.58

Rosewood and lookalike species are generally known as *hongmu* in China.59 China classifies thirty-three species as *hongmu*, seven of which are CITES-listed.60 The United Nations Office of Drugs and Crime’s (“UNODC”) World Wildlife Crime Report 2020 estimated that in 2018, Chinese imports of tropical logs totaled roughly $2.8 billion, where rosewood logs made up a fifth of that total (roughly $560 million).61 Starting in 2012, African sources of rosewood (generally West African, as opposed to Madagascan) overtook Latin American and Southeast Asian sources to become the near-exclusive supply feeding Chinese markets by 2018.62 The availability of such data changed, however, with the 2017 CITES listing of the entire *Dalbergia* genus, as well as certain associated *hongmu* species.63
The UNODC noted that even before the total ban, by 2015, most rosewood imported by China was illegally sourced.\(^4\) Despite general Chinese crackdowns on corruption, the illicit nature of illegal logging renders the actual volume of the illegal rosewood trade something of an open question.\(^5\) The actual volume of illegal trade must be extrapolated from statistics on seizures, as well as generalized export data from trade associations that do not specialize in the investigation of environmental crimes.\(^6\) While rosewood shares with tortoiseshell the same general problems of illegal harvest and smuggling, rosewood markets are larger, more active, and more entrenched.

2. **Pernambuco**

Pernambuco, *Paubrasilia echinata* or *Caesalpinia echinata*, is used to make bows for stringed instruments, generally of the violin family.\(^7\) Pernambuco is listed in CITES Appendix II but with an annotation that applies the listing only to unfinished wood articles such as logs or bow blanks.\(^8\) Pernambuco suffers from many of the same problems as rosewood.\(^9\)

The difference between woods is largely one of scale: Pernambuco’s native range is restricted to parts of the Brazilian coast,\(^10\) and demand is largely restricted to violin bows and the classical music lutherie community.\(^11\) However, demand for Pernambuco is much less flexible than demand for rosewood, in that classical musicians overwhelmingly refuse to accept alternatives.\(^12\) Additionally, the best modern violin bows can

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\(^4\) Id. at 42–43.
\(^5\) Id. at 12–13, 38 (“Because there is no universal definition of ‘rosewood’, there are no global statistics on the rosewood market . . . .”).
\(^7\) ELENA MEJÍA & XIMENA BUITRÓN, BRAZILWOOD (*CAESALPINIA ECHINATA*) IN BRAZIL 9 (2008), https://cites.org/sites/default/files/ndf_material/WG1-CS5.pdf [https://perma.cc/ZW6R-JH88].
\(^8\) CITES, supra note 17, at 69.
\(^10\) MEJIA & BUITRÓN, supra note 67, at 4.
\(^11\) Id. at 1–2, 9.
achieve impressive prices, sometimes in excess of $10,000. To satisfy universal demand among musicians stemming from inflexible, and to some degree ahistorical, attitudes surrounding the primacy of Pernambuco, Chinese industry has begun manufacture of extremely low-cost bows.

It is by now an open secret in the violin trade that this Chinese production relies on illegally harvested Pernambuco. Because finished violin bows enjoy an exception to CITES protections of Pernambuco, Chinese manufacturers are able to exploit a loophole, creating something of a triangle trade in illegal bows: They benefit from lax enforcement, fraud, or corruption in the Brazilian-Chinese transit, then pose their finished bows as legally produced from old stock to U.S. Fish & Wildlife enforcement.

While it is a violation of the Lacey Act to import finished articles, when the importer knows or should know of illegally obtained source material, the Fish & Wildlife Service has stated that it presumes all imported violin bows contain legal material. While this stance is easily criticized as arbitrary given the common knowledge of China’s vast markets for illegally sourced lumber, it is also understandable given the general difficulty of obtaining any sort of reliable and authentic evidence of supply chain compliance. Pernambuco, therefore, suffers from a perfect storm: limited range and lower visibility than rosewood, but with a more certain market,
whose demand comes both from volume manufacturers and from high-
end, specialist artisans.

II. PROPOSED SOLUTION

Solutions to international trade in endangered species are many: (1) ecological efforts to monitor and increase population before taking;81 (2) microeconomic solutions targeting taking activities by local populations;82 (3) environmental criminal enforcement against criminal enterprises at the source and along the supply chain of raw materials;83 (4) supply chain verification and enforcement as raw materials are converted to products;84 and (5) economic or legal incentives for consumers, who are often bona fide purchasers.85 These solutions exist on a spectrum from ecological and localized to increasingly macroeconomic, political, and legal.

