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WTO RULES, EXPORT QUOTAS AND SUSTAINABLE DEVELOPMENT: THE CASE OF CHINA RARE EARTHS

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GLOSSARY OF TERMS

EPR	Energy-intensive, highly-polluting, resource-based products
EU	European Union
GATS	General Agreement on Trade in Services
GATT	General Agreement on Tariffs and Trade
ICTSD	The International Centre for Trade and Sustainable Development
MEP	The Ministry of Environmental Protection
MIIT	The Ministry of Industry and Information
MLR	The Ministry of Land and Resources
MOFCOM	The Ministry of Commerce
MOH	The MEP and the Ministry of Health
SDPC	The State Development and Reform Commission
PRC	The People's Republic of China
REE	Rare earth element
REO	Rare earth oxide
RIE	Rapidly industrializing economy
RMB	Renminbi - Official currency of the People's Republic of China
US	The United States of America
WTO	World Trade Organization

EXECUTIVE SUMMARY

This Memorandum was prepared on a *pro bono* basis by students of the Trade & Investment Law Clinic at the Graduate Institute for International and Development Studies in Geneva, Switzerland. It responds to a request by the International Centre for Trade and Sustainable Development (ICTSD) to investigate China's rare earths export quota regime, as it stands in 2012, and to examine whether the regime could be justified in line with certain obligations of the World Trade Organization. ICTSD is a non-governmental organization created "to influence the international trade system such that it advances the goal of sustainable development." As such, this Memorandum also aims to identify what "policy space" could be available to WTO Members wishing to apply export restrictions for sustainable development purposes.

China authorizes the Ministry of Commerce and Customs to establish export quotas under the Foreign Trade Law and Regulation on Import and Export Administration. Export quotas on rare earths are allocated in batches, twice per year, amounting to around 30,000 tons annually since 2010.

Export quotas are prohibited under GATT Article XI, the "General Elimination of Quantitative Restrictions." However, China's measures will not violate the provision if they meet the requirements of Article XI:2 (a), which carves out quantitative restrictions temporarily applied to essential products in order to resolve critical shortages. China may not meet these requirements because its supplies of rare earths may not be in critical shortage, nor do China's measures appear to be temporarily applied.

If China faces a GATT Article XI violation, it may seek to justify its measures under GATT Articles XX (b) and XX (g), which provide exceptions for sustainable development-related purposes. Under Article XX (b), China must show that its export quotas materially contribute to health and environmental protection and that they are the best option given other available, less trade-restrictive alternatives. Under Article XX (g), the export quotas must relate to the conservation of an exhaustible resource. Moreover, they must be made effective with corollary restrictions on domestic

production or consumption to balance the burden that export quotas impose on trade partners.

China has instituted a number of new measures in recent years designed to increase environmental protection and resource conservation in the rare earths industry. These could help it meet the requirements of Articles XX (b) and (g). These include export licensing measures allocating export quotas to environmentally-certified enterprises, as well as production quotas and efforts to consolidate, police, and monitor the domestic rare earths sector.

China could assert at least five broad arguments to link its export quotas to its sustainable development efforts. These include “signaling,” that is, relying on export quotas to induce trade partners to develop new rare earths supplies; incentivizing rare earths producers to pass environmental inspection to gain access to export quota licenses; narrowing the export sector to enforce limits on illegal production and consolidate the rare earths industry; exchanging access to Chinese rare earths for foreign investment in greener technologies and expertise; and subduing spikes in foreign demand.

Despite China’s substantial progress in strengthening the sustainable development of rare earths, the current regime is unlikely to meet the requirements of Articles XX (b) and (g). The export quotas do not appear designed primarily to achieve sustainable development of the rare earths industry. Moreover, China’s domestic restrictions on environmental pollution and resource conservation in rare earths do not yet appear to effectively reduce domestic production or consumption, and remain viable alternatives to export quotas. Under the further requirements of the Article XX “chapeau,” China’s measures may be deemed discriminatory or disguised restrictions on trade, and thus face a second formidable hurdle.

In general, the GATT should offer some policy space to Members seeking to apply export quotas, but the space is very narrow. WTO adjudicators should be careful to interpret GATT disciplines to prevent this space from becoming so narrow that Members may not have any real recourse to impose export quotas, even under reasonable circumstances.

I. INTRODUCTION

Rare earth elements (“rare earths” or “REE”) are critical ingredients to many of the most technologically-advanced industrial goods.² They consist of 17 elements that may be roughly divided into three categories: light, medium, and heavy.³ Although rare earths are widespread in the earth’s crust, they scarcely arise in concentrations large enough to mine economically.⁴

China contains within its borders 30 percent of global rare earths reserves, but produces 95 percent of global output.⁵ This disproportionate level of production and export puts severe pressure on its remaining stock, which it estimates could be exhausted in 15-30 years.⁶ Moreover, extraction and processing of rare earths are highly polluting. As a result, China’s environmental burden is unbalanced vis-à-vis the rest of the world.⁷ One of China’s principle goals in imposing rare earths export quotas is to reduce

² Technologies dependent on rare earths range from common commercial goods such as cell phones, iPods, computers, and televisions to emerging green or strategic technologies such as wind turbines, electric vehicles, and lasers. Commercial amounts of rare earths are usually expressed in terms of rare earths oxides (“REO”).

³ The 17 elements include the 15 lanthanides (atomic numbers 57-71) plus yttrium (39) and scandium (21). Light REEs: lanthanum, cerium, praseodymium, and neodymium. Medium REEs: promethium, samarium, europium, and gadolinium. Heavy REEs: terbium, dysprosium, holmium, erbium, thulium, ytterbium, lutetium, and yttrium. Scandium is not classified. Heavier REEs are generally scarcer, more expensive, and more difficult to extract than lighter varieties. See Jane Korinek & Jeonghoi Kim, *Export Restrictions on Strategic Raw Materials and Their Impact on Trade and Global Supply* (OECD Workshop on Raw Materials 2009, OECD Workshop), at 19.

⁴ Typically, commercial sources of rare earths include concentrations of bastnäsite, as in northern China and California. Southern China contains deposits of lateritic ore with higher concentrations of heavy REEs. Although found in monazite composites, these are no longer a significant commercial source of rare earths due to the common presence of radioactive daughter elements. See US Geological Survey, *Rare Earth Elements – Critical Resources for High Technology* (USGS, 2002).

⁵ Korinek & Kim, *supra* note 3, at 19. China established a quasi-monopoly over the global rare earths industry in the late 1990s and early 2000s. Until the 1980s, the US had been largely self-sufficient in rare earths production, but environmental concerns and low-cost competition from China (due in part to lax environmental and resource conservation legislation) caused it to close its last major rare earths mine at Mountain Pass, California, in 2002.

⁶ *Id.*, at 20. See also *China Rare Earths to Last 15-20 Years*, BLOOMBERG (Oct. 16, 2010) <http://www.bloomberg.com/news/2010-10-16/china-says-its-medium-heavy-rare-earth-reserves-may-last-only-15-20-years.html> (last visited: Mar. 17, 2012).

⁷ We see no reason why, as some may contend, China’s lax environmental regulation in the recent past should, in and of itself, prejudice any sincere efforts it makes to clean up the industry today.

these burdens and to induce other countries to develop new supplies or substitutes.

Currently, advanced economies are highly dependent on Chinese rare earths supplies despite the small size of the market.⁸ Global demand for rare earths has been growing steadily at around 8-11 percent since the late 1990s.⁹ In 2010, China tightened its export quotas on rare earths by over 30 percent. It was also widely reported that, as a result of a diplomatic dispute, China temporarily banned rare earths exports to Japan.¹⁰ These events alarmed China's trade partners, fuelled a rapid increase in global rare earths prices from 2010 to mid-2011, and prompted advanced economies to make serious efforts to find rare earths substitutes or bring new supplies online.¹¹ The US, EU, and Japan challenged China's application of export quotas by filing for WTO consultations in March 2012.¹²

This Memorandum reviews China's rare earths export quota regime in light of WTO rules and certain sustainable development-related exceptions. In Section II, we detail WTO disciplines relating to export restrictions and offer a brief description of the restrictions' potential economic impact. Section III lays

⁸ See Scott Kennedy, *Rocky road for China Inc(oherent)* (GK Dragonomics, 2012) (on file with authors) (observing that China's total exports were valued at under US \$1 billion in 2010, a small fraction of the US \$79 billion China paid for iron ore imports in the same year).

⁹ Korinek & Kim, *supra* note 3, at 19. Rare earths demand has typically followed the general trend of rising demand seen in most commodities since the early 2000s. Prices fell in 2001 in response to economic fallout from the US dot-com bust and again in 2008 and 2011 due to the global financial crisis. See Kennedy, *supra* note 8, at 2; Maurice Obstfeld & Kenneth Rogoff, *Global Imbalances and the Financial Crisis: Products of Common Causes* (Federal Reserve Bank of San Francisco Asia Economic Policy Conference, Oct. 18-19, 2009), at 137. <http://elsa.berkeley.edu/~obstfeld/globalimbalances2010.pdf> (last visited June 8, 2012).

¹⁰ *Amid Tension, China Blocks Vital Exports to Japan*, New York Times (Sept. 9, 2010) <http://www.nytimes.com/2010/09/23/business/global/23rare.html?pagewanted=all> (last visited Mar. 25, 2012).

¹¹ *Toyota Finds Way to Avoid Using Rare Earth-media*, Reuters (Jan. 23, 2012) <http://www.reuters.com/article/2012/01/23/toyota-rare-earth-idUSL4E8CN4GC20120123> (last visited June 8, 2012); *Japan to Slash Use of a Heavy Rare Earth as China Tightens Grip*, Reuters (Feb 8, 2012), <http://www.reuters.com/article/2012/02/08/us-rare-earth-japan-idUSTRE8170KN20120208> (last visited June 8, 2012).

¹² Request for Consultations by the United States, *China – Measures Related to the Exportation of Rare Earths, Tungsten, and Molybdenum*, WT/DS431/1, (Mar. 15, 2012); Request for Consultations by the European Union, *China – Measures Related to the Exportation of Rare Earths, Tungsten and Molybdenum*, WT/DS432/1, (Mar. 15, 2012); Request for Consultations by Japan, *China – Measures Related to the Exportation of Rare Earths, Tungsten, and Molybdenum*, WT/DS433/1, (Mar. 15, 2012) [hereinafter Requests for Consultations, *China – Rare Earths*].

out all relevant and available Chinese laws and regulations relating to rare earths export quotas,¹³ framing China's rare earths legal regime as it stands in 2012.¹⁴ In Section IV, we show that China's export quotas violate GATT Article XI without an Article XI:2 (a) defense.¹⁵ Sections V and VI analyze the consistency of China's rare earths export quota regime with GATT Articles XX (b) and XX (g), two key sustainable development-related exceptions. Section VII extends these analyses to the "chapeau" of GATT Article XX. Finally, we conclude in Section VIII. We find that China's current export quota regime violates GATT Article XI and is unlikely to meet the legal requirements of certain sustainable development-related exceptions.

II. LAW AND ECONOMICS OF EXPORT RESTRICTIONS

Border measures such as export restrictions have a variety of economic impacts, including restricting or distorting international trade and favoring domestic interests at the expense of foreign trade partners. As a result, the GATT negotiating parties drafted disciplines that regulate under what circumstances Members may apply export restrictions. This section briefly reviews GATT rules on export restrictions, including exceptions, and introduces a basic framework for understanding the economic impact of these measures.

¹³ China agreed not to impose export taxes on rare earths under the China Protocol. While China *does* in fact impose export taxes on rare earths, in violation of the Protocol, the present analysis is limited to China's quota-related measures. How China's export taxes interact with its quotas could be an important aspect of the regime, but it is beyond the scope of this Memorandum.

¹⁴ See *infra* Appendix I. Due to informational constraints, not all Chinese measures relevant to this analysis may be publically available. We have made every effort to provide a comprehensive analysis, but make no claim that it is exhaustive. Moreover, given that official English translations of the Chinese measures reviewed in this analysis are limited, much of the content of the instruments (including titles) may rely on authors' translations. Thus, the authors disclaim any legal liability for imperfect, incomplete, or otherwise unintended erroneous interpretation connected with the measures entailed herein or their English translations.

