China Council for International Cooperation on Environment and Development

Council Member Paper

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China Council for International Cooperation on Environment and Development

China's Green Market Supply Chain

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China's Green Market Supply Chains

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One of the great challenges of this century, for China and for the world, will be to meet the growing demand for food, feed and fiber while sustaining the healthy forests, rivers, and oceans on which we all depend. At the heart of this challenge lie the global commodity markets.

Unfettered markets can engender a "race to the bottom" – a race to catch every last fish, to cut down every last tree, clearing more and more land, and using more and more fertilizers and pesticides in the name of increasing production. And often they have.

But now far-sighted government and business leaders are beginning to recognize that a race to the bottom imperils their economies and their companies as well as the planet. The result is an array of initiatives to transform global markets to become engines of sustainable development. As the largest or second largest importer of many commodities, and a key producer of others, the role of China in these efforts will be crucial. China's leaders have emphasized that environment and development are fundamentally interdependent and have set out to build an "ecological civilization." These initiatives offer a singular opportunity for China and Chinese enterprises to translate the concept of an ecological civilization into practice, by working with partners from producing and consuming countries to set the standards that will shape global markets. It is an opportunity to help secure future supplies and to establish China and its enterprises as leaders in sustainability.

> *"We have to understand that to protect the environment is to preserve our productivity and to improve the environment is to develop our productivity. Such concepts should be deeply rooted."*
>
> *- Xi Jinping*

This paper provides an overview of the global commodity markets, focusing on food, feed and fiber, the promising initiatives that have emerged in recent years to begin to move those markets on to a sustainable footing, and the steps that will be needed to translate the initial success of these initiatives into fundamental transformation of the global markets. It then turns to the question of China's role, to look at how these efforts fit with the interests of China and of China's private and state-owned enterprises, and how they might engage and support them. It concludes with recommendations for action by the Chinese government, by Chinese enterprises, and by NGOs, for possible development by the Council.

[1] My thanks to Vincent Chen, Geena Chen, and Jieming Wei for their assistance in the research for this paper, and to several colleagues who reviewed drafts. The views expressed and any errors are, of course, my own.

1. THE IMPORTANCE OF GLOBAL COMMODITY MARKETS

The global commodity markets are vitally important to the prosperity and food security of the 9-10 billion people who will share the planet in 2050. They are also vitally important to the prosperity and food security of China.

1.1 Global importance

The fundamental challenge of this century is to build an economy that allows humanity to thrive within the limits of the Earth's resources. Meeting this challenge will require radical changes by consumers, businesses, and governments to shift to more sustainable consumption – to use fewer resources, to use resources more efficiently, and to make choices that reduce our ecological "footprint". It will require attention to shaping patterns of consumption, such as our diets; our total demand for food and feed crops, for example, will depend very much on how much meat we eat.[2] We will also need to get much better at recycling the resources we use.[3] And we will need to reduce the widespread waste in the current global economy.[4]

Changing the way we produce commodities to meet our needs and wants will be a critical part of this effort. We will have to find ways to meet the burgeoning demand for food and fiber while conserving forests, rivers, and ocean ecosystems. To that end, we will need to produce much more from every hectare of land and every liter of water that we use. And we will need to do that while also reducing our reliance on pesticides and chemical fertilizers that contaminate lands and waterways.

1.2 China

China's own development will depend on its success in addressing these challenges domestically. Growing prosperity has brought significant changes in consumption patterns, and building an ecological civilization will require action to shape those patterns. How the diets of people across China continue to change over the coming decades, for example, including how much they continue to shift toward increased consumption of meat,[5] will have profound implications for China's total demand for food and feed, and for China's dependence on imports of many types. Minimizing waste in the system will also be important.

China has a longstanding commitment to self-sufficiency in staple foods, and has supported research and development of new seeds and agricultural technologies to keep up with growing demand. There are exciting prospects for increasing China's domestic production.

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[2] It takes 40 kilograms of feed and more than 100,000 liters of water to produce 1 kilogram of beef. Pimentel, David, and Marcia Pimentel. "Sustainability of Meat-Based and Plant-Based Diets and the Environment." *The American Journal of Clinical Nutrition* 78.3 Suppl (2003): 660S–663S.

[3] China is already a leader in recycling paper, for example.

[4] One third of the food we grow is wasted – rotting in the fields, spoiling on the way to market, left unsold, or bought and discarded. Gustavsson, Jenny et al. *Global Food Losses and Food Waste*. Rome: Food and Agriculture Organization of the United Nations, 2011: v.