The Sustainable Development Goals ("SDGs"), launched in 2015, envision integration across all of these fields.86 SDGs 12 ("Ensure sustainable consumption and production patterns"), 14 ("Conserve and sustainably use the oceans, seas and marine resources . . ."), and 15 ("Protect, restore and promote sustainable use of terrestrial ecosystems . . .") lie at

the heart of the CITES agenda.\textsuperscript{87} United Nations implementation of the SDGs vary by secretariat, with the U.N. Environment Programme ("UNEP") and U.N. Conference on Trade and Development ("UNCTAD") heavily involved in SDG Twelve.\textsuperscript{88} When it comes to macroeconomic solutions, these are not the only international organizations: The WTO is also a powerful influence on international trade.\textsuperscript{89}

Including the WTO in the SDGs’ agenda integration would be particularly powerful because trade policy can target the supply chain at several points: export of natural resources, points of transit along the value chain, and import as a finished article. A primary weakness in policing many endangered species’ supply chains is their relationship to legal, non-endangered species, whether through mixing at source of taking,\textsuperscript{90} exploitation over species identification,\textsuperscript{91} or laundering through rules of origin loopholes.\textsuperscript{92}

While CITES initiatives admirably address listed species, they must be expanded to include those legal, non-endangered species that are used to facilitate trade in CITES-listed resources. These particular non-endangered species may be called “CITES-adjacent species.” Furthermore, if CITES Appendices list an exception to trade in an article using the listed resource, that article’s provenance must be completely verified.\textsuperscript{93} A preferential system of tariffs could be applied progressively to these legal resources and articles on the basis of the extent of their supply chain’s verification.\textsuperscript{94} An unverified article would face very high tariffs.

\textsuperscript{87} G.A. Res. 70/1, Transforming Our World: The 2030 Agenda for Sustainable Development, at 14, 22–25 (Sept. 25, 2015).
\textsuperscript{91} See id. at 40.
\textsuperscript{92} Cf. VICTORIA MUNDY & GLENN SANT, TRACEABILITY SYSTEMS IN THE CITES CONTEXT: A REVIEW OF EXPERIENCES, BEST PRACTICES AND LESSONS LEARNED FOR THE TRACEABILITY OF CITES-LISTED SHARK SPECIES 31, 42 (2015).
\textsuperscript{93} Cf. Hale Neilson, Combating OPEC at the Intersection of the Prisoners’ Dilemma and Stag Hunt, 88 MISS. L.J. 455, 476–77 (2019) (proposing progressive tariffs on oil as a method of commodity price control); Vivien Deloge, Road to 2015: The European Union
An article with reliable and authentic confirmation not only that the taking was legal, but that every subsequent transfer was legal, would face very low tariffs. The many cases in between would experience a range of tariffs depending on the degree of information provided, always with the goal of making total supply chain transparency the cheapest option.95

UNEP would expand existing projects to more comprehensively supply necessary scientific and legal expertise in species identification and environmental policy, providing scientifically based, impartial, easily accessible, and international criteria for verification and transparency.96 This would be designed to be a firmer sort of encouragement than the current best-practices approach, whose deficiencies include fragmentation, opacity, and inconsistent application by private stakeholders.97 Use of experienced monitoring bodies would correct existing problems in Generalized Systems of Preferences (“GSP”) compliance,98 but as trade policy, it would not amount to the imposition of global administrative law.99

Revenues from higher tariffs would be channeled back into UNEP, UN Development Programme (“UNDP”), and SDG initiatives as contributions from member nations.100 These contributions would address existing

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96 See, e.g., CITES Standing Comm., SC70 Inf. 34, Managerial Best Practice Guidelines for Planning and Implementing CITES Traceability Systems, ¶¶ 9–14 (Oct. 5, 2018) [hereinafter SC70 Inf. 34], https://cites.org/sites/default/files/eng/proge/E-SC70-Inf-34%20bis.pdf [https://perma.cc/ZQC2-UE6B]; CITES Standing Comm., SC70 Inf. 32, Traceability: Technical Standards, ¶¶ 2–5 (Oct. 5, 2018); but see Mundy & Sant, supra note 93, at 46–48. “Traceability systems implemented for CITES-listed timber vary widely across countries. As CITES does not prescribe specific traceability requirements for CITES-listed timber, Parties have considerable latitude to develop systems appropriate to their national contexts.” Id. at 46. This fragmentation and decentralization, though politically expedient, can pose barriers both to efficient use of funding, and to establishment of the large databases the authors subsequently propose: “[A] key constraint is the need to establish very large reference databases for most methods[,] . . . the cost of which may be prohibitive . . . .” Id. at 47.

97 Cf. SC70 Inf. 34, supra note 96, ¶¶ 4–8, 13, 16.


99 See Benvenisti, supra note 12, at 15, 18–21.

funding needs as well as expand monitoring, repopulation, livelihoods, rule of law, anti-corruption, sustainable management transition efforts, ensuring less compliant members of the international community are given the help they need to become more compliant. While this would be a step in the direction of a more progressive trade policy by the WTO, it is supported by precedent surrounding the SDGs.