¹⁵ General Agreement on Tariffs and Trade 1994, Apr. 15, 1994, Marrakesh Agreement Establishing the World Trade Organization, Annex 1A, The Legal Texts: The Results of the Uruguay Round of Multilateral Trade Negotiations, 33 I.L.M. 1153 (1994) [hereinafter GATT].

A. WTO RULES ON EXPORT RESTRICTIONS

WTO law distinguishes between two types of export restrictions: duties and non-duties. Export duties, tariffs, or taxes are generally permitted under the General Agreement on Tariffs and Trade (“GATT”), but may be restricted in special cases such as under China’s WTO Accession Protocol (hereinafter “China Protocol”).¹⁶ Non-tariff or “quantitative” restrictions, such as export quotas, are generally forbidden under GATT Article XI.¹⁷

The GATT provides certain exceptions to Article XI for sustainable development purposes. These include exceptions to prevent critical shortages of essential raw materials, to “protect human, animal or plant life or health” (widely interpreted to include environmental protection), and to conserve exhaustible natural resources.¹⁸

There are few precedents to-date that have tested these rules. The Panel and AB reports address export restrictions in *China – Raw Materials* and *China – Audiovisuals*,¹⁹ as well as in *Argentina – Hides and Leather* and *US – Export Restraints*.²⁰ There are also two relevant (pre-WTO) GATT cases, *Japan*

¹⁶ See the Protocol on the Accession of The People's Republic of China, art. 11.3.

¹⁷ Additional forms of quantitative export restrictions include minimum export prices, non-automatic export licensing, non-transparent export licensing procedures, and so on. While duties are considered transparent and consistent with the price mechanism, quantitative restrictions are considered non-transparent and more trade-distortive. See generally, ANDREW GUZMAN & JOOST PAUWELYN, INTERNATIONAL TRADE LAW (2009) at 199-223; PETROS C. MAVROIDIS, THE GENERAL AGREEMENT ON TARIFFS AND TRADE: A COMMENTARY 27- 52 (2005).

¹⁸ See GATT Articles XI:2 (a), XX (b), and XX (g), respectively. Other GATT exceptions are available to secure compliance with a GATT-consistent measure (XX (d)), to prevent domestic price hikes (XX (i)), and to ensure domestic quantities of products in short supply (XX (j)). Exceptions are also available for maintaining public morals and order (XX (a)). The relevant restraints on foreign enterprises' market access to the rare earths market may involve the issues under General Agreement on Trade in Services (“GATS”) Art. XIV and China Protocol. Although these or other exceptions could apply in the present case, we focus only on GATT Articles XI:2 (a), XX (b), and XX (g).

¹⁹ Appellate Body Report, *China – Measures Related to the Exportation of Various Raw Materials*, WT/DS394/AB/R, WT/DS395/AB/R, WT/DS398/AB/R (Jan. 13, 2012) [hereinafter Appellate Body Report, *China – Raw Materials*]; Appellate Body Report, *China – Measures Affecting Trading Rights and Distribution Services for Certain Publications and Audiovisual Entertainment Products*, WT/DS363/AB/R, (Jan. 19, 2010) [hereinafter Appellate Body Report, *China – Audiovisuals*].

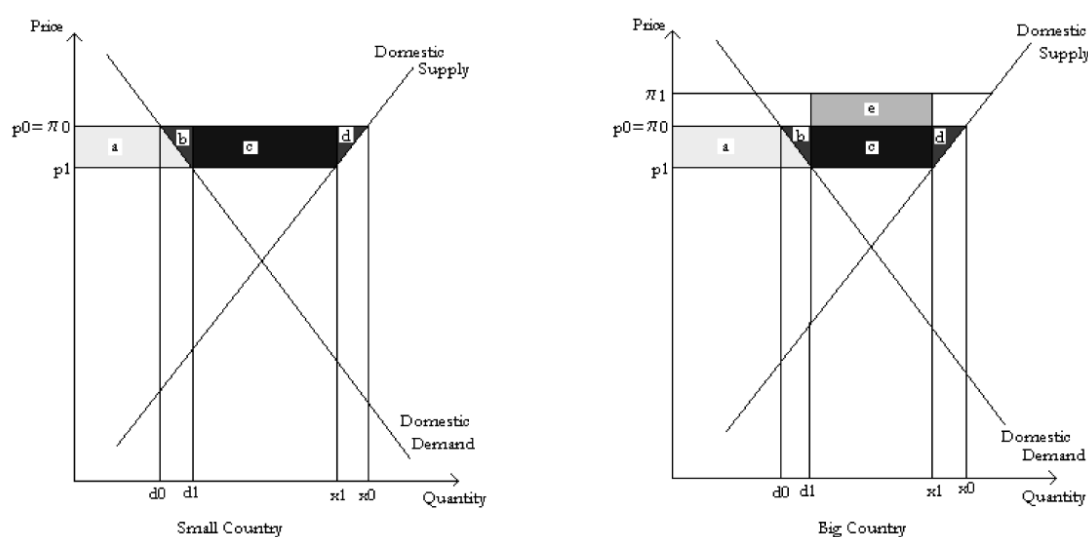
²⁰ Panel Report, *Argentina – Measures Affecting the Export of Bovine Hides and the Import of Finished Leather Argentina* WT/DS155/R (Dec. 19, 2000) [hereinafter Panel Report, *Argentina – Hides and Leathers*]; Panel Report, *US – Measures Treating Export Restrictions as Subsidies*, WT/DS194/R (June 29, 2001) [hereinafter Panel Report, *US – Export Restraints*].

– *Semiconductors* and *Canada – Salmon*.²¹ Each of these is reviewed in the context of the legal analysis below. The lack of abundant case law in this area leaves Members some room to test WTO rules on export restrictions.

B. A BRIEF ECONOMIC ASSESSMENT OF EXPORT RESTRICTIONS

Export restrictions have important international trade consequences whether or not they meet WTO obligations. In essence, they drive a wedge between domestic and international prices, lowering the former and potentially raising the latter. As seen in Figure 1 below, domestic prices fall (p_0 to p_1) and, in the right panel, global prices rise (π_0 to π_1) if a “big” country imposes the restrictions.²² This alters the optimal allocation of resources worldwide, a core goal of the WTO, and introduces inefficiencies in global production.²³

Figure I: Partial Equilibrium Analysis of an Export Tax²⁴



²¹ Panel Report, *Japan – Trade in Semi-Conductors*, ¶ 107 L/6309 (May 4, 1988), GATT B.I.S.D. (35th Supp.) (1989) [hereinafter Panel Report, *Japan – Semiconductors*]; Panel Report, *Canada – Measures Affecting Exports of Unprocessed Herring and Salmon*, L/6268 (Nov. 20, 1987), GATT B.I.S.D. (35th Supp.) at 99 (1989) [hereinafter Panel Report, *Canada – Salmon*].

²² “Big” and “small” in this case do not refer to the size of a country, but rather to its dominance in a given sector. “Big” countries have market power and thus can influence global prices, whereas “small” countries cannot.

²³ Areas ‘b’ and ‘d’ in Figure I are “deadweight losses” due to production inefficiencies introduced by the export restrictions.

²⁴ Antoine Bouët and David Laborde Debucquet, *Economics of Export Taxation in a Context of Food Crisis: A Theoretical and CGE Approach Contribution* (Int’l Food Pol’y Research Institute, Discussion Paper 00994, June 2010), available at: <http://www.ifpri.org/sites/default/files/publications/ifpridp00994.pdf> (last visited June 8, 2012). Although the study focuses on export taxes, quotas’ impact on the market is similar. Bouët & Laborde use both partial and general equilibrium analyses, but the latter is beyond the scope of this Memorandum.

Source: Bouët & Laborde (2010).

Moreover, Members could impose export restrictions to benefit domestic interest groups at the expense of foreign trade partners. First, export restrictions benefit domestic consumers by raising domestic supplies ('d0' to 'd1') and lowering domestic prices ('p0' to 'p1').²⁵ Downstream industries, for example, could utilize cheaper and more abundant inputs to produce higher value goods. Second, in "big" countries, domestic producers could also benefit.²⁶ Although they must cut production and face lower prices at home, higher prices abroad could make up the loss.²⁷ Thus, "big" countries may be motivated by an opportunity to improve their terms-of-trade.²⁸

These distortions inevitably subject GATT-inconsistent export restrictions such as export quotas to intense scrutiny. However legitimate the declared goal may be, such restrictions must be carefully justified under WTO rules.

III. CHINA'S EXPORT QUOTA REGIME FOR RARE EARTHS

A. PRIMARY LEGAL INSTRUMENTS & AUTHORITIES

The main legal instrument governing China's imports and exports is the Foreign Trade Law of the People's Republic of China.²⁹ Import and export trade in goods is generally permitted in China, unless relevant laws or administrative regulations provide otherwise.³⁰ The Foreign Trade Law confers to the competent authority the power to regulate the exportation of

²⁵ Foreign consumers are hurt because exports fall ('x0' to 'x1'). Prices remain the same in the case of a "small" exporter (left panel) or rise under a "big" exporter (right panel).

²⁶ Producer gains are represented by area 'e' in the right panel. Producers in "small" countries inevitably lose.

²⁷ The ability of domestic producers to impact global prices is determined by its market power in the sector as well as the product's price elasticity of demand. In general, the more inelastic demand for a product is, the more foreign consumers will be willing to pay.

²⁸ World Trade Organization, *World Trade Report 2010: Trade in Natural Resources* (WTO, 2010), at 114, available at: http://www.wto.org/english/res_e/reser_e/wtr10_brochure_e.pdf (last visited June 8, 2012). Terms-of-trade surpluses refer to the gains that "big" countries receive by raising global prices on exports relative to imports.

²⁹ DuiWai MaoYi Fa (对外贸易法) [Foreign Trade Law] (promulgated by the Standing Comm. National People's Congre., May 12, 1994, amended, Apr. 6, 2004, effective July 1, 2004) [hereinafter Foreign Trade Law].

³⁰ *Id.*, art. 14.

goods. Currently, the export of specific goods may be restricted under Article 16 for certain purposes. These include safeguarding state security or public interests;³¹ protecting the environment and human, plant, or animal life or health;³² conserving exhaustible natural resources;³³ establishing or developing a particular domestic industry;³⁴ and so on.

The State Council implemented these rules under the Regulation on Import and Export Administration.³⁵ Article 35 provides that the exportation of goods may be restricted under the circumstances described in Article 16 of the Foreign Trade Law.³⁶

The main authority for trade regulation lies in the hands of the Ministry of Commerce (“MOFCOM”) which, in conjunction with Customs, has the responsibility to “establish, adjust and publish the list of goods” subject to export restrictions.³⁷ According to the Foreign Trade Law, enterprises in violation of the export restrictions would be subject to administrative fines or, where applicable, criminal sanctions.³⁸ Thus, MOFCOM’s decisions on the items restricted for exportation are binding on the exporters. The roles of MOFCOM and Customs are explored below under sub-section B.

Because rare earths are strategic natural resources with ramifications for the environment, they also fall under the auspices of several other authorities. These include the Ministry of Land and Resources (“MLR”), the Ministry of Industry and Information (“MIIT”), the State Development and

³¹ *Id.*, art. 16 (1).

³² *Id.*, art. 16 (2).

³³ *Id.*, art. 16 (4).

³⁴ *Id.*, art. 16 (7).

³⁵ HuoWu JinChuKuo GuanLi TiaoLi (货物进出口管理条例) [Regulation on Import and Export Administration] (promulgated by the State Council, Dec. 10, 2001, effective Jan. 1, 2002).

³⁶ *Id.*, art. 35 (which states that “in any of the circumstances as provided in Clauses 1, 2, 3, and 7 of Article 16 of the Foreign Trade Law, the goods concerned shall be limited in exportation. Where there are provisions in other laws or regulations on limiting the exportation of goods, such provisions shall be abided by.”)

³⁷ Foreign Trade Law, *supra* note 29, art. 18; Regulation on Import and Export Administration, *supra* note 35, art. 35.