[5] Consumption of meat has increased rapidly in recent years. OECD/FAO. "Feeding China Prospects and challenges in the next decade", in *OECD-FAO Agricultural Outlook 2013*. OECD Publishing, 2013.

A recent study by researchers at the Chinese Agricultural University and Stanford University, published in Nature, found potential for significant increases in output with sharp reductions in inputs.[6]

But, with 20% of the world's population and only 9% of its arable land and 7% of its water, inevitably, China will need to get much of its food, feed and fiber from overseas, through direct investment in production and, predominantly, through trade.[7] Today, for example, China depends on foreign sources for most of the palm oil, soy, wild fish, and wood pulp it uses (Table 1).

Table 1. China's foreign dependence and share in global trade in selected commodities (2011 FAO data)[8,9]

	Foreign Reliance	Share in Worldwide Imports	Import Rank
Palm Oil	96.7%	16.1%	2
Soybeans	78.6%	59.9%	1
Rubber	74.5%	27.2%	1
Wood Pulp	63.1%	29.5%	N/A
Pelagic Fish	59.7%	24.4%	3
Cotton Lint	34.9%	45.6%	1
Industrial Roundwood	23.1%	35.8%	N/A
Sugar	22.8%	6.5%	1

Notably, some commodities will also be important to China's export markets. China is the leading exporter of many wood products, for example. China is also a leading producer and exporter of seafood, both wild-caught and farmed.[10] Increasingly, China is entering new markets, such as organic produce, and in some cases has become a world leader, such as for farmed Tilapia, which is now exported worldwide.

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[6] Chen, Xinping et al. "Producing More Grain with Lower Environmental Costs." *Nature* 514.7523 (2014): 486–9.

[7] Economy, Elizabeth, and Michael Levi. *By All Means Necessary: How China's Resource Quest Is Changing the World*. Oxford University Press, 2014: 189). China ranked third after US and Canada in foreign direct investment in agriculture (Economy, 63).

[8] Foreign reliance and share in worldwide imports are calculated with 2011 FAOSTAT data. (*FAOSTAT*. Rome, Italy: FAO, 2012. Web. 15. Oct. 2014.)); import rank from FAOSTAT.

[9] China's overall trade dependence (i.e. trade value per unit agricultural GDP) of Chinese agricultural products was 21% and its import dependence on agricultural products was 13% in 2011. (OECD/FAO. "Feeding China Prospects and challenges in the next decade", in *OECD-FAO Agricultural Outlook 2013*. OECD Publishing, 2013.)

[10] China captured 13.9 million tons of marine fish and produced 43.5 million tons of aquaculture food fish, accounting for 16.4% of the world's captured fish and 60% of global agricultural production in 2012. China was also the top exporter of seafood by value at US$18.2 billion in 2012. (*The State of World Fisheries and Aquaculture 2014*. Rome: Food and Agriculture Organization of the United Nations, 2014.)

2. THE PROBLEM

Global demand for many natural commodities has grown very fast over the past two to three decades. China has been an increasingly important part of that growth[11] and is expected to continue to be in the years ahead.[12]

On paper, commodity trade deals may seem a clear 'win-win' for both the importing and the exporting country. Importing countries have often not recognized, however, that unless it is well-managed, production of commodities can have devastating impacts on the global environment and on local resources and ecosystems, and can undermine local livelihoods.

2.1 Impacts

Climate Change: Commercial agriculture and deforestation together are a major cause of climate change – they account for about 24% of global greenhouse gas emissions. They are closely interrelated.[13] Seventy percent of the world's deforestation across tropical and subtropical countries comes from the clearing of land for commercial agriculture.[14] Expansion of palm oil plantations in Southeast Asia is the principal driver of deforestation in that region – so significant that Indonesia is the world's third largest emitter of greenhouse gases. Soy and beef production in Latin America are the principal drivers of deforestation in the Amazon and other forested areas. Timber and pulp production puts additional pressure on forests on every continent.

In addition to deforestation, agriculture produces additional emissions from use of fossil fuels and fertilizers, for example,[15] and the methane produced by livestock.[16]

Forest Loss: Climate change is not the only impact of deforestation, of course. Tropical forests are the richest reservoirs of species diversity. And forests everywhere are vital to the health of rivers and watersheds, to flood and erosion control, and to local climate. Yet a

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[11] China consumed 23% of major agricultural crops in 2010, with particularly sharp market share increases since 2000. (Roache, Shaun K. *China's Impact on World Commodity Markets*. International Monetary Fund, 2012: 3.