III. THE WTO, GSPS, AND GREEN INTERNATIONAL TRADE

The WTO exists to lower barriers to global trade. Historically, it has sought to achieve this principally by enforcing the non-discrimination and tariff-binding provisions of the GATT, and by providing a mechanism for dispute settlement. GATT Article XX allows nations to make a general exception to its provisions where “necessary to protect human, animal or plant life or health;” “necessary to secure compliance with laws or regulations which are not inconsistent with [the GATT], including those relating to customs enforcement;” and above all, “relating to the conservation of exhaustible natural resources if such measures are made effective in conjunction with restrictions on domestic production or consumption.” Since the beginning of the Doha round of negotiations in 2001, the WTO has, as a body, moved from a neutral to an active posture in seeking to mitigate the consequences of free global trade on the environment.
A. The Current WTO Framework Supporting Sustainable Natural Resources Management

The WTO was created with a Trade and Environment Committee (“Committee”) in the 1994 Uruguay round, but the committee’s goals came into focus with the Doha round.\(^\text{107}\) The Doha round contains three principal goals: (1) negotiating the relationship between the WTO and Multilateral Environmental Agreements (“MEAs”); (2) exchanging information between the WTO and MEA secretariats; and (3) reducing both tariff and non-tariff barriers to environmental goods and services.\(^\text{108}\)

At this point, the most visible body of activity of the Committee concerns discussion.\(^\text{109}\) One more recent dialogue initiative is the Trade and Environmental Sustainability Structured Discussions, which began in 2021.\(^\text{110}\) The 2022 plan for these discussions involves “identification of good practices, voluntary actions and partnerships . . . .”\(^\text{111}\) These discussions, as well as others, are therefore essentially an open forum which allows countries to report successful or novel attempts at regulation, but which does not contemplate any joint action through the WTO.\(^\text{112}\)

The most concrete initiative by the Committee in recent years was the Environmental Goods Agreement (“EGA”).\(^\text{113}\) Negotiations began in 2014, but collapsed in 2016, due to last minute demands by China and subsequent abandonment by the United States during the Trump

\(^{107}\) See UNDERSTANDING THE WTO, supra note 103, at 65–71.


\(^{111}\) Ministerial Statement 2021, supra note 109, at 4.


Administration.114 The EGA is forecast to remain a pawn in U.S.-China trade disputes and a “bottom-tier priority for the Biden administration.”115 Even were the EGA to have succeeded, however, its principal focus was on industrial and technological components in clean energy generation and environmental remediation.116 It was Chinese objections to measures regarding much of this technology that ended negotiations when they were about to succeed.117 The overly broad scope of the negotiations also may have interfered with their success by eliciting debate over definitions and by eliciting hostility from virtually every industry or country that had an economic stake against environmental goods in the market sectors they dominated.118

B. GSPs, Tariff Rate Quotas, and the Environmental Agenda

Since 1971, UNCTAD has coordinated developed nations’ adoption of GSPs.119 These schemes vary by nation, but fundamentally they form the basis on which developed nations reduce tariffs on goods from developing or least-developed nations.120 GSP-eligible nations vary in size and wealth; for example, U.S. designations range from Tuvalu and Chad to Brazil and Thailand.121 In 2018, the U.S. GSP program covered 3,572 tariff entries, and the total value of GSP-eligible imports was $23.6 billion.122

Since the 1990s, GSPs have been influenced to some degree by environmental concerns.123 Currently, the European Union’s (“EU”) GSP+  

115 Id. at 22.
117 REINSCH ET AL., supra note 114, at 9–10.
121 Id. at 5–9.
(“Anything but Arms”) requires eligible countries to ratify twenty-seven international conventions, including CITES, and to participate in monitoring on effective, good faith implementation of the conventions. However, there is little evidence that the GSP+’s environmental requirements have led to more sustainable practices in eligible nations. Problems include under-participation, outdated requirements and “lack of financial resources and capacity . . . . [D]ata lags on environmental indicators impede monitoring and enforcement efforts . . . .”

Current GSPs therefore neither adequately address source nations’ exports of CITES resources, nor loopholes in importing nations’ enforcement, and their fragmented, discretionary nature allows continued existence of rogue markets. Despite support by environmental law, such as separate civil and criminal penalties under the U.S. Lacey Act, rules of origin can be exploited to transform more highly regulated resources into less regulated finished articles. Supply chain loopholes are a general problem in international trade; for example, in 2021, the U.S. Trade Representative characterized entry of unfairly competitive Chinese metals into U.S. and EU markets as “leakage.” The United States and EU have recently attempted to remedy this leakage by agreeing to a specialized Tariff Rate Quota system on steel and aluminum. Among other measures, this system lowers tariffs between the two parties within