³⁸ Foreign Trade Law, *supra* note 29, art. 61.

Reform Commission (“SDPC”)³⁹, the Ministry of Environmental Protection (“MEP”), and the Ministry of Health (“MOH”).⁴⁰

B. EXPORT QUOTAS & ADMINISTRATION

The main legal instruments governing export quotas are the Measures for the Administration of License⁴¹ and the 2012 Export Licensing Catalogue.⁴² Export restrictions are applied as export quotas and/or export licenses.⁴³ Thus, the goods subject to export restrictions shall not be released from Customs without a license.⁴⁴ These licenses take one of two forms: an “export quota license” or “export license”.⁴⁵ The licensing catalogue is jointly published by MOFCOM and Customs annually, and rare earths are listed as one of the 49 goods covered by the 2012 Catalogue.⁴⁶ It is unclear based upon what criteria that the Chinese Government determines which goods will be included in the list.⁴⁷

Export quotas are allocated directly or through a bidding system.⁴⁸ Pursuant to the 2012 Export Licensing Catalogue, export quotas for rare earths are directly allocated by MOFCOM.⁴⁹ MOFCOM enumerates the quotas biannually by dividing them into two batches, “Batch I Quota” and “Batch II Quota”. Table I below lists the quotas for the past four years.

³⁹ Formerly, the State Planning Commission.

⁴⁰ See also discussion *infra* Sections V-VI.

⁴¹ HuoWu XuKeZheng GuanLi Ban Fa (货物出口许可证管理办法) [Measures for the Administration of License for the Export of Goods] (promulgated by the MOFCOM, May 7, 2008, effective July 1, 2008).

⁴² 2012 Nian ChuKou XuKe Zheng GuanLi Mu Lu(2012 年出口许可证管理目录) [2012 Export Licensing Management Commodities List] (promulgated by the MOFCOM and the Customs, Dec., 30, 2011, effective Jan., 2012) [hereinafter 2012 Export Licensing List].

⁴³ Foreign Trade Law, *supra* note 29, art. 19.

⁴⁴ HaiGuan Fa (海关法) [Customs Law] (promulgated by the Standing Comm. National People’s Congre., Jan. 22, 1987, amended, July 8, 2000). Article 24 provides that the goods subject to export license are not permitted for release without the license.

⁴⁵ Measures for the Administration of License for the Export of Goods, *supra* note 41, art. 6.

⁴⁶ 2012 Export Licensing List, *supra* note 42, art. 1.

⁴⁷ To the extent that this measure may be applied in a non-transparent manner, it may violate GATT Article X and the China Protocol. See China Protocol, *supra* note 16, Annex 7, Reservations by WTO members, ¶ 2 (c) 1.

⁴⁸ 2012 Export Licensing List, *supra* note 42, art. 1.

⁴⁹ *Id.*

Table I: Export Quota for Rare Earths (2009-2012)

Year		Batch I (metric tons)	Batch II (metric tons)	Total (metric tons)
2009		15,043	16,267	31,310
2010		16,305	15,952	32,257
2011		14,446	15,738	30,184
2012	Light	21,700	N/A	N/A
	Medium / Heavy	3,372	N/A	N/A

Source: MOFCOM.

Certain important measures on export quotas have been enacted since 2012. First, the quotas are now allocated in a more sophisticated manner based on two categories, namely, “light” and “medium / heavy” rare earths.⁵⁰ Second, MOFCOM may withhold from exporters the relevant quotas in order to enforce environmental protection standards.⁵¹ Thus, MOFCOM reserved certain Batch I Quota allocations in 2012. If the relevant exporters do not pass inspection by the Ministry of Environmental Protection by the end of July, they will be ineligible for the Batch II Quotas. Moreover, they will lose their Batch I Quota assignments, which will be re-allocated to competitors.⁵²

Since export quotas are allocated directly by MOFCOM, exporters need to apply for such quotas. Exporters are categorized either as “producers” or “distributors,” both of which must meet certain qualifications.⁵³ Producers must satisfy the following criteria:

⁵⁰ ShangWuBu GuanYu GongBu 2012 Nian XiTu ChuKou QiYe MingDan Bing XiaDa DiYiPi ChuKou PeiE De Tong Zhi(商务部关于公布 2012 年稀土出口企业名单并开始下达第一批出口配额的通知) (2012 Notice on List of Rare Earth Export Enterprises and First Batch Rare Earth Export Quota) (promulgated by MOFCOM, Dec. 26, 2011) [hereinafter 2012 Export Enterprise List and First Batch Quota Notice] This approach is consistent with the administration of production quotas for rare earths. See discussion *infra* Section VI.

⁵¹ *Id.* Enterprises (other than those engaged solely in distribution) that have been assigned the Batch I Quota for 2012 are also listed by MEP as qualified under the relevant environmental protection regulations in 2011. See discussion *infra* Section V.

⁵² *Id.*

⁵³ GuanYu 2012 Nian XiTu ChuKou PeiE ShenBao TiaoJian (关于 2012 年稀土出口配额申报条件和申报程序的公告) (Announcement on 2012 Application Conditions and Procedures for Qualification for 2012 Rare Earth Export Quota) (promulgated by MOFCOM, Nov. 11, 2011).

-
- independent juridical person with a registered export business;⁵⁴
 - compliance with relevant rare earths regulations;⁵⁵
 - compliance with the export performance requirement (2008-2010);⁵⁶
 - raw rare earths must be purchased from licensed mining enterprises;⁵⁷
 - compliance with certain environmental requirements;⁵⁸
 - separation and metal smelting enterprises shall fall within the list published by MEP;⁵⁹
 - compliance with relevant land regulations;⁶⁰
 - compliance with certain social security requirements;⁶¹ and
 - non-violation of other regulations.⁶²

With respect to distributors, the following requirements apply:

- independent juridical person registered to export;⁶³
- minimum capital of RMB 50 million;⁶⁴
- export performance record;⁶⁵
- ISQ 9000 certification;⁶⁶
- compliance with certain social security requirements;⁶⁷
- non-violation of other regulations;⁶⁸ and
- the rare earths source is from a certified production enterprise."⁶⁹

After 2012, logistics enterprises are only permitted to export rare earths purchased from production enterprises qualified under the environmental protection requirements.⁷⁰

[hereinafter 2012 Rare Earth Export Quota Application Qualifications and Procedures] This measure may be inconsistent with China's commitments under the Protocol, which states that, with certain exceptions, China must "progressively liberalize the availability and scope of the right to trade in all goods," such that "all enterprises in China shall have the right to trade in all goods." See China Protocol, *supra* note 16, ¶ 5. Producers are technically identified as "production enterprises" and distributors as "logistics enterprises."

⁵⁴ *Id.*, art. I.1(1).

⁵⁵ *Id.*, art. I.1(2).

⁵⁶ *Id.* (The enterprise must demonstrate that its actual export volume from 2008 to 2010)

⁵⁷ *Id.*, art. I.1(3).

⁵⁸ *Id.* art. I.1(4) (includes environmental protection equipment corresponding to the scale of the production enterprise, compliance with national and local emissions standards, proof of payment of pollutant emissions charges, no record of non-compliance with environmental regulations, contingency plans for environmental emergencies, and so on).

⁵⁹ *Id.*, art. I.1(5).

⁶⁰ *Id.*, art. I.1(6).

⁶¹ *Id.*, art. I.1(7).

⁶² *Id.*, art. I.1(8).

⁶³ *Id.*, art. I.2(1).

⁶⁴ *Id.*, art. I.2(2).

⁶⁵ *Id.*

⁶⁶ *Id.*, art. I.2(5).

⁶⁷ *Id.*, art. I.2(4).

⁶⁸ *Id.*, art. I.1(6).

⁶⁹ *Id.*, art. I.2(3).

In general, the application for export quotas must be made to the competent provincial commerce ministries. After a preliminary review, these authorities forward their recommendations to MOFCOM for final approval.⁷¹

IV. APPLICATION OF GATT ARTICLE XI TO CHINA'S RARE EARTHS REGIME

A. APPLICATION OF GATT ARTICLE XI:1

Among others, China's export quotas on rare earths most likely violate Article XI:1 of the GATT. The prohibition on the use of quantitative restrictions is central to the WTO regime. As opposed to quantitative restrictions, tariffs are a preferred and acceptable form of protection under the GATT.⁷² This is reflected in Article XI:1, which reads "no prohibitions or restrictions other than duties, taxes or other charges, whether made effective through quotas...shall be instituted..."

Article XI:1 does not rely on an exhaustive list of covered measures. The GATT Panel in *Japan – Semiconductors* held that "Article XI:1, unlike other provisions of the General Agreement, did not refer to law or regulations but more broadly to measures."⁷³ In the same vein, the Panel in *Colombia – Ports of Entry* asserted that "WTO panels have also concluded that the language 'other measures' in Article XI:I is meant to encompass a 'broad residual category', and that the concept of a restriction on importation covers any measures that result in 'any form of limitation imposed on, or in relation to importation'."⁷⁴ Recently, the AB in *China – Raw Materials* confirmed that "Article XI of the GATT 1994 covers those prohibitions and restrictions that have a limiting effect on the quantity or amount of a product being imported or exported."⁷⁵

⁷⁰ *Id.*

⁷¹ *Id.*, art. II (states that enterprises governed by the central government shall apply for export quota to MOFCOM directly).

⁷² See *supra* note 17 and the accompany texts.

⁷³ See Panel Report, *Japan – Semi-Conductors*, *supra* note 22, ¶ 106.

⁷⁴ Panel Report, *Colombia – Port of Entry*, WT/DS366/R ¶ 7.227 (Apr. 27, 2009) [hereinafter Panel Report, *Colombia – Port of Entry*] (original emphasis added) See also, Panel Report, *India – Autos*, WT/DS146R, WT/DS175R (Dec. 21, 2001) ¶ ¶ 7.254-7.265.

⁷⁵ Appellate Body Report, *China – Raw Materials*, *supra* note 19, ¶ 320. The Appellate Body concurred with the Panel and considered the use of the word "quantitative" in the title of

In the instant case, MOFCOM and Customs authorities subject rare earths to export quotas twice a year under the mandate of the Foreign Trade Law and the Regulation on Import and Export Administration. Given that this export quota regime is instituted by executive agencies in the Chinese government, that it binds all enterprises engaged in rare earths trade, and that the export quotas on rare earths result in quantitative restrictions, the export quotas violate Article XI:1 of the GATT.

B. APPLICATION OF GATT ARTICLE XI:2 (A)

GATT prohibits the use of quantitative restrictions apart from certain exceptions. We first examine Article XI:2 (a), which provides that Article XI:1 shall not extend to cases where “export prohibitions or restrictions [are] temporarily applied to prevent or relieve critical shortages of foodstuffs or other products essential to the exporting Member.” Thus, to invoke this exception, China would have to overcome at least three legal hurdles, namely, “temporarily applied,” “other products essential,” and “to prevent or relieve critical shortages.” The AB thus far examined these elements in detail in only one case, that is *China – Raw Materials*. This Memorandum builds on that analysis, examining each element in turn.

1. Temporarily Applied

The AB considered the term “temporarily” to mean “lasting or meant to last for a limited time only,” “not permanent,” and “made or arranged to supply a passing need.”⁷⁶ Taken together, “temporarily applied” and “applied” refer to “measures that are applied in the interim.”⁷⁷

China has employed the export quota system on rare earths for over 10 years and, so far, there has been no indication that it will cease to impose the quotas. As observed, China’s rare earths reserves are estimated to last 15 to 30 more years at the current rate of production. Faced with a similar factual background, the AB upheld the Panel’s conclusion that the relevant export

Article XI when it interpreted the terms “restriction” and “prohibition” under Articles XI:1 and XI:2.

⁷⁶ Appellate Body Report, *China – Raw Materials*, *supra* note 19, ¶ 323.