[12] Some have estimated that, overall, China will account for more than 40% of the growth in agricultural commodities between now and 2050. Linehan, Verity et al. "Food Demand to 2050: Opportunities for Australian Agriculture." *ABARES Conference March 2012*. Canberra, ACT, Australia: Australian Government Department of Agriculture, Fisheries, and Forestry, 2012.

[13] Chapter 11, IPCC 5th Assessment Report "Climate Change 2014: Mitigation of Climate Change. " IPCC Working Group III, Dec 2013.

[14] Lawson, Sam. *Consumer Goods and Deforestation: An Analysis of the Extent and Nature of Illegality in Forest Conversion for Agriculture and Timber Plantations*. Forest Trends, 2014: iii.

[15] Tubiello, F.N. et al. *Agriculture, Forestry and Other Land Use Emissions by Sources and Removals by Sinks*. Rome: Food and Agriculture Organization of the United Nations (FAO), 2014: 9.

[16] Gerber, Pierre et al. *Tackling Climate Change through Livestock – A Global Assessment of Emissions and Mitigation Opportunities*. Rome: Food and Agriculture Organization of the United Nations (FAO), 2013: xii.

recent analysis found that in the period 2000-2012, more than 200,000 square kilometers of forest was cleared to supply global agricultural commodity markets.[17]

Fisheries decline: Overfishing has depleted fisheries around the world. The FAO reports that 90% of the world's fisheries have been fished to their limit or beyond.[18] Some experts have projected that if current fishing trends continue, most commercial fisheries will be exhausted by the middle of this century.[19]

Water scarcity: Agriculture accounts for 70% of water use worldwide, and in some regions production of commodities for international trade is a major cause of water scarcity. Cotton production in arid regions of India and Pakistan is rapidly exhausting groundwater reservoirs, for example, and cotton production in Uzbekistan has literally drained the Aral Sea.[20]

Water pollution: In many places, including China, the intensive use of chemical fertilizers and pesticides and the huge quantities of waste produced by livestock operations are primary sources of water pollution. Some rivers are too contaminated for other uses. Nutrient surges cause red tides that destroy coastal aquaculture.[21] And in many cases, from the Mississippi River to the Yangtze River Estuary, the overload of nutrients has caused vast eutrophic "dead zones" where rivers enter the ocean.[22]

Poverty: As commodity production degrades natural resources and the environment, it undermines the welfare of local communities. Large-scale industrial production often has also posed a more direct threat – in many parts of the world, overfishing by commercial fleets has depleted the fish stocks that feed coastal communities; installation of massive soy or palm plantations has often displaced communities or compromised livelihoods.

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[17] Lawson, Sam. Consumer Goods and Deforestation: An Analysis of the Extent and Nature of Illegality in Forest Conversion for Agriculture and Timber Plantations. Forest Trends, 2014: 2.

[18] *The State of World Fisheries and Aquaculture 2014*. Rome: Food and Agriculture Organization of the United Nations, 2014: 7.

[19] Worm, Boris et al. "Impacts of Biodiversity Loss on Ocean Ecosystem Services." *Science (New York, N.Y.)* 314.5800 (2006): 787–90.

[20] Tavernise, Sabrina. "Old Farming Habits Leave Uzbekistan a Legacy of Salt." *The New York Times* 15 Jun 2008; Schwank, Othmar, Nicole North, and Michèle Bättig. *Freshwater & Cotton Field Case Studies: Assessment of Selected Cotton Projects in India, Pakistan and Turkey*. Zurich: World Wildlife Fund, 2001: 4.

[21] "On average, there are 90 red tides in China's seas each year, up from only one every five years in the 1960s." (Liu, Jianguo, and Jared Diamond. "China's Environment in a Globalizing World." *Nature* 435.7046 (2005): 1179–86.)

[22] Li, Daoji. "Oxygen Depletion off the Changjiang (Yangtze River) Estuary." *Science in China Series D* 45.12 (2002): 1137; Selman, Mindy et al. *Eutrophication and Hypoxia in Coastal Areas: A Global Assessment of the State of Knowledge*. Washington, DC: World Resource Institute, 2008.