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125 Blot & Kettunen, supra note 98.
126 Id.
127 See, e.g., CITES, CoP19 Prop. XXX, Consideration of Proposals for Amendment of Appendices I & II [Proposal by Brazil], §§ 4–6, 8.3.1, 11 (June 23, 2022) [hereinafter CoP19 Prop. XXX], https://cites.org/sites/default/files/eng/cop/19/prop/as_received/E-Paubrasilia__echinata.pdf [https://perma.cc/9ZQQ-6J63]; see generally discussion, supra Sections I.A.1 and I.B.2.
129 See CITES, supra note 17, at 69; see also Generalised Scheme of Preferences Wood, EUR. TRADE COMM’N, https://trade.ec.europa.eu/doclib/docs/2013/may/tradoc_151178.pdf [https://perma.cc/HK9W-HCAZ] (last visited Nov. 13, 2022); see also CoP19 Prop. XXX, supra note 127, §§ 6.5, 7.2, 8.3.1–8.3.2, 11.
a given quota, keeping in place tariffs on Chinese metals, and explicitly identifying stages in the manufacturing of the fifty-four categories of steel products the system encompasses. While the agreement was likely motivated in part by political, economic, and industrial interests, it was the immediate product of the Glasgow Climate Pact. China’s steel sector is estimated to generate between 10–20% of the country’s total emissions, and its industry relies on dirtier power, such as use of coal for fuel as well as a metallurgical component. Global steel production is estimated to generate 10% of total global carbon emissions.

The White House claims this agreement is novel because it is “carbon-based.” This may simply be a reference to the context in which the deal was struck, as official sources note only resolutions to take into account carbon intensity during future negotiations. However, given that policy-oriented trade agreements such as GSPs have historically determined tariffs by taking into account countries’ economic factors, and, despite GSP+ ambitions, have been generally decoupled from compliance under other treaties, there is still some merit to White House claims of novelty. The metals agreement reached at Glasgow is perhaps a first glimpse of a new generation of environmental initiatives in international trade, which, as the EGA had imagined, direct tariffs according to their environmental, rather than economic, utility.

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133 See id.
137 See id.; White House TRQ Fact Sheet, supra note 135.
138 Compare White House TRQ Fact Sheet, supra note 135, with UNCTAD, supra note 124, at 6–8, 13–15.
139 Cf. REINSCH ET AL., supra note 114, at 21–22.
C. Negotiating an EGA to Close CITES Loopholes

Conventional commodities under the abandoned EGA, or GSP+ and Tariff Rate Quota systems share problems with trade in CITES-listed resources: lack of sufficient national enforcement and international monitoring, rule of origin loopholes, and rogue markets. These trade programs form precedent on which to build an EGA supporting CITES policy goals. There are several reasons why, as a basic concept, such an agreement could be accepted.

First, CITES has been ratified in some form by 184 parties, including China. Most of the world has already made at least a nominal acknowledgment of the need to tightly control these endangered resources, contrasting with more rebellious attitudes surrounding climate commitments. Second, CITES covers a very limited set of resources, meaning economic and political disputes would at least be less harmful than in EGA and GSP negotiations. Due to the success of the Convention so far, trade in endangered species has been diminished, if not totally controlled, a positive indicator supporting continued action. Furthermore, while trade in certain CITES-listed resources can total hundreds of millions of dollars annually, these totals pale in comparison to annual import value of non-CITES-listed resources in the same category. Third, the CITES CoP and Secretariat have already catalogued

140 See supra Part I.
142 Compare id., with, e.g., Mathiesen, supra note 14.
143 See CITES, supra note 17, at 1; see also, e.g., EUR. COMM’N, TRADE/HUMAN RIGHTS: WITHDRAWAL OF CAMBODIA’S PREFERENTIAL ACCESS TO THE EU MARKET—FACTSHEET 3–4 (2020).
145 Compare WORLD WILDLIFE CRIME REPORT 2020, supra note 61, at 37, with China Wood
the resources in question, identified specific threats, and amassed decades’ worth of expert scientific and economic input on factors affecting trade in listed species.146

The CITES Secretariat already gathers information, collaborates with parties, and offers guidance on trade.147 But the plain language of the treaty makes it difficult to address leakage through mixing or fraud, other than through an extravagantly comprehensive enforcement, or achieve lasting change in root production and end-consumption patterns.148 An EGA, only one of many necessary solutions, could be implemented on a shorter time scale and tighter budget. Within the examples given, it could cover the types of hongmu that are not true Dalbergia species and that can be used as legal pretenses to smuggle genuine rosewood; it could cover products with annotated exceptions for certain uses, such as Pernambuco; it could cover works of art made from ivory or tortoiseshell that claim preconvention provenance, but are in fact made with illegal new material; and finally, it could cover yet-unlisted species and resources that are vulnerable to unsustainable practices or that are undergoing reviews of significant trade.149 In cases where a country categorically refuses to follow the international community, such as Japan on the topic of whaling, an EGA might not be feasible, or it would have to touch more remotely related goods. This could include unlisted fish species caught by the whaling fleet or unlisted species which conventional fisheries kill by bycatch of listed species.150 The most politically