⁷⁷ *Id.*

restriction had “been in place for at least a decade with no indication of when it will be withdrawn and every indication that it will remain in place until the reserves have been depleted.”⁷⁸

China could argue that export quotas are interim measures applied “temporarily” until new resources or technologies create viable substitutes for rare earths, thereby alleviating shortages. The AB found room under Article XI:2 (a) for “temporary” measures that do not specify end-dates.⁷⁹ China would need to show that its export quotas are in fact intended to be interim, which could be evidenced by other efforts to relieve the shortage in addition to, or in lieu of, export restrictions. Periodical review of existing export bans based on objective assessment criteria, scientific research for technological alternatives or substitutes, and other such measures could be relevant.⁸⁰ China’s various measures taken to regulate and reduce rare earths extraction could also apply.⁸¹

Without convincing evidence that China instituted an end-date for its export quotas or engaged in other activities that might imply a future end-date, it is unlikely that China’s measures will be seen as “temporary.”

2. Foodstuffs or essential products

According to the AB, the term “essential” means “absolutely indispensable or necessary,” and the scope of “products” is not limited to foodstuffs.⁸² Thus, Article XI:2 (a) denotes “critical shortages of foodstuffs or otherwise absolutely indispensable or necessary products.”⁸³ In *China – Raw Materials*, China successfully convinced the Panel that refractory-grade bauxite is “essential” to China. Given that rare earths are extremely scarce and

⁷⁸ Appellate Body Report, *China – Raw Materials*, *supra* note 19, ¶¶ 311, 315, 339-341.

⁷⁹ *Id.*

⁸⁰ In *China – Raw Materials*, China argued that the export restrictions were renewed annually. Given that they remained in place for over 10 years, however, the argument was rejected by the Panel and the Appellate Body. Thus, in the present case, there must be something beyond annual renewal to convince the WTO tribunals that the measures are ‘temporary’.

⁸¹ See Section VI.

⁸² Appellate Body Report, *China – Raw Materials*, *supra* note 19, ¶ 326.

⁸³ *Id.*

key to the production of many new technologies, China would be capable of overcoming this hurdle.

3. Prevent or relieve a critical shortage

To “prevent” is to “provide beforehand against the occurrence of [something],” “make impracticable or impossible by anticipatory action,” or “stop from happening,”⁸⁴ while “relieve” denotes “raise out of some trouble, difficulty or danger; bring or provide aid or assistance to.”⁸⁵ The term “critical shortage,” as the AB observed, refers to “those deficiencies in quantity that are crucial, that amount to a situation of decisive importance, or that reach a vitally important or decisive stage, or a turning point.”⁸⁶ Taken together, Article XI:2 (a) is to “alleviate or reduce an existing critical shortage” and for “preventive or anticipatory measures adopted to pre-empt an imminent critical shortage.”⁸⁷

China’s supplies of rare earths are expected to last at least 15-30 more years. This time span is long relative to the likely meaning of ‘critical shortage’. The Panel in *China—Raw Materials* found that a similar time period – 16 years – did not constitute an imminent “critical shortage” on another raw material. Without a significantly different interpretation of this term, China will be unlikely to meet the requirement.

One important factor in this reading of “critical shortage” is the linkage “critical shortage” and a time factor. The Panel in *China—Raw Materials* appeared to link the two separate requirements of “temporarily applied” and “critical shortage,”⁸⁸ noting that export quotas in place until depletion of reserves would connote a shortage that was less likely to be “critical.” The AB largely avoided the substance of this issue by stating that, “if there is no possibility for an existing shortage ever to cease to exist, it will not be possible

⁸⁴ *Id.* ¶ 327.

⁸⁵ *Id.*

⁸⁶ *Id.* ¶ 324.

⁸⁷ *Id.* ¶ 327.

⁸⁸ Panel Report, *China—Measures Related to the Exportation of Various Raw Materials*, WT/DS394/R, WT/DS395/R, WT/DS398/R, ¶ 7.351[hereinafter Panel Report, *China—Raw Materials*].

to 'relieve or prevent' it through an export restriction applied on a temporary basis."⁸⁹ However, the link between "temporariness" and "critical shortage" could be decisive for China: if its measures are found not to be temporary, it will be unable to show that a "critical shortage" exists. China would thus wish to weaken the link between "temporariness" and "critical shortage."

To overcome this hurdle, China may point to the AB's observation in *China – Raw Materials*, stating that "...whether a shortage is 'critical' may be informed by how 'essential' a particular product is."⁹⁰ By emphasizing the unique qualities of the rare earths industry, including its importance in global high-tech supply chains and the difficulty of finding substitutes, China could underline its 'essentialness' and thus bolster its case that the shortage is 'critical'. China's argument could be further enhanced by indicating that its chosen measure, export quotas, will relieve the 'critical shortage' by "signaling" to trade partners that they should expect serious supply restrictions. China's trade partners could then be expected to begin developing new rare earths supplies and lessen the shortage.

C. CONCLUSION

China's export quotas on rare earths constitute quantitative restrictions in violation of GATT Article XI:1. China's ability to invoke Article XI:2 (a) as a valid exception is relatively slim, largely depending on how China satisfies the "temporariness" and "critical shortage" requirements. Given the relative lack of WTO jurisprudence on these disciplines, future adjudicators may find more flexibility in its terms based on the unique nature of the rare earths industry.⁹¹

⁸⁹Appellate Body Report, *China – Raw Materials*, *supra* note 19, ¶¶ 336, 342-343. See also Baris Karapinar, *Defining the Legal Boundaries of Export Restrictions: A Case Law Analysis* 15 J. INT'L ECON. L. (2012) 1, 11-14 (criticizing that such interpretation would lead to absurd result. Assuming that China's bauxites will be exhaustible within 1 year, rather than 16 years, the export restrictions would still not relieve the critical shortage because bauxites will be exhaustible anyway. Unfortunately, the AB did not substantively address this issue).

⁹⁰ Appellate Body Report, *China – Raw Materials*, *supra* note 19, ¶ 328.

⁹¹ The AB in *US – Shrimp* referred to "sustainable development" – one of the primary objectives enshrined in the Preamble to the WTO Agreement – when interpreting GATT Article XX. The unique nature of rare earths, the rapid depletion thereof, and the lack of new technology or substitutable resources could have a significant impact on future generations.

V. GATT ARTICLE XX (B) APPLICATION TO CHINA'S EXPORT QUOTAS

China may defend its export quotas on rare earths under Article XX (b) of GATT 1994, which allows Members to take measures “necessary to protect human, animal or plant life or health.” The AB’s “dynamic and evolutionary” interpretation has enabled the full range of environmental protection to fall under the combined scope of GATT Articles XX (b) and (g).⁹² Following AB practice,⁹³ China’s export quotas must first meet the requirements of the specific XX (b) exception. Then, they must meet the requirements of the “chapeau” (see Section VII). The Article XX (b) exception contains three legal tests. First, the ‘objectives’ targeted by the disputed measure must fall within the scope of health and environmental protection.⁹⁴ Second, the disputed measure must make a significant ‘material contribution’ to the targeted objectives.⁹⁵ Third, no other less trade-restrictive “alternative” measures should be reasonably available.⁹⁶ We examine to what extent China’s current export quota regime, as introduced above at Section III, can meet these requirements. We also suggest ways the regime could be further strengthened.

A. *THE ENVIRONMENTAL OBJECTIVES OF CHINA'S EXPORT QUOTAS*

The “objectives” test can be conducted by focusing on the design and

Thus, “sustainable development” could inform the adjudicator’s reading of “critical shortage” under Article XI:2 (a) of the GATT. See Appellate Body Report, *US – Shrimp*, *infra* note 93, ¶¶ 129, 131.

⁹² See Gabrielle Marceau and Julian Wyatt, *The Birth of the WTO, Its Sustainable Development Objective and the Reinterpretation of GATT XX*, in *ECONOMIE ENVIRONNEMENT ETHIQUE DE LA RESPONSABILITÉ SOCIALE ET SOCIÉTALE* (RITA TRIGO TRINDADE ET AL. EDS. 2009), at 229.

⁹³ See Appellate Body Report, *United States – Import Prohibition of Certain Shrimp and Shrimp Products*, WT/DS58/AB/R (Oct. 12, 1998) [hereinafter Appellate Body Report, *US – Shrimp*]; see also, Appellate Body Report, *Brazil – Measures Affecting Imports of Retreaded Tyres*, WT/DS332/AB/R (Dec. 3, 2007) [hereinafter Appellate Body Report, *Brazil – Tyres*].

⁹⁴ See e.g., Panel Report, *European Communities – Measures Affecting Asbestos and Asbestos Containing Products*, WT/DS135/R (Sept. 18, 2000), ¶ 8.184 [hereinafter Panel Report, *EC – Asbestos*]; Panel Report, *United States – Standards for Reformulated and Conventional Gasoline*, WT/DS2/R (Jan. 29, 1996), ¶ 6.20 [hereinafter Panel Report, *US – Gasoline*].

⁹⁵ Appellate Body Report, *Brazil – Tyres*, *supra* note 93, ¶¶ 150-152, 155.

⁹⁶ Panel Report, *Korea – Various Measures on Beef*, WT/DS161/AB/R WT/DS169/AB/R (Dec. 11, 2000), ¶ 166 [hereinafter Appellate Body Report, *Korea – Beef*]; Panel Report, *US-Gasoline*, *supra* note 94, ¶¶ 6.24, 6.26, 6.28.

structure of the rare earths export quotas, as determined by their text and context.⁹⁷ Ideally, the text should reference the objective, taking the measure's legislative history into consideration as context. Context should also reveal that the measure is part of a comprehensive framework to achieve the objective.⁹⁸

In the present case, the texts of the measures imposing China's export quotas do not directly reference environmental or health protection.⁹⁹ Rather, the measures are authorized under the Foreign Trade Law, which allows MOFCOM and Customs to impose export restrictions for public health or environmental protection purposes.¹⁰⁰ Absent legislative history as context, however, it is difficult to positively determine whether or not a clear link exists between the export quotas and the objective of health and environmental protection.

Nevertheless, the export quotas could be within a broader framework for environmental protection. In the past two years, China has introduced a more comprehensive regulatory regime for rare earths. See Table II below. Prior to 2011, China circulated two measures relating to rare earths and health or environmental protection, one of which was designed to protect workers in the industry from radiation.¹⁰¹ More recently, China issued a series of relevant measures. First, the 2011 Rare Earths Opinions produced a high-level policy plan to consolidate the rare earths industry, curb illegal mining, promote

⁹⁷ Panel Report, *China – Raw Materials*, *supra* note 88, ¶ 7.500.

⁹⁸ See e.g., Panel Report, *European Communities – Conditions for the Granting of Tariff Preferences to Developing Countries*, WT/DS246/R (Apr. 20, 2004), ¶¶ 7.201-202 [hereinafter Panel Report, *EC – Tariff Preferences*].

⁹⁹ 2012 Export Enterprise List and First Batch Quota Notice, *supra* note 50 ;2012 Nian ChuKou XuKe Zheng GuanLi Mu Lu (2012 年出口许可证管理目录) [2012 Export Licensing Management Commodities List] (promulgated by the MOFCOM and the Customs, Dec., 30, 2011, effective Jan., 2012) [hereinafter 2012 Export Licensing List].

¹⁰⁰ Foreign Trade Law, *supra* note 29, art. 16.

¹⁰¹ XiTu ShengChan Chang Suo Zhong Fang She WeiSheng FangHu BiaoZhun (稀土生产场所中放射卫生防护标准) [Radiological Protection Standards for the Production Locations of Rare-Earth Elements] (promulgated by Ministry of Health, Apr. 8, 2002, effective, June 1, 2002).

clean production and energy consumption, and engage in ecologic restoration and environmental protection.¹⁰² Second, China promulgated the 2011

Table II: Environmental Measures in Chronological Order (1999-2012)

Year	Instrument	Measure
1999	<i>1999 Circular on the Suspension of Mining Permit for Certain Minerals</i>	Temporary suspension of rare earths mining due to serious environmental pollution.
2002	<i>Radiological Protection Standards for the Production Places of Rare - Earth Elements</i>	Relevant measures taken to protect employees in rare earths enterprises.
2011	<i>2011 Rare Earths Opinions</i>	High-level policy document setting overall rare earths agenda. Emphasizes environmental protection; requests implementation of the “ecology restoration deposit” system.
2011	<i>2011 Emissions Standards</i>	Sets specific emissions standards for rare earths enterprises.
2012	<i>Measures for the Environmental Protection Inspection of Rare Earth Enterprises</i>	The MEP took a series of inspection measures to enhance the implementation of the environmental protection.
2012	<i>Announcement on Application Conditions and Procedures for Qualification for 2012 Rare Earths Export Quota</i> <i>Circular with respect to the List of Rare Earths Enterprises Qualified under the Environmental Protection Requirement (Batch I)</i>	Enterprises unqualified under the environmental protection requirements are prohibited from applying for: <ul style="list-style-type: none"> - export quota for rare earth; - environmental assessment for new or expanded projects; - financial support in relation to environmental protection and certificates.