2.2 Implications for long-term productivity

The environmental degradation caused by current commodity production practices is a direct threat to long-term productivity in these sectors. Overfishing is an obvious example, driving the depletion and ultimately exhaustion of fish stocks. Cod fisheries of the Northwest Atlantic are the most famous case, but they are hardly the only one. The Food and Agriculture Organization estimates that nearly 30% of global fisheries are overfished or depleted, and many more face escalating pressure.[23]

Overuse and contamination of water resources is also an acute concern in many places. In some currently productive regions, "mining" of water aquifers threatens to make future production impossible.[24] Continued deforestation may also disrupt rainfall regimes, undermining agricultural productivity.[25]

And, of course, rising temperatures and shifts in rainfall patterns caused by climate change threaten to reduce productivity in many agricultural regions.[26] Warming ocean temperatures are already causing upheavals in ocean ecosystems and displacement of fish stocks.[27]

So, it is clear that shifting to sustainable production is important for protecting the many values of forest, freshwater and ocean ecosystems, including their ability to sustain production of these commodities. China is facing huge challenges in protecting its own ecosystems, and has taken vitally important action, including, for example, the protection of forests in the watershed of the Yangtze River. As it addresses these risks at home, however, it is important that China also take measures to ensure that the commodities it imports are sustainably produced.

3. THE CHALLENGE OF SUSTAINABLE PRODUCTION

To curb the impacts described above and meet our growing needs within the limits of the Earth's resources, we need to shift these global commodity sectors to more sustainable production. In most of the countries producing food, feed and fiber for global markets, governments have taken some measures to require or encourage good practices. Few have put in place measures sufficient to ensure sustainability, however, and even where

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[23] In 2011, 28.8% of global fish stocks were overfished while 61.3% were fully fished. (*The State of World Fisheries and Aquaculture 2014*. Rome: Food and Agriculture Organization of the United Nations, 2014: 37)

[24] Foster, Stephen et al. "Quaternary Aquifer of the North China Plain - assessing and achieving groundwater resource sustainability." *Hydrogeology Journal* 12.1 (2004): 81–93. Web. 2 Nov. 2014: 87.

[25] Aragão, Luiz E O C. "Environmental Science: The Rainforest's Water Pump." *Nature* 489.7415 (2012): 217–8.

[26] Lobell, David B, Wolfram Schlenker, and Justin Costa-Roberts. "Climate Trends and Global Crop Production since 1980." *Science (New York, N.Y.)* 333.6042 (2011): 616–20.

[27] Brander, K M. "Global Fish Production and Climate Change." *Proceedings of the National Academy of Sciences of the United States of America* 104.50 (2007): 19709–14.

governments have measures in place, their management regimes are often undercut by massive illegal trade.

3.1 Illegal Trade

A critical step in moving toward sustainable production is to confront the problem of illegal trade. While it is notoriously difficult to measure the extent of illegal trade, it is clear that many of the natural resources in international commerce were procured illegally. Recent analyses suggest that 15-30% of the volume of timber in international trade was harvested illegally[28] (and as much as 90% in certain countries), generating approximately US$10-15 billion annually in criminal proceeds[29]. Similarly, an estimated 11 to 25 million tons of fish (or 12-27% of total catch[30]), are taken in violation of national or international management regimes annually.[31]

Many agricultural commodities are also illegal, having been grown on lands that were cleared and cultivated in violation of local laws. A recent analysis estimates that nearly half of all deforestation is caused by illegal conversion of lands for commercial agriculture, and nearly half of that was agriculture for export.[32]

Left unchecked, illegal trade makes sustainable production impossible. It defeats governments' efforts to manage their resources wisely. It cheats those who are trying to be responsible by undercutting them in the marketplace. And in many countries it fuels corruption. Controlling illegal trade is thus an essential foundation for sustainable markets.

3.2 Raising Standards

The broader need is to recognize that current policies and management regimes are often inadequate, and that further action is required to ensure that production practices are truly sustainable.

Historically, industry and governments have equated increase with expansion – bringing more hectares into production, using more water, and applying ever more inputs of fertilizer and pesticides. This expansion has been costly, but many of the costs of our current commodity production system – such as water pollution, forest loss, and fisheries

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[28] Nellemann, Christian. *Green Carbon, Black Trade: Illegal Logging, Tax Fraud and Laundering in the World's Tropical Forests*. INTERPOL Environmental Crime Programme and UNEP, 2012.