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controversial topics may best be avoided in favor of laying a solid foundation—a test case for future, broader EGAs.\(^{151}\)

The goals of a CITES-related EGA should be fourfold: (1) to create strong economic incentives for sustainable practices that further the CITES mission; (2) to eliminate havens and rogue markets through universal participation by markets at all stages of the manufacturing process; (3) to strengthen information-gathering and reporting initiatives so that illegally harvested materials can be more easily reported; and (4) to aid source countries of CITES-listed species to improve their national enforcement and monitoring. With 164 members, including all major economies, the WTO is the necessary global setting for accomplishing these goals.\(^{152}\)

IV. **COLLABORATION WITH CITES AND OTHER MULTILATERAL ENVIRONMENTAL AGREEMENT SECRETARIATS**

A. **Impartiality Through Subject Matter Expertise**

Though such an EGA would benefit widely ratified treaties such as CITES and result in favorable treatment of developing countries’ sustainably managed exports, it would find acceptance in the developing world only by demonstrating its economic utility—it would need to avoid criticism as “colonialist” intervention in developing nations’ sovereign rights to their natural resources.\(^{153}\) Normally, new trade agreements are

\(^{151}\) Cf. *CITES Has Its Critics*, supra note 144 (“CITES is a consensus-orientated body but it can take decisions by two-thirds majority when required, so that some debates have inevitably become politicised.”).


negotiated by specialists in international trade, considering primarily political and macroeconomic interests.\textsuperscript{154} For its part, the WTO eschews any regulatory role with regard to the environment.\textsuperscript{155} In a joint 2015 publication, the WTO and CITES Secretariat appear at first glance to hold each other at arm’s length, characterizing their cooperation as “a practical framework that enables trade in wildlife specimens to contribute to sustainable development and use.”\textsuperscript{156} However, the publication also acknowledges the “intensification” of “worldwide efforts to achieve sustainable development,” and contemplates “more active forms of cooperation, including targeted institutional and policy dialogues, and joint technical assistance and capacity building activities.”\textsuperscript{157} So far, this has taken the form of CITES participation in the Committee’s work and advice to national governments—but the weight of this cooperation is belied by CITES’ observer status in Committee proceedings.\textsuperscript{158}

Since 2015, circumstances have changed: The ambitious EGA negotiations collapsed;\textsuperscript{159} sustainable development has generally become a higher priority despite stagnation of the global economy and wealth consolidation;\textsuperscript{160} the Paris Agreement was negotiated and the United States joined, left, and rejoined;\textsuperscript{161} rosewood was banned entirely by CITES and hundreds of new species have been listed or changed status;\textsuperscript{162} and Japan


\textsuperscript{155} See UNDERSTANDING THE WTO, supra note 103, at 65 (“The WTO is not an environmental agency . . . ”).


\textsuperscript{157} Id. at 9–11.


\textsuperscript{159} See discussion, supra Section III.A.


left the International Whaling Commission, among many other developments. There may now be more appetite for CITES and the WTO to take their active cooperation to the next level, achieving a degree of more formal integration.

Because the preferential tariffs in a CITES-related EGA would be decided on the basis of conservation needs rather than economic benefit, the CITES experts in environmental science and environmental crime would take the lead in proposing a tariff schedule, supported by trade experts. The roles in Committee meetings would reverse, with WTO economic experts backstopping a fundamentally environmental agreement. The CITES Secretariat’s long experience of monitoring and field work would enable it to identify with particularity the measures that could achieve desired microeconomic effects. Finding itself “at the intersection between trade, the environment and development,” the CITES Secretariat is also in the best position to mediate between trade associations such as the International Tropical Timber Organization and more technical environmental organizations such as the International Union for Conservation of Nature (“IUCN”). Most importantly, however, these impartial observations and technical discussions on the science of conservation would take tariff negotiations out of the realm of political jockeying for economic gain and elevate them to the realm of existing commitments under CITES.

163 See discussion, supra Section I.A.3.
166 Cf. id.
168 Cf. supra note 156, at 4.
B. A GSP+-Like Set of Conditions and Benefits for Signatories of a CITES-Related EGA

1. Integration with the WTO to Achieve More Comprehensive Monitoring

CITES and the WTO both have reporting requirements. However, given that the principal problems in CITES supply chains are transparency, fraud, and smuggling, more stringent reporting requirements would be a central commitment of a new agreement. Trade data complements ecological data gathered by other MEA secretariats, such as those of the Convention on Migratory Species and the Convention on Biodiversity.

CITES requires annual reports of legal trade, but the contents are subject only to guidelines and are “not subject to compliance procedures.” The findings of the UNODC World Wildlife Crime Report 2020 support a more demanding reporting policy with regard to current guidelines, as well as the need for new areas of reporting. In the cases of both illegally harvested timber and illegal fishing, supply “is not sold in acknowledged illegal markets, but rather fed into legal industries where its illegal origin is obscured.” Illegal markets must be reconstructed forensically using a combination of data from legal trade and seizures. The UNODC identifies a host of data that are not often available, from business structures...