Source: MOFCOM; MLR; MEP; SDPC; the State Council.

Emissions Standards, establishing specific standards on air and water pollution for the rare earths industry, including monitoring and supervision.¹⁰³ Next, China introduced the 2012 Measures for the

¹⁰² GuanYu CuJin XiTu HangYe ChiXu JianKang Fa Zhan De RuoGan YiJian (关于促进稀土行业持续健康发展的若干意见) [Several Opinions on Promoting Sustained and Healthy Development of the Rare Earths Industry] (promulgated by the State Council, May 20, 2011) [hereinafter 2011 Rare Earths Opinions].

¹⁰³ XiTu GongYe WuRanWu PaiFang BiaoZhun (稀土工业污染物排放标准) [Emissions Standards of Pollutants from the Rare Earths Industry] (promulgated by the Ministry of

Environmental Protection Inspection of Rare Earths Enterprises. This created a three-tiered system of self-inspection, local and national inspection overseen by MEP and aimed at enforcing the Emissions Standards.¹⁰⁴ Importantly, only those enterprises that pass inspection may qualify for rare earths export licenses. The licenses thus operate as an incentive to firms wishing to produce for export to pass environmental certification.¹⁰⁵ Rare earths producers without environmental certification are barred from starting new projects or expanding operations.¹⁰⁶ Finally, China announced the Application Conditions and Qualification Procedures for the 2012 Rare Earths Export Quotas. This measure tied allocations of rare earths export quotas to environmental certification. Rare earths distributors intending to export have to prove that their supplies have originated from environmentally-certified producers. In addition, rare earths producers must themselves obtain certification for access to the export quota. Export quotas are therefore part of the incentive structure limiting exports to certified sources.

The regime outlined above is a significant effort to strengthen China's environmental regulation. Export quotas are linked to it through export licenses. A broad interpretation of the "objectives" test could thus interpret the export quotas as having an environmental objective. A narrower interpretation, however, could find the link to be too tenuous, due to the fact that exactly the same incentivizing effect could be achieved through export

Environmental Protection, Jan., 24, 2011, effective Oct. 1, 2011) [hereinafter 2011 Emission Standard].

¹⁰⁴ Kai zhan XiTu Zhuan Xiang Zheng Zhi Xing Dong Lian He Jian Cha De Tong Zhi (关于开展稀土专项整治行动联合检查的通知) [The Circular on Rare Earth Specific Rectification Actions and Joint Inspection] (promulgated by the Ministry of Land and Resources, Nov. 10, 2011) Also, MEP requested that the relevant provincial departments take more effective and efficient measures against non-qualifying enterprises. Such measures include fines, certain timeframes for amelioration, business suspension, and license revocation.

¹⁰⁵ Recall from Section II that export quotas drive a wedge between domestic and international prices, lowering the former and, in this case, raising the latter. With over 95 percent of global production, China has significant market power in the rare earths sector.

¹⁰⁶ XiTu QiYe HuanJing BaoHu HeCha BanFa (稀土企业环境保护核查办法) (Measures for the Environmental Protection Inspection of Rare Earth Enterprises) (promulgated by the Ministry of Environmental Protection, Apr. 6, 2011).

licensing alone, without restricting exports through a quota. This leaves some ambiguity in China's ability to meet the "objectives" test under Article XX (b).

China could attempt to strengthen its case by introducing legislation that tied the total export quota in a given year to environmental protection, using it as a reward for real reductions in pollution. This would achieve a different result than export licensing alone and could make a more convincing case that the quota has an environmental objective.

B. THE MATERIAL CONTRIBUTION OF CHINA'S EXPORT QUOTAS

The second condition under Article XX (b) requires that "necessary" measures must make a 'material contribution' to the objective.¹⁰⁷ In *Korea – Beef*, the AB held that "necessary" did not merely mean "making contribution to," but was "significantly closer to... 'indispensable'."¹⁰⁸ In *China – Audiovisuals*, the AB allowed some flexibility based on the relative importance of the underlying objective.¹⁰⁹ As health and associated environmental protection are deemed to be of the highest level of importance,¹¹⁰ export quotas imposed with this objective in mind could reasonably be subject to a lower threshold of "necessity." Therefore, for the purposes of this Memorandum, we take a moderate position on "necessity," interpreting it to mean that China's rare earths export quotas must make a significant, but not indispensable, 'material contribution' to the protection of health and the environment.

China could make at least five qualitative claims that its export quotas make a significant 'material contribution'. First, as explained above, export quotas incentivize producers to seek and obtain environmental certification. Without certification, they cannot export rare earths to potentially more lucrative markets abroad, nor can they avail of export markets through third-party distributors. Non-compliant producers are limited to production and sale in the domestic market and are prevented from expanding.

¹⁰⁷ See e.g., Appellate Body Report, *Brazil – Tyres*, *supra* note 93, ¶ 210.

¹⁰⁸ Appellate Body Report, *Korea – Beef*, *supra* note 96, ¶ 161.

¹⁰⁹ See Appellate Body Report, *China – Audiovisuals*, *supra* note 19, ¶ 251.

¹¹⁰ Appellate Body Report, *Brazil – Tyres*, *supra* note 93, ¶ ¶ 144, 179.

Second, China could claim that the export quotas materially contribute to reducing pollution by controlling illegal production. Illegal producers are responsible for the crudest and most environmentally damaging methods of extracting rare earths in China, yet most of their production may be arguably for export. Export quotas tied to environmentally-certified firms prevent illegal production from export markets, because only firms holding export licenses may engage in international trade. Illegal producers are therefore left without their potentially most attractive markets. Moreover, as argued below, the quotas could help authorities enforce restrictions on illegal production.

Next, China could claim that the export quotas materially contribute to reducing pollution through industry consolidation. Because export quotas are allocated to firms that acquire rare earths from environmentally-certified mines, they incentivize growing companies to meet environmental compliance requirements. Uncertified firms may find it difficult to compete without the additional profits they can earn on export markets. As a result, expansionary firms with environmental certification will seek to acquire them, incorporating them into a certified enterprise. Over time, it could be argued, all rare earths producers and exporters will have an incentive to become certified, because certified firms will be more profitable as well as more valuable to acquire.¹¹¹

Fourth, export quotas could “signal” that global rare earths supplies will henceforth be limited, thus inducing other countries to develop new supplies or substitutes. This diversifies global rare earths production, sharing the environmental burden more equitably and sustainably across nations.¹¹²

Finally, China could claim that its export quotas, in conjunction with rules limiting foreign investment in China’s rare earths,¹¹³ materially contribute to environmental protection because they incentivize foreign

¹¹¹ Moreover, industry consolidation will facilitate the government’s efforts to monitor environmental compliance and reduce illegal mining. China’s second and third arguments may therefore reinforce each other.

¹¹² As noted in Section I, China’s share of global rare earths reserves is far smaller than its share of global production.

¹¹³ See Section VI.

companies to invest in China's rare earths industry. Such firms could be required to invest knowledge and capital to "green" China's rare earths industry in exchange for export licenses for China's rare earths.¹¹⁴

China's arguments may be countered, however. First, the export quota operates as a reward allowing certified producers and affiliate exporters to seek higher profits in international markets. It is an incentive to seek environmental certification, rather than an imperative. Producers without environmental certification may not expand or export, but may continue to produce and pollute.¹¹⁵ Moreover, exactly the same effect could be achieved through export licensing alone, without restricting export amounts through a quota.

Second, although narrower export markets could reduce some firms' profitability, it is unclear to what extent it could reduce illegal production or consolidate the industry. If illegal producers can avoid law enforcement and sell in the home market, the export quotas may not have a large impact at all. Similarly, small mines could remain competitive, allowing the industry to stay fragmented. Improving enforcement mechanisms that restrict illegal production and sale, in addition to market access limitations for small producers, provide more effective means of addressing these issues than export quotas alone.¹¹⁶

Third, "signaling" other countries can be achieved, without GATT-inconsistent trade measures, through production cuts or multilateral diplomacy.

Finally, foreign investments do not necessarily guarantee transfers of greener technology or expertise without mandates to do so – there appears to be no Chinese law requiring such transfers as a condition for foreign investment in rare earths. Moreover, foreign investment could increase

¹¹⁴ Foreign firms in China producing downstream products not subject to rare earths export quotas will also have an advantage. These firms could further help develop China's technical capacity, but not in the rare earths industry or in environmental innovation *per se*.

¹¹⁵ Tying environmental certification to production quotas or, better yet, production licenses would be a clearer and more convincing means of making a significant 'material contribution'.

¹¹⁶ China has, it may be argued, made substantial efforts in both areas. *See* Section VI.

domestic production and consumption unless both are effectively limited. In any case, Chinese firms could also finance technical improvements through normal market mechanisms.

China's current regime ties export quotas to environmental certifications for firms, but may fall short of making a significant 'material contribution' without strong evidence to the contrary. Thus, under this test, China's export quotas would not appear to be "necessary" to health and environmental protection for the purposes of Article XX (b). China could make efforts to strengthen the 'material contribution' of its export quotas by improving the environmental protection regime to which it is linked, as well as deepening its ties to the quotas.

C. AVAILABLE ALTERNATIVES TO CHINA'S EXPORT QUOTAS

Once a measure has been deemed to make a 'material contribution' to the objective, its "necessity" must be re-affirmed by providing the complaining party the opportunity to rebut with proposals of less trade-restrictive, reasonably available alternatives.¹¹⁷ A measure is reasonably available if it achieves the chosen level of protection¹¹⁸ and is financially and technologically feasible.¹¹⁹

Numerous less-trade restrictive alternatives could be available to China outside export quotas. Suggestions will likely focus on measures that regulate environmental protection at source, that is, during production. These include taxes and caps on rare earths production and consumption, cleaner technologies and occupational safety measures, cracking down on illegal mining through stricter policing of mines, promoting the expansion of recovery and recycling, and electricity rationing. China has already begun

¹¹⁷ Appellate Body Report, *Brazil – Tyres*, supra note 93, ¶ 156.

¹¹⁸ Appellate Body Report, *European Communities – Measures Affecting Asbestos and Asbestos Containing Products*, WT/DS135/AB/R [hereinafter Appellate Body Report, *EC – Asbestos*] ¶ 174.

¹¹⁹ See e.g., Appellate Body Report, *United States – Measures Affecting the Cross-Border Supply of Gambling and Betting Services*, WT/DS285/AB/R (Apr. 20, 2005) ¶ 308 [hereinafter Appellate Body Report, *US – Gambling*] (AB interpreted "necessary" requirement under GATS Article XIV (a) by taking into account technical difficulties).

implementing many of these measures in the rare earths industry.¹²⁰ Some alternatives may not be reasonably available to China. For example, developing new technologies or substitutes that reduce the need for rare earths in downstream products could be beyond China's technological capacity.

China's chosen level of protection should be high, given the prime importance of health and environmental protection noted above.¹²¹ In this sense, only those less trade-restrictive alternatives that better achieve a high level of protection should be considered to impact the "necessity" of China's export quotas. Recycling and electricity reduction, though important, should not rule out the impact of export quotas. Production and consumption taxes and caps, however, could achieve a high level of protection without unduly restricting trade. Similarly, stronger enforcement of mining regulations could reduce illegal mining as much or more than export quotas. Because less trade-restrictive, reasonably feasible alternatives are available, China's rare earths export quotas do not appear to pass the "alternatives" test under GATT Article XX (b).