[29] Goncalves, Marilyne Pereira et al. *Justice for Forests: Improving Criminal Justice Efforts to Combat Illegal Logging*. The World Bank, 2012.

[30] Total global capture production was 93.7 million tons in 2011. (*The State of World Fisheries and Aquaculture 2014*. Rome: Food and Agriculture Organization of the United Nations, 2014.)

[31] Agnew, David J et al. "Estimating the Worldwide Extent of Illegal Fishing." Ed. Stuart A. Sandin. *PloS one* 4.2 (2009): e4570.

[32] Almost half of total tropical deforestation between 2000 and 2012 was due to illegal conversion for commercial agriculture, causing approximately 1.5 Gt of CO_2 emissions per year. An estimated 90% of Brazilian Amazon deforestation and 80% of Indonesian deforestation was illegal. (Lawson, Sam. Consumer Goods and Deforestation: An Analysis of the Extent and Nature of Illegality in Forest Conversion for Agriculture and Timber Plantations. Forest Trends, 2014: 2.)

depletion – are "externalized." They are not borne by the producer, or in many cases even by the producing country.

The challenge is to confront these costs and move toward more sustainable practices. That means better management of the resources we use – managing fisheries and logging operations to sustain healthy stocks, reducing use of chemical inputs, using water wisely. It means stopping the conversion of forests and other habitats by, for example, restoring already degraded lands and bringing them into production, and ensuring that some lands and waters are just outright protected. It means ensuring that commercial production supports local livelihoods.

Even as they recognize that such reforms are needed, governments have struggled to tackle these problems. In a globalized economy, efforts to strengthen regulation or management are easily overwhelmed by the pressure of competition with other producing countries.[33] Many developing countries simply lack the capacity to set standards or to enforce them effectively. And often management or regulation is compromised by corruption, which flourishes in a market that has huge financial flows and that is fundamentally opaque.

The shift to sustainable production thus will only be possible if global markets support the shift – if the countries and companies who buy these commodities favor producers who operate sustainably. That has now begun to happen.

4. THE OPPORTUNITY: THE GLOBAL EFFORTS NOW UNDERWAY

While the last two decades have seen huge growth in production of commodities, in that period we have also seen the emergence of global efforts – voluntary, and largely private – to shift whole sectors to more sustainable production. These efforts began with the creation of the Forest Stewardship Council in 1994, which established standards for good management of forests and a certification regime for assessing individual landowners' or companies' compliance with those standards. The Marine Stewardship Council, established a few years later, brought that approach to fisheries. In the years since, similar voluntary private initiatives have been launched in many other sectors, including aquaculture and many agriculture commodities, such as sugar, cocoa, coffee, cotton, soy, beef, and palm oil.[34]

4.1 Key components

While details vary across sectors, overall these efforts have been built on three tools – traceability, standards, and certification.

Traceability: These voluntary regimes depend on transparency – buyers, and ultimately consumers, need to be able to purchase with confidence that they are supporting

[33] Global Environmental Institute. *Environmental and Social Challenges of China's Going Global*. Beijing: China Environment Press, 2013; Vandenbergh, Michael P. "Climate Change: The China Problem." *Southern California Law Review* 81 (2008): 905–58.

[34] For a good overview of these global sustainability initiatives, see Potts, Jason et al. *The State of Sustainability Initiatives Review 2014: Standards and the Green Economy*. International Institute for Sustainable Development (IISD), 2014.

sustainable producers. So, most regimes provide a system for traceability. The specifics vary, because what is practical for seafood may be different for soy. But traceability is key, and it means that these private initiatives can help buyers screen out illegal products while also helping them drive better performance.

Standards: At the heart of each of these efforts lie global principles and standards for sustainability in that sector. In some cases, as with FSC, these global standards are elaborated into more specific regional criteria. Many of the leading standards have been developed through "roundtable" processes bringing together a wide range of stakeholders to hammer out a consensus. While standards regimes have proliferated in recent years, for each commodity there are standards that command broad respect in both producing and consuming countries and that are increasingly accepted as global norms.[35]

Certification: In these voluntary regimes, the key to implementation is certification. Once the rules are in place – standards for production and requirements for traceability – any producer or trader can have their performance assessed by an accredited third party certifier. If they meet the standard, they can sell their goods as certified sustainable products. Each certification system has an internationally recognized label that can be used to market certified products. Certification provides independent, objective assurance to buyers and consumers that the goods they purchase are in fact sustainably produced.