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174 See WORLD WILDLIFE CRIME REPORT 2020, supra note 61, at 13, 19–27 (“[B]oth the legal trade data and the seizure data need to be considered in assessing the illicit flow.”).

175 Id. at 13; PEW CHARITABLE TRS., supra note 90.

and illicit financial flows to “controlled deliveries” and centralized databases for law enforcement.\footnote{177}{Id. at 21–23.} Two areas in particular stand out as candidates that could benefit from a collaboration with the WTO: chain of custody data and trade in non-CITES-listed species.\footnote{178}{Id. at 22, 24.}

Country notifications to the WTO revolve around policy, rather than the factual circumstances or history of the country’s trade.\footnote{179}{See Reinsch et al., supra note 170.} This is similar in concept to the mandatory Implementation Reports under CITES, which regard “legislative, regulatory and administrative measures taken to enforce the Convention.”\footnote{180}{Implementation report, CITES, https://cites.org/eng/resources/reports/Implementation_report [https://perma.cc/6VEC-429D] (last visited Nov. 13, 2022).} The WTO also collaborates with UNCTAD, the World Bank, and other organizations to compile statistics on import and export data.\footnote{181}{World Integrated Trade Solutions, WORLD BANK, https://wits.worldbank.org/ [https://perma.cc/HX4Q-6H4U] (last visited Nov. 13, 2022); see also About Us, WORLD BANK, https://data.worldbank.org/about [https://perma.cc/K75Z-VYSF] (last visited Nov. 13, 2022).}

To facilitate data gathering goals, a CITES-related EGA would factor adequacy of reporting into its tariff calculations. One set of preferences, applied on an import-by-import basis, would be based on the degree to which there is complete data on origin and chain of custody of the given import. Examples include certification of legal catch aboard a factory ship or authentication of instruments or art made with preconvention rosewood, Pernambuco, tortoiseshell, ivory, and other species.\footnote{182}{See FAQ: Illegal, Unreported, and Unregulated Fishing, supra note 90; Certification, CABINET JEAN-FRANCOIS RAFFIN ARCHITECTES—EXPERTS, http://www.jfraffin.fr/en/services/ [https://perma.cc/AF5L-6VD6] (last visited Nov. 13, 2022) (select “Values & Services”; then select “Certification”); cf. Joseph Furlett, The Insufficiency of the Musical Instrument Passport Program Under CITES and the Lacey Act: The Need for a Centralized Wood Title and Certification System for Manufactured Wood Products and Wooden Musical Instruments, 48 J. MARSHALL L. REV. 495, 501–06 (2015).} While digital systems for supply chain tracking of timber have already been implemented in Brazil, hacking, fraudulent data entry, inaccurate algorithms, and lack of open data sources have all been cited as threats to the systems’ integrity.\footnote{183}{MUNDY & SANT, supra note 93, at 53–54.} Emerging technologies such as blockchain would solve some of these problems by providing a secure, efficient, easily accessible, and transferrable certification system; improvements in digital infrastructure and increased reporting requirements to gather larger datasets would also help.\footnote{184}{See WORLD ECON. F., UNLOCKING TECHNOLOGY FOR THE GLOBAL GOALS 16–17, 19, 21–22 (2020).}
Another factor in calculating tariffs, applied by country of origin, would be the adequacy of that country’s submission of aggregate macro and microeconomic datasets pertinent to the enforcement and scientific goals of CITES, its affiliates, and certain stakeholders. UNEP and SDG initiatives have begun to embrace the power of big data and data analytics in conducting environmental research, not only using cutting-edge technologies, but actively researching and developing digital technology for SDG-specific use. While access to data may be limited by human rights concerns over privacy, new Artificial Intelligence (“AI”) tools can be developed to synthesize quantitative and qualitative data provided by governmental sources in environmental, customs, and economic fields. This data can be used not only to analyze trends and launch new policies, but to predict the movements of environmental criminals, smugglers, and noncompliant manufacturers for enforcement purposes.

Rather than fixing tariff/data relationships in an article of the agreement, tariff percentages and data requirements would be determined dynamically through a regularly updated schedule and in response to evolving trends. While CITES already collaborates with the World

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187 See id. ¶¶ 25, 44, 78.


189 Cf. id. at 88–90, 143–48, 163–65.

Customs Organization to gather “information of common interest,” as well as with INTERPOL, the UNODC, and the World Bank, an EGA adding the WTO to this list would balance current legal collaboration with greater economic incentives, particularly encouraging reporting by private parties.