D. CONCLUSION

China's application of export quotas is unlikely to meet the requirements of GATT Article XX (b). First, a narrow interpretation of the "objectives" test will find tenuous the link between China's measures and the objective. Second, because export quotas provide an incentive, but not an assurance, to domestic producers to seek environmental certification, they may not constitute a significant 'material contribution'. Third, less-trade restrictive alternatives to export quotas could be reasonably available to China, making the quotas "unnecessary."

¹²⁰ The Panel in *China – Raw Materials* found that China's prior implementation of such measures made them reasonably available.

¹²¹ Observers may see China's level of protection as being somewhat lower, due to the gradual way it has implemented its environmental rules over the years. In this Memorandum, we give deference to national priorities in setting the level of protection, noting China's history of gradual policy implementation as well as its success. Without further evidence to the contrary, it is assumed that China's chosen level of protection is the highest.

VI. GATT ARTICLE XX (G) APPLICATION TO CHINA'S EXPORT QUOTAS

China may defend its export quotas on rare earths under Article XX (g) of GATT 1994, which allows Members to take measures “relating to the conservation of exhaustible natural resources if such measures are made effective in conjunction with restrictions on domestic production or consumption.” Following AB practice,¹²² China’s export quotas must first meet the requirements of the specific XX (g) exception. Then, they must meet the requirements of the “chapeau” (see Section VII). China bears the burden of proof.

The Article XX (g) exception contains three legal tests. First, China’s export quotas must “relate to” conservation of an exhaustible natural resource. Second, they must be made effective “in conjunction with” restrictions on domestic production or consumption. Finally, the AB has ruled that Article XX (g) encompasses an implied requirement of “even-handedness” between treatment of domestic industries and foreign trade partners.¹²³ “Even-handedness” depends in part on the effectiveness of China’s domestic restrictions.¹²⁴ We examine to what extent China’s current export quota regime, as introduced above at Section III, can meet these requirements. We also suggest ways in which the regime could be further strengthened.

A. *THE RELATION OF CHINA'S EXPORT QUOTAS TO CONSERVATION*

The fact that China’s rare earths are an exhaustible natural resource is unlikely to be contested. However, whether China’s export quotas actually “relate to” conservation will be challenged. The texts of the measures imposing the bi-annual export quotas do not explicitly mention the goal of conservation,¹²⁵ nor does the Circular laying out export eligibility

¹²² See, e.g., Appellate Body Report, *Brazil – Tyres*, *supra* note 93.

¹²³ Appellate Body Report, *United States – Standards for Reformulated and Conventional Gasoline*, WT/DS2/AB/R (Apr. 29, 1996) [hereinafter Appellate Body Report, *US – Gasoline*], at 20-21.

¹²⁴ Panel Report, *China – Raw Materials*, *supra* note 88, ¶¶ 7.462, 7.465. The burdens need not be identical.

¹²⁵ See, e.g., 2012 Export Enterprise List and First Batch Quota Notice, *supra* note 50.

requirements.¹²⁶ However, both of these are authorized under China's Foreign Trade Law, which allows legislation affecting exports to be introduced for conservation purposes. This fact alone may not be sufficient to convince a WTO panel that China's export quotas have met the "relate to" requirement. The determination could turn on whether the quotas have in fact reduced rare earths production or consumption.

Several arguments could nevertheless support the notion that China's export quotas "relate to" conservation of rare earths. First, the quotas could be a credible means of assuring that other countries develop new rare earths supplies. We call this "signaling."¹²⁷ Export quotas aim directly at foreign markets where new supplies can be developed, sending the strongest possible signal. Thus, China could make the case that its export quotas are preferable to production quotas.¹²⁸ Similarly, China may find export quotas preferable to export taxes. Quotas restrict foreign supplies directly, regardless of price effects. Taxes, on the other hand, operate on a price mechanism, allowing those most able to afford the raw materials to purchase them even at higher prices.¹²⁹ Presumably, export taxes would then allow the wealthiest nations, those most capable of developing new supplies, to avoid doing so by paying a higher price for Chinese rare earths.¹³⁰ This would shift the burden to smaller economies incapable of diversifying global supplies.

¹²⁶ See 2012 Rare Earth Export Quota Application Qualifications and Procedures, *supra* note 53.

¹²⁷ Signaling also holds under Article XX (b), the environment exception.

¹²⁸ While production quotas could restrict global supplies, they may fall short of export quotas on two counts. First, China's trade partners may not believe China's intention is sincere to impose production quotas, because they believe either that China does not wish to hamper domestic industries or that it is incapable of effectively enforcing production quotas. Export quotas, on both accounts, could be more 'believable'. Second, export quotas clearly define limits on foreign consumers, whereas production quotas allow jockeying for remaining supplies. This could result in a higher proportion of China's production going to global markets. The threat to foreign supplies - the critical motivator in "signaling" - would be mitigated relative to export quotas.

¹²⁹ Even if export taxes were preferred, China Protocol Article 11.3 and Annex 6 forbid them. The Appellate Body found in *China - Raw Materials* that China had no recourse to GATT Article XX to justify violations of China Protocol Article 11.3. This has the perverse result that China may justify an export quota but not an export tax.

¹³⁰ Large economies would still have some incentive to find new supplies and develop alternatives.

Second, because most illegal production is intended for export, quotas increase the effectiveness of production restrictions. Exports fall under the mandates of Customs and the central government. They are easier to control than production, which is regulated by local governments that do not always effectively implement central government policies. China's export quota eligibility and licensing procedures and additional legislation to combat illegal production bolster this goal by reducing the number of potential illegal producers. Export quotas are an essential, if "second-best," means of reducing illegal production.

Third, export quota eligibility and licensing procedures limit distribution to licensed agents in China. To gain better access to China's rare earths, foreign firms need to cooperate with local rare earths enterprises, which may involve inward investment, transfer of new technology and expertise.¹³¹ The export quotas directly contribute to China's green development of rare earths by attracting technical improvements from abroad.

Finally, by limiting the amount of rare earths available for export, export quotas prevent additional (and often illegal) extraction due to sudden spikes in foreign demand or global prices.¹³²

Each of these justifications, or several taken together, could allow China's export quotas to meet the "relate to" requirement under Article XX (g). Each is rebuttable, however.¹³³ First, signaling has viable alternatives that do not threaten to distort international trade, such as a multilateral agreement on developing new rare earths supplies. A credible public announcement that China is taking serious measures to cut and control production could also induce trade partners to develop new supplies. Second, while China may

¹³¹ See generally, *WaiShang TouZi XiTu HangYe GuanLi ZhanXing GuiDing* (外商投资稀土行业管理暂行规定) (Interim Provisions on the Administration of Foreign-Funded Rare-Earth Industry) (promulgated by the SDPC, Aug. 2002, effective Aug. 1, 2002).

¹³² If production restrictions (reviewed below) are effective, additional extraction is illegal.

¹³³ These counterarguments, on the other hand, could also serve as reasonably available alternatives that render China's export bans as "arbitrary or unjustifiable discrimination" or "disguised restrictions." We examine these in the "chapeau" analysis, Section VII.

contend that the export quotas aid its efforts to control illegal production, so long as there is “more than one alternative course of action” available, administrative difficulties cannot excuse violations of GATT rules.¹³⁴ Third, China can increase its technical expertise and attract joint ventures without export quotas.¹³⁵ It could also purchase new technologies and hire foreign talent directly. Finally, China could respond to foreign demand or global price spikes on an ad hoc basis, for example, under GATT Article XI:2 (a), without applying export quotas when demand is flat.¹³⁶ With less trade-distortive alternatives available, China must carefully make its case that the export quotas in fact “relate to” conservation of rare earths.

In the end, the case may turn on the evidence. Importantly, export quotas should lower domestic production or consumption of rare earths. A cursory look at recent data, however, suggests that both Chinese production and consumption have risen. According to some available evidence,¹³⁷ Chinese production fell in 2010, but rose again in 2011. Between 2006 and 2010, Chinese consumption rose steadily from 63,000 to 77,000 tons, despite more restrictive export quotas. As noted below, production quotas have also been routinely exceeded and illegal extraction has been a key factor. This has benefited both Chinese and foreign consumption: in 2010, Chinese consumption rose with illegal extraction, filling 86 percent of the production quota instead of the 66 percent expected, had both the production and export quotas been fully enforced. China must provide convincing counter-evidence to show that its export quotas have in fact reduced domestic consumption and production.

¹³⁴ Appellate Body Report, *US – Gasoline*, *supra* note 123, at 28.

¹³⁵ China is already a leading destination for foreign direct investment inflows. Its large rare earths reserves assure it will continue to be an important player in the rare earths market.

¹³⁶ Moreover, export quotas could have the effect they are intended to prevent. The 2009 announcement that China would greatly tighten its export quotas sharply raised global rare earths prices in 2010. When foreign demand slackened in late 2011, prices fell, but remained significantly higher than in 2009. See Rare Earths, *THE ECONOMIST* (Mar., 17, 2012), available at: <http://www.economist.com/node/21550318>.

¹³⁷ See Pui-Kwan Tse, *China's Rare-Earth Industry* 4 (US Geological Survey Report No. 2011-1042, 2011). Note that the US is a complainant in *China – Rare Earths* and, thus, the data used herein are open to challenge.

There are many arguments that could support China's claim that its export quotas "relate to" conservation. However, these are rebuttable and will likely turn on evidence. Unless it can convince a WTO panel that the measures have in fact contributed to conserving rare earths, China may need to take further steps to make its export quotas effective in reducing domestic production or consumption of rare earths.

B. DOMESTIC RESTRICTIONS ON CHINA'S RARE EARTHS INDUSTRY

We now examine whether or not China's current regime meets the second and third conditions under GATT Article XX (g), the "in conjunction with" and "even-handedness" tests. Since 2009, China has instituted a number of restrictions on domestic production of rare earths, limiting extraction through production controls, strengthening enforcement, and regulating market entry. Table III contains a select list of Chinese conservation measures reviewed herein.

The State Council declared rare earths protected minerals in 1991.¹³⁸ Rare earths mining is therefore subject to licensing under the Mineral Resources Law.¹³⁹ Since then, China has taken various other measures to regulate production and exportation of rare earths. In 1999, it introduced export quotas for the first time.¹⁴⁰ Meanwhile, MLR temporarily suspended approvals of new applications for rare earths mining, citing natural resource

¹³⁸ GuoWuYuan GuanYu Jiang Wu, Xi, Ti, LiZiXing XiTu KuangChan LieWei GuoJia ShiXing BaoHuXing KaiCai TeDing KuangZhong De TongZhi (国务院关于将钨、锡、锑、离子型稀土矿产列为国家实行保护性开采特定矿种的通知) [The State Council Circular on Listing Tungsten, Tin, Antimony and Ion-Type Rare Earth as National Protected Mining Minerals] (promulgated by the State Council, Jan. 15, 1991) [hereinafter 1991 Circular on Certain Protected Mining Minerals].

¹³⁹ KuangChan ZiYuan Fa (矿产资源法) (Mineral Resources Law) (promulgated by the Standing Comm. National People's Congre., Mar. 19, 1986, amended, Aug. 29, 1996, effective July 1, 1997), art. 16.

¹⁴⁰ DuiWai JingMao HeZuo Bu GuanYu XiaDa 1999 Nian XiTu ChanPin ChuKou PeiE De TongZhi (对外贸易经济合作部关于下达 1999 年稀土产品出口配额的通知) [Ministry of Foreign Trade and Economic Cooperation Circular with respect to the Rare Earth Export Quota for 1999] (promulgated by the Ministry of Foreign Trade and Econ. Cooperation, Feb., 14, 1999, effective Feb. 14, 1999).

conservation and environmental protection.¹⁴¹ The SDPC in 2002 limited foreign investors to participation in smelting and separation projects only. Such enterprises could take the form of Sino-foreign “equity” or “cooperative” joint ventures.¹⁴²

¹⁴¹ GuoTu ZiYuan Bu GuanYu Dui XiTu Deng Ba Zhong KuangChan ZhanTing BanFa CaiKuang XuKe Zheng De TongZi (国土资源部关于对稀土等八种矿产暂停颁发采矿许可证的通知) [the Ministry of Land and Resources Circular on the Suspension of Mining Permit for the Rare Earth and Other Seven Minerals] (promulgated by the Ministry of Land and Resources, Apr. 23, 1999, effective Apr. 23, 1999) [hereinafter the 1999 Circular on the Suspension of Mining Permit for Certain Minerals].