CITES works with other MEAs to gather and share scientific data through independent and coordinated activities and through submissions by State Parties. Research by the Convention on Migratory Species focuses on fauna and provides a more complete picture of species at the beginning of supply chains, often before the taking or the analysis of the manner of taking. The Convention on Biodiversity focuses on conservation, sustainable use, and restoration of species, as opposed to illegal trade, and emphasizes a holistic approach focusing on biome health and social patterns. The IUCN is not derived from any particular treaty but works closely with the UN Educational, Scientific and Cultural Organization (“UNESCO”) and UNEP. The IUCN provides a comprehensive source of scientific research on endangered species around the world, but...
it is in need of additional resources to expand its coverage of species and ensure its coverage of obscure or hard-to-identify flora species is up to date.\textsuperscript{196} Although CITES also partners with the International Trade Centre, UNCTAD, and others to gather trade data, by its nature, the illicit trade in CITES-listed species does not want to be discovered. The global nature of supply chains also contrasts with the static nature of a species’ range, posing greater informational, legal, and administrative problems. The proposed EGA would therefore not only incentivize sustainable practices but also the generation and sharing of hard-to-find, critical data.

2. Sustainable Development and Encouraging Participation by Developing Nations

Another set of preferences in a CITES-related EGA should be based on the sustainable practices used at all stages of the manufacturing and importation process but particularly for sustainable management of the origin resources. Tariffs would be levied on goods and resources related to the endangered species trade that also lack proof of sustainable management.\textsuperscript{197} Preferences for sustainably managed and supply chain compliant goods would have to be substantial enough to create a genuine competitive advantage that would effectively subsidize the transition to sustainable production.\textsuperscript{198}

The UNODC report suggests that there is indeed the political will among developed countries to engage in more vigorous monitoring and enforcement against international environmental crimes.\textsuperscript{199} Because Article XX of the GATT already allows CITES to completely ban endangered species, it could also be used to justify unilateral tariffs on species and products involved in CITES violations.\textsuperscript{200} However, a CITES-related EGA should not betray the mission of both organizations by becoming a developed nations’ club.\textsuperscript{201} As part of the Sustainable Development Agenda,


\textsuperscript{197} Cf. G.A. Res. 70/1, supra note 87, at 15–16, 23–25.

\textsuperscript{198} Cf. id.

\textsuperscript{199} See WORLD WILDLIFE CRIME REPORT 2020, supra note 61, at 9, 20.

\textsuperscript{200} Cf. CITES AND THE WTO, supra note 156, at 7–8.

\textsuperscript{201} See id. at 3–4.
CITES and the WTO would offer guidance and technical assistance to developing nations on how to benefit from the EGA.\footnote{CITES Notification to the Parties No. 2020/029, \textit{New Case Studies on CITES and Livelihoods}, ¶¶ 1–2 (Mar. 31, 2020); cf. \textit{World Wildlife Crime Report 2020}, supra note 61, at 25.}


Contributions to CITES activities and management of the EGA could be calculated as all, or as a percentage of, the tariffs raised, as gross contributions calculated by gross domestic product, as contributions based on level of consumption or import of listed resources and products, or as a combination of factors.\footnote{New Case Studies on \textit{CITES and Livelihoods}, supra note 204, ¶ 4.} Importer countries and developed countries would contribute additional funds to administration of the EGA as a new sustainable development initiative, advancing political narratives about commitment to sustainability.\footnote{New Case Studies on \textit{CITES and Livelihoods}, supra note 204, ¶ 4.} This is consistent with existing CITES policy; the 18th Conference of Parties issued several documents recognizing the need to secure greater funding from member states; for example in the case of the International Consortium on Combatting Wildlife Crime (“ICCWC”):

\footnote{G.A. Res. 70/1, supra note 87, at 3, 7, 10.}


\footnote{See, e.g., \textit{World Wildlife Crime Report 2020}, supra note 61, at 67–69, 76–77 (pangolins), 95, 98 (glass eels), 102 (sea cucumbers), 129 (ivory).}

\footnote{Id.}


\footnote{New Case Studies on \textit{CITES and Livelihoods}, supra note 204, ¶ 4.}
Regarding enforcement activities [. . .] the Secretariat

6. URGES the Parties, intergovernmental and non-governmental organizations to provide additional financial support for the enforcement of the Convention, by providing funds for the enforcement assistance work of the Secretariat. [. . .]

Regarding additional actions to promote enforcement. . . .

17. URGES the Parties and the donor community to provide financial support to ICCWC. . . .

18. URGES the Parties, intergovernmental and non-governmental organizations to provide, as a matter of urgency, funds and expertise to enable enforcement-related training. . . . focusing on developing countries and countries with economies in transition and range States. . . .

A structured system of tariffs, though requiring intricate design, would allow for more transparent and consistent financial contributions than voluntary donations.