¹⁴² See Interim Provisions on the Administration of Foreign-Funded Rare-Earth Industry, *supra* note 131, art. 1 (stating that the purpose of the Provisions is “to deepen reform of the utilization of foreign investments in the rare earths industry” and “promote the sustainable, rapid, and healthy development of the rare earths industry in China...”) If these provisions deny access to foreign enterprises, China could be violating its GATS commitments. China agreed in its Protocol to allow wholly foreign-owned enterprises to engage in certain services incidental to the mining industry within three years of WTO accession. See People’s Republic of China – *Schedule of Specific Commitments*, Nov. 10, 2001, WT/MIN(01)/3/Add.2.

Table III: Conservation Measures in Chronological Order (1991-2012)

Year	Instrument	Summary
1991	<i>1991 Circular on Certain Protected Mining Minerals</i>	Rare earths declared protected strategic minerals.
1993	<i>Provisions on Administration of Minerals Resources Compensation Collection</i>	Rare earths subject to resource compensation fee.
1999	<i>Ministry of Foreign Trade and Economic Cooperation Circular with respect to the Rare Earth Export Quota for 1999</i>	Export quota on rare earths first introduced.
2002	<i>Interim Provisions on the Administration of Foreign-Funded Rare-Earth Industry</i>	Foreign investors restricted from mining rare earths.
2009	<i>Ministry of Land and Mineral Resources Circular on the Implementation of National Mineral Resources (2008-2015)</i>	Updated general plan for natural resources.
2009	<i>Circular of 2009 Control Index of Total Exploitation Amount of Tungsten, Antimony and Rare-Earth</i>	Updated quota on rare earth mining.
2010	<i>The Interim Provisions on The Administration of Exploration and Mining of Specific Protected Mineral Resources</i>	Interim framework to regulate exploitation and mining. Market adjustment. Surplus production seized and resale prohibited.
2010	<i>Calls for Comments on Market Access Standards for Rare Earth Industry</i>	Draft bill on market access standards for public comments.
2011	<i>2011 Rare Earth Opinions</i>	High-level policy document setting overall rare earths agenda.
2011	<i>The Circular on Rare Earth Specific Rectification Actions and Joint Inspection</i>	Joint task force on rare earths illegal mining, trafficking.
2012	<i>Ministry of Land and Resources Circular on Implementation of Statistics Direct Report on Collection of Mineral Resource Compensation</i>	MLR enhanced resource compensation fee collection by updating the data report system.

Source: MOFCOM; MLR; SDPC; the State Council.

In 2009, China laid out a comprehensive plan for conserving natural resources. The 2008-2015 National Mineral Resources Plan sets the goal of limiting total annual rare earths extraction to at most 140,000 tons until 2015 and explicitly states a conservation goal.¹⁴³ This programmatic document was followed by the Control Indices of 2009-2011, which set real annual limits on

¹⁴³ Guo Tu Zi Yuan Bu GuanYu FaBu ShiShi QuanGuo KuangChan ZiYuan GuiHua (2008 - 2015 Nian) De TongZhi (国土资源部关于发布实施《全国矿产资源规划(2008 - 2015年)》的通知) [Ministry of Land and Mineral Resources Circular on the Implementation of the "National Mineral Resources Plan (2008-2015)"] (promulgated by the Ministry of Land and Resources, Dec. 31, 2008, effective, Dec. 31, 2008), art. 4.2.

domestic production. Citing the goal of conservation, the Indices set rare earths production quotas and take concrete steps to enforce them.¹⁴⁴ China also imposes a resource tax¹⁴⁵ and compensation fee¹⁴⁶ on rare earths.

Table IV: Mining Quotas for Rare Earths (2009-2011) (metric tons)

Year	Light	Mid-Weighted/Heavy	Total	Actual (US est.)
2009	72,300	10,020	82,320	129,000
2010	77,000	12,200	89,200	120,000
2011	80,400	13,400	93,800	130,000

Source: MLR; Tse 2011.

However, the above measures may not effectively limit production. Recent estimates suggest that China's production quotas are ineffective, as they may be regularly exceeded (see Table IV above).¹⁴⁷ In 2011, China responded to market pressures by loosening its production quota to 93,800.¹⁴⁸ Moreover, the resource tax and compensation fee appear to be too small to make a serious impact on production. The resource tax amounts to only US\$9.10 per ton of light rare earths and US\$4.50 per ton of medium or heavy rare earths.¹⁴⁹ These are negligible fractions of the per ton price of various rare

¹⁴⁴ See e.g., 2009 Nian Wu Xi Ti Kuang Han XiTuKuang KaiCai ZongLiang KongZhi ZhiBiao De TongZhi (2009 年钨矿铋矿和稀土矿开采总量控制指标的通知) [Circular of 2009 Control Index of Total Exploitation Amount of Tungsten, Antimony and Rare-Earth] (promulgated by the Ministry of Land and Resources, Apr. 10, 2009).

¹⁴⁵ 2011 Rare Earth Opinions, *supra* note 102.

¹⁴⁶ KuangChan ZiYuan BuChang Fei ZhengShou GuanLi GuiDing (矿产资源补偿费征收管理规定) [Provisions on Administration of Mineral Resources Compensation Collection] (promulgated by the Standing Comm. National People's Congre., June 29, 1993, amended, July 3, 1997).

¹⁴⁷ Tse, *supra* note 137, at 4. Note that the US is a complainant in *China – Rare Earths*.

¹⁴⁸ 2011 Nian Wu Xi Ti Kuang Han XiTuKuang KaiCai ZongLiang KongZhi ZhiBiao De TongZhi (2011 年钨矿铋矿和稀土矿开采总量控制指标的通知) [Circular of 2011 Control Index of Total Exploitation Amount of Tungsten, Antimony and Rare-Earth] (promulgated by the Ministry of Land and Resources, Mar. 23, 2011).

¹⁴⁹ See *China: Increase of more than 1000% of an adjusted rare earth tax*, GlobalTradeAlert.Org, <http://www.globaltradealert.org/measure/china-increase-more-1000-adjusted-rare-earth-tax> (last visited: May 28, 2012). In 2011, China raised its extraction tax on rare earths from 10 to 20 times. Although the magnitude of change is large, the impact on production is little.

earths.¹⁵⁰ The compensation fee has been previously ruled not to operate as a significant restriction on production.¹⁵¹ China strengthened the measure's reporting requirements in 2012, but the fee itself remained unchanged.¹⁵² China must evidence that this framework in fact limits domestic production to meet the "in conjunction with" test.

China is taking steps to make its production quotas more effective. A key factor in China's alleged excess production could be illegal extraction. The 2011 Rare Earth Opinions, although primarily aimed at environmental protection, may contribute to conservation by restraining illegal production and sales.¹⁵³ The joint task force established in late 2011 strengthens enforcement.¹⁵⁴ Scale requirements for certified rare earths producers reduce the number of firms allowed to extract, which could improve the government's regulatory capacity.¹⁵⁵ The 2010 The Interim Provisions on the Administration of Exploration and Mining of Specific Protected Mineral Resources set out rules for enforcing production controls of important minerals, including rare earths. Illegal production is sanctioned according to relevant laws and regulations.¹⁵⁶ Mining authorities must seize excess

¹⁵⁰ Because there is no global exchange for rare earths, price data are not always freely available. However, MineralPrices.Com reports that on 5 March 2012, REO prices ranged from US \$30,000 per ton for cerium oxide (light REE) to US \$1,500,000 for dysprosium (heavy REE). MineralPrices.Com, <http://www.mineralprices.com/> (last visited June 4, 2012).

¹⁵¹ Panel Report, *China – Raw Materials*, *supra* note 88, ¶ 7.447.

¹⁵² GuanYu ZuoHao KuangChan ZiYuan BuChang Fei ZhengShou Tong Ji Zhi Bao GongZuo De TongZhi (关于做好矿产资源补偿费征收统计直报工作的通知) [Ministry of Land and Resources Circular on Implementation of Statistics Direct Report on Collection of Mineral Resources Compensation] (promulgated by the Ministry of Land and Resources, Jan. 5, 2012).

¹⁵³ 2011 Rare Earths Opinions, *supra* note 102.

¹⁵⁴ Kai zhan XiTu Zhuan Xiang Zheng Zhi Xing Dong Lian He Jian Cha De Tong Zhi (关于开展稀土专项整治行动联合检查的通知) [The Circular on Rare Earth Specific Rectification Actions and Joint Inspection] (promulgated by the Ministry of Land and Resources, Nov. 10, 2011).

¹⁵⁵ GongKai ZhengJi XiTu HangYe ZhunRu TiaoJian De YiJian (公开征集稀土行业准入条件的意见) [Calls for Comments on Market Access Standards for the Rare Earths Industry] (promulgated by the Ministry of Industry and Information Technology, May 12, 2010) At the time of drafting this Memorandum, China has not yet formally implemented these standards.

¹⁵⁶ BaoHu Xing KaiCai De TeDing KuangZhong KanCha Kaicai QuanLi ZhanXing BanFa (保护性开采的特定矿种勘查开采管理暂行办法) [The Interim Provisions on the Administration of Exploration and Mining of Specific Protected Mineral Resources] (promulgated by the

production, which may not be resold.¹⁵⁷ However, the Provisions may be primarily aimed at maintaining steady mineral supplies rather than conservation, as they allow for market adjustments.¹⁵⁸

China has in place a significant rare earths conservation framework consisting of production quotas, resource taxes, and compensation fees, and is taking important steps to limit illegal production. These efforts are relatively fresh, having begun in earnest in the past few years. However, a review of China's domestic restrictions, as well as a cursory look at recent data, suggest that the measures may not yet be effective. China needs to produce evidence that domestic production or consumption have been limited to meet the "in conjunction with" test under Article XX (g). Thus, China could require additional legislation to make its domestic restrictions more effective.

C. "EVEN-HANDEDNESS" OF CHINA'S EXPORT QUOTAS

China's export quotas would additionally need to be "even-handed" under Article XX (g). This requirement balances the burden imposed by China's conservation efforts between its trade partners and its domestic industries, and depends on the effectiveness of domestic restrictions on production and consumption. As their effectiveness remains unclear, this analysis must await additional evidence.

D. CONCLUSION

China's export quotas are unlikely to meet the requirements of GATT Article XX (g). First, China's measures may not relate to conservation without convincing evidence to support their impact on conservation. Second, China must impose effective restrictions on domestic production or consumption in order to balance the burden of its export quotas on foreign trade partners.

Ministry of Land and Resources, Nov. 24, 2009, effective, Jan. 1, 2010), art. 19. It is not immediately clear to which laws and regulations this provision refers, or whether these measures are yet in place.

¹⁵⁷ *Id.*, art. 16. It is unclear what must be done with the excess. This could allow producers to over-extract and recover costs, especially when market conditions or socio-political expedients demand. For example, producers could be allowed to over-extract without serious consequences to avoid laying off workers. The goal of maintaining high employment would then trump conservation. Thus, the level of enforcement is ambiguous.

¹⁵⁸ *Id.*, art. 7.

China may need to strengthen its measures with additional legislation in order to meet the terms of this exception.

VII. GATT ARTICLE XX “CHAPEAU” APPLICATION TO CHINA’S EXPORT QUOTAS

If China’s export quotas could meet one of the exceptions listed under GATT Article XX, they would face a second important hurdle under the “chapeau.” The chapeau seeks to strike a balance between “the right of a Member to invoke an exception under Article XX and the *duty* of that same Member to respect the treaty rights.”¹⁵⁹ It consists of two legal tests. The disputed measure must not constitute “a means of arbitrary or unjustifiable discrimination between countries where the same conditions prevail” or “a disguised restriction on international trade.” We examine each in turn.

A. *ARBITRARY OR UNJUSTIFIABLE DISCRIMINATION*

The first test contains three elements.¹⁶⁰ First, the application of the measure must be discriminatory. Second, the discrimination must be “*arbitrary or unjustifiable* in character.”¹⁶¹ Third, the discrimination must occur between “countries where the same conditions prevail.”