The EGA’s sustainable development objectives would encourage replenishment not only of CITES species, but of unlisted, threatened species that are in danger of being listed or under review of significant trade. The viability of agroforestry and viability of tropical hardwood plantations are areas of continued research that could prove to be lucrative for the inhabitants of unique biomes such as in India, Brazil, and Cameroon. Compliance monitoring and sustainable management aid

\[^{210}\] CITES Res. Conf. 11.3, supra note 100, ¶¶ 6, 17–18.
\[^{211}\] See G.A. Res. 70/1, supra note 87, at 24–25.
initiatives to resource-exporting nations would be greatly expanded.\footnote{213} This would bring MEA capacity building and WTO aid for trade initiatives closer together, reducing compliance costs and diffusing political critiques of colonialism.\footnote{214}

3. More Remote Privileges Conditioned on Ratification of a CITES-Related EGA

Many CITES-listed species are found in developing and least-developed countries.\footnote{215} Enthusiastic participation in conservation initiatives by the countries in which these resources are found is essential to implementation.\footnote{216} Developing countries that are already mistrustful of sustainable development and environmental goals may demand additional incentives to fully participate in these initiatives.\footnote{217} The WTO already allows compulsory licensing of intellectual property to least-developed countries under the Trade-Related Aspects of Intellectual Property Rights (“TRIPS”),\footnote{218} and the GATT allows preferential treatment of trade in services with least-developed countries.\footnote{219} Developed parties to CITES could encourage participation in an EGA by extending some of these trade privileges, unrelated to CITES, to developing countries in which CITES-listed species are found or by expanding or prolonging these privileges in least-developed countries.\footnote{220}

\begin{footnotes}
\item[213] See G.A. Res. 70/1, \textit{supra} note 87, at 21–23, 26–27.
\item[218] Compulsory Licensing of Pharmaceuticals and TRIPS, WTO, https://www.wto.org/engli
ish/tratop_e/trips_e/public_health_faq_e.htm [https://perma.cc/VX7C-3WKT] (last visited Nov. 13, 2022).
\item[220] Cf. Boon, \textit{supra} note 30, at 23–24.
\end{footnotes}
CONCLUSION: A NEW ROLE FOR THE WORLD TRADE ORGANIZATION

The WTO claims not to be an environmental agency, but states that its overall objective . . . is to help its members use trade as a means to raise living standards, create jobs and improve people’s lives . . . [and] to improve the welfare of people around the world. . . . At its heart are the WTO agreements, negotiated and signed by the bulk of the world’s trading nations.221

The WTO, therefore, is whatever its member nations—164 in total—want it to be.222 These nations, members of the United Nations, have adopted, through the General Assembly, the Sustainable Development Agenda.223 This Agenda shares certain goals with the WTO, but represents something of a revision of the methods and theory of world trade.224 That is to say, the “greening” of the WTO should no longer be considered a continuation of established trade policy by incorporating environmental principles, but rather the innovation of more comprehensive international environmental policy through economic means.225 The WTO need not fear becoming Daniel Esty’s proposed “Global Environment Organization.”226 But like the Bene Gesserit of Dune, environmentalists can circumvent present difficulties by adopting a roundabout strategy, laying the seeds for future international administrative law through economic policy rather than direct regulation. 227

The dynamic of international trade in endangered species is characterized by an interesting contrast: The high value of resources extracted from endangered species leads to international interest and a global market, but the ecology of those species is often highly localized, concentrated in only a handful of countries.228

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222 Id.
223 G.A. Res. 70/1, supra note 87, ¶¶ 1–6, 91.
224 Id. at Preamble, ¶¶ 7–9, 60–68.
226 Esty, supra note 10, at 848–50.
227 Cf. HERBERT, supra note 2, at 641–43.
228 See National Laws for Implementation of the Convention, supra note 216, ¶¶ 42–44.
well as its widespread adoption makes a CITES-related EGA a good test case for the broader sort of EGA that was originally envisioned. Entrenched cultural and political attitudes by both exporter and importer nations would still complicate negotiations. However, the successful conclusion of one EGA may lead to the creation of more: conventional agriculture, metals, energy and technology, and even travel and culture are all sectors that must cross the green Rubicon and would benefit from an EGA. Sector specific EGAs allow for continued incorporation of the expertise of MEA secretariats in world trade policy. These secretariats’ knowledge of hard science and experience in field work lends greater certainty to economic policy.

Frank Herbert, in his first Appendix to *Dune*, wrote that “[b]eyond a critical point within a finite space, freedom diminishes as numbers increase. This is as true of humans in the finite space of a planetary ecosystem as it is of gas molecules in a sealed flask.” A similar logic can be applied to world trade: As national economies integrate, a greater degree of regulation is required. In international environmental law, increased regulation is probably the most direct means to achieve protection, justice, and progress. Barring this, however, environmentalists must “continue[e] . . . policy by other means,” and embrace economic solutions in the face of political headwinds.

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229 *HERBERT, supra* note 2, at 621.
231 See *Esty, supra* note 10, at 853.