1. Discrimination

On their face, China’s export quotas on rare earths are equally applicable to all exporters, regardless of export destination. Procedural rules on quota allocation are based on objective criteria such as environmental standards, ISO certificates, labor standards, and so on. There seems to be no rule stipulating how exporters must choose among different potential customers. Thus, China’s export quotas do not appear to discriminate between foreign trade partners.

However, the way in which China manages the sales of rare earths abroad and home may discriminate between Chinese and foreign markets. The AB confirmed in *US – Shrimp* that discrimination under the chapeau can

¹⁵⁹ Appellate Body Report, *US – Shrimp*, *supra* note 93, ¶ 156 (original emphasis).

¹⁶⁰ *Id.*, ¶ 150.

¹⁶¹ *Id.*

occur “not only between different exporting Members, but also between exporting Members and the importing Members concerned.”¹⁶² China has implemented elaborate rules on applications for export quota licenses that are tied to environmental protection, but it is not clear to what extent domestic sales are subject to similar rules.

China’s policy justifications will do little to dismiss the concern that its export quotas are discriminatory. Whether aimed at “signaling,” reducing illegal production, consolidating a fragmented industry, or attracting green technologies and expertise through foreign investment, or a combination of these goals, China’s export quotas appear to put most of the burden on other Members. As under Articles XX (b) and (g) above, China must show that it has taken effective action to protect the environment and conserve resources at home, especially given the distortionary effects of export restrictions that could increase domestic production or consumption. If China’s restrictions affect only exports, without similarly affecting home supplies of rare earths, then China would appear to discriminate between its market and other Members.

2. *Arbitrary or unjustifiable*

If China’s export quotas are deemed discriminatory, they must also be found to be “arbitrary or unjustifiable.” China’s measures do not appear to be arbitrary because the requirements for export quota licenses are clearly enumerated and based on objective criteria. However, the export quotas could be unjustifiably discriminatory due to the availability of alternative courses of action (see Sections V and VI). These include, most notably, the possibility that China could effectively regulate domestic production and consumption, placing some burden on its own market to assure that rare earths extraction protects the environment and conserves the resource over time. If this burden is left to export markets alone, the measures could be unjustifiable.

¹⁶² *Id.* In other words, discrimination could occur in the “most-favored nation” or “national treatment” sense.

3. Countries where the same conditions prevail

Finally, a country's measures must take account of both the similarities and differences between conditions in all relevant countries. "Countries where the same conditions prevail" has been clarified to include both comparisons between importing countries as well as between the exporting and importing countries.¹⁶³ As noted in Sections I & VI, demand for rare earths is rising both inside and outside China. In this sense, China's domestic market could be comparable to foreign markets.

4. Conclusion

While China's export quotas appear to be applied in a non-arbitrary manner, its lenient rules on environmental compliance for rare earths sold at home as opposed to those sold abroad, and its focus on placing much of the burden for its policy goals on foreign rather than domestic markets, could amount to unjustifiable discrimination under the chapeau.

B. DISGUISED RESTRICTION ON TRADE

Next, China's export quotas must be shown not to be "disguised restrictions on trade." In other words, it should not camouflage trade-restrictive objectives.¹⁶⁴ On their face, export quotas are much more trade-restrictive than some viable alternatives, such as environmental guidelines or production quotas. Regulating at source has a direct impact on resource conservation without distinguishing between domestic and foreign consumption. China has implemented legislation setting environmental guidelines and limiting domestic production, which could be evidence of its capacity to use these instruments in lieu of export quotas. Thus, the trade-restrictive effect of the quotas may cancel whatever value they could add to China's environmental and conservation goals.

It is important to add that the many economically distortionary effects of export quotas,¹⁶⁵ if present, could further evidence a disguised restriction on trade. These include benefits to China's terms of trade as export quotas act

¹⁶³ See e.g., Appellate Body Report, *US – Gasoline*, *supra* note 123, at 23–24.

¹⁶⁴ Panel Report, *EC – Asbestos*, *supra* note 94, ¶ 8.236.

¹⁶⁵ See Section II.

to raise international prices to the benefit of producers, as well as lower domestic prices for consumers. These effects could not be ruled out under the XX (b) and (g) analyses above. Whether or not China intends these effects may be irrelevant.

C. CONCLUSION

China's chosen measures could constitute both unjustifiable discrimination and a disguised restriction on trade under the terms of GATT Article XX chapeau. Moreover, in the AB's view, "'arbitrary discrimination', 'unjustifiable discrimination' and 'disguised restriction' on international trade" may be read "side-by-side."¹⁶⁶ Thus, the two requirements could reinforce each other. China's export quotas are therefore unlikely to meet the requirements of the chapeau, even if they could be excepted under the specific provisions of GATT Articles XX (b) or (g).

VIII. CONCLUSION AND SUGGESTIONS

This Memorandum examined the consistency of China's rare earths export quota regime in light of certain sustainable development-related exceptions to WTO rules. Based on a review of relevant Chinese laws and regulations, the current regime likely violates GATT Article XI, the general prohibition on quantitative restrictions, and falls short of an Article XI:2 (a) carve-out. China could also seek to justify its measures for environmental protection or natural resource conservation purposes, in line with GATT Articles XX (b) and XX (g). However, despite China's substantial efforts in recent years to improve its sustainable development-related regulations, its export quota regime is not likely to meet the narrow terms of these exceptions. This conclusion is reinforced by the additional hurdle of the Article XX chapeau. These observations are preliminary, based solely on review of China's publicly available laws and regulations in 2012. Additional information, including scientific and economic data, is necessary to better assess the impact of China's measures and their consistency with WTO rules.

¹⁶⁶ Appellate Body Report, *US – Gasoline*, *supra* note 123, at 25.

Moving beyond the case of Chinese rare earths, we note more generally that the GATT exceptions may leave alarmingly little policy space to Members applying export quotas for sustainable development purposes. Article XI:2 (a) applies only to very narrow conditions. GATT Article XX provisions allow some policy space for export quotas, albeit very little, but that space all but disappears under the chapeau.

Too strict an interpretation of GATT rules could undermine the reasons for allowing exceptions in the first place. For example, export quotas could be preferable to export taxes under certain circumstances.¹⁶⁷ GATT does not prohibit export taxes, giving many Members the potential expectation of that export restrictions should be available to manage natural resources. Similarly, export quotas may be permissible with an Article XX exception. Yet, if the disciplines are read as narrowly as they now appear to be, then Members may not reasonably expect to have recourse to an Article XX exception. This could effectively ban export quotas under *any* circumstances.¹⁶⁸

Developing countries may have an even greater need for recourse to these exceptions. Such countries are not only developing economically, but also socially and institutionally. Without the capacity in certain cases to effectively regulate domestic markets, trade measures may be a “second-best” alternative. For example, although China seeks to impose domestic restrictions, its production quotas are routinely exceeded due to illegal production. Additional analysis would be required to ascertain the verity of China’s lack of control and to confirm that it is taking real steps to improve enforcement. Nevertheless, export restrictions could be China’s only reasonably available policy option for conserving rare earths and preventing

¹⁶⁷ As noted earlier, some of the wealthiest Members could afford higher prices even if the export tax is in place. See *supra* note 130 and accompanying text.

¹⁶⁸ This result is a particularly difficult situation for China, given that it may only apply export taxes to 84 products, excluding rare earths. See China Protocol, *supra* note 16, art. 11.3.

environmental damage until production controls can be made effective. In this case, China should be justified in seeking a GATT Article XX exception.¹⁶⁹

Export restrictions are not necessarily the best means – or, in many cases, even a good means – to protect the environment or conserve natural resources. They must operate to actually reduce domestic production, pollution, or consumption. Due to the counter-conservation effects of market distortions from export restrictions, they must likely be imposed in addition to real domestic restrictions in order to be effective. Notwithstanding, to the extent that the current disciplines achieve this result, export restrictions are not fundamentally flawed. However, if export restrictions in fact operate to *further* conserve the environment or natural resources, Members should be able to claim a legitimate right to impose them under GATT. These considerations should allow some flexibility in interpreting GATT provisions, which both WTO adjudicators as well as negotiating Members should keep in mind.

¹⁶⁹ GATT Article XX (d) could also apply in this case because export quotas may ensure the effective implementation of conservation and environmental measures. However, application of XX (d) is beyond the scope of this Memorandum.

-Appendix I-

List of the Reviewed P.R.C Measures

<i>Legal Instruments on Export Restrictions</i>	
1	Foreign Trade Law (promulgated, May 12, 1994; amended, Apr. 6, 2004; effective July 1, 2004)
2	Regulation on Import and Export Administration (promulgated, Dec. 10, 2001, effective, Jan. 1, 2002)
3	Measures for the Administration of License for the Export of Goods (promulgated, May 7, 2008, effective July 1, 2008)
4	2012 Export Licensing Management Commodities List (promulgated, Dec. 30, 2011, effective, Jan. 1, 2012)
5	Customs Law (promulgated, Jan. 22, 1987, amended, July 8, 2000)
6	2012 Notice on List of Rare Earth Export Enterprises and First Batch Rare Earth Export Quota (promulgated, Dec. 26, 2011)
7	The MOFCOM Circular with respect to the Eligibility and Procedure for the Application to Rare Earth Quota for 2012 (promulgated, Nov. 11, 2011)
8	Mineral Resources Law (promulgated, Mar. 19, 1986, amended, Aug. 29, 1996, effective July 1, 1997)
9	The State Council Circular on Listing Tungsten, Tin, Antimony and Ion-Type Rare Earth as National Protected Mining Minerals (promulgated, Jan., 15, 1991)
10	Ministry of Foreign Trade and Economic Cooperation Circular with respect to the Rare Earth Export Quota for 1999 (promulgated, Feb. 14, 1999, effective Feb. 14, 1999)

<i>Legal Instruments on Resource Conservation, Health & Environmental Protection</i>	
1	The Ministry of Land and Resources Circular on the Suspension of Mining Permit for the Rare Earth and other Seven Minerals] (promulgated, Apr. 23, 1999, effective Apr., 23, 1999)
2	Interim Provisions on the Administration of Foreign-Funded Rare-Earth Industry) (promulgated, Aug., 2002, effective Aug. 1, 2002)
3	Ministry of Land and Mineral Resources Circular on the Implementation of "National Mineral Resources (2008-2015) (promulgated, Dec. 31, 2008, effective, Dec. 31, 2008)
4	Circular of 2009 Control Index of Total Exploitation Amount of Tungsten, Antimony and Rare-Earth] (promulgated, Apr. 10, 2009)
5	Circular of 2010 Control Index of Total Exploitation Amount of Tungsten, Antimony and Rare-Earth] (promulgated, Mar. 4, 2010)

6	Circular of 2011 Control Index of Total Exploitation Amount of Tungsten, Antimony and Rare-Earth (promulgated, Mar. 23, 2011)
7	Calls for Comments on Market Access Standards for Rare Earth Industry (published, May 12, 2010)
8	Several Opinions on Promoting Sustained and Healthy Development of Rare-earth Industry] (promulgated, May 20, 2011)
9	Emission Standards of Pollutants from Rare Earths Industry (promulgated, Jan., 24, 2011, effective Oct. 1, 2011)
10	Provisions on Administration of Mineral Resources Compensation Collection (promulgated, June 29, 1993, amended, July 3, 1997)
11	Ministry of Land and Resources Circular on Implementation of Statistics Direct Report on Collection of Mineral Resource Compensation (promulgated, Jan. 5, 2012)
12	Measures for the Environmental Protection Inspection of Rare Earth Enterprises) (promulgated, Apr. 6, 2011)
13	The Circular with respect to the List of Rare Earth Enterprises Qualified under the Environmental Protection Requirement (Batch I)] (promulgated, Nov. 22, 2011)
14	The Law the Prevention and Control of Occupational Diseases (promulgated, Oct. 27, 2001, amended, Dec. 31, 2011)
15	Radiological Protection Standards for the Production Places of Rare-Earth Elements] (promulgated by Ministry of Health, Apr. 8, 2002, effective, June 1, 2002)