4.2 Progress

While these initiatives are private and voluntary, they are playing a vital role in helping move the global commodity system to sustainability. Certification of chains of custody is helping to ensure that commodities in trade are produced in accordance with local laws. Certification of performance against international standards for sustainability is driving better management practices (and often significant improvements in efficiency and productivity), and it is creating a market for those who do it right. Ultimately, a market that supports sustainable production can also create the political space for governments to better address these challenges, by creating a growing constituency for regulatory standards that lift the performance of all producers.[36]

Over the past several years, certification regimes have gained a significant foothold in many of the commodity markets that pose the biggest sustainability challenges. As of October 2014, 16% of the world's palm oil production has been certified under the Roundtable on Sustainable Palm Oil (RSPO)[37], and 10% of timber under the FSC (2012).[38] MSC certification now covers 10% of wild-caught seafood (2013)[39], including approx. 53% of whitefish

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[35] Ibid.

[36] Steering Committee of the State-of-Knowledge Assessment of Standards and Certification. *Toward Sustainability: The Roles and Limitations of Certification*. RESOLVE, Inc., 2012.

[37] "Shared Responsibility of Certified Sustainable Palm Oil to Be Discussed at RSPO Conference." Roundtable on Sustainable Palm Oil, 2014: 2.

[38] *The 2050 Criteria: Guide to Responsible Investment in Agricultural, Forest, and Seafood Commodities*. Washington, DC: World Wildlife Fund, Sep 2012: 5.

[39] *Marine Stewardship Council Annual Report 2013-2014*. Marine Stewardship Council, 2013.

(2012).[40] Table 2 provides an overview of the market penetration of certification compliant products in various commodity markets.

Table 2. Market share of sustainability certification compliant products in select commodity markets[41]

Commodity	2008	2012
Coffee	15%	40%
Cocoa	3%	22%
Palm Oil	2%	15%
Tea	6%	12%
Cotton	1%	3%
Bananas	2%	3%
Sugar	<1%	3%
Soy Beans	2%	2%

Notably, some of these initiatives have inspired commitments that go beyond the requirements of certification. Many of the commitments in the palm oil market, for example, go well beyond the RSPO standard.[42]

4.3 From Certification to Market Transformation

The critical question is how do we ensure that sustainable products are not just a niche market but in fact are the mainstream market. This transformation will require broader engagement of business – reaching enterprises everywhere. It will also require government action -- in producing countries, to establish binding standards; and in consuming countries, to favor trade in sustainable products.

A growing global effort on deforestation is an exciting example of the potential to leverage voluntary certification efforts to drive change across entire global markets. In 2010, the Consumer Goods Forum, composed of 400 companies with total sales of more than US$3 trillion, committed to eliminate deforestation from their supply chains by 2020. Two years later, that effort was embraced by governments, now including the governments of the US, UK, Netherlands, Norway, Liberia and Indonesia, and by many leading international NGOs, who joined with the Consumer Goods Forum to create the Tropical Forest Alliance, focused on delivering the Forum's commitments. In September 2014, at the UN Climate Summit, this broad coalition was endorsed as part of the New York Declaration on Forests, signed by

[40] *The 2050 Criteria: Guide to Responsible Investment in Agricultural, Forest, and Seafood Commodities*. Washington, DC: World Wildlife Fund, Sep 2012: 5.

[41] Potts, Jason et al. *The State of Sustainability Initiatives Review 2014: Standards and the Green Economy*. International Institute for Sustainable Development (IISD), 2014: 90.

[42] In 2014, major global traders of palm oil including Wilmar International, Golden Agri-Resources, and Cargill – together representing 60% of global trade – have adopted zero deforestation policies. (UN Climate Summit 2014. *New York Declaration on Forests: Action Statements and Action Plans*. New York, 2014.)

27 national governments, 34 companies, 16 indigenous peoples organizations, and 45 NGOs.[43]

The Alliance has set its sights on ending deforestation in the four sectors that are the main drivers of tropical forest loss – palm oil, soy, beef, and timber and pulp. It will do that principally by shifting production to voluntary sustainability standards set for each of those sectors. And early progress is encouraging – as of September 2014, commitments had been secured from enterprises that account for more than 60% of all the palm oil in international trade,[44] and work on soy and beef commitments is well underway.

"For Chinese enterprises involved with palm oil, the coming five years will be a critical period for the development of a robust sustainability approach that will offer better guarantees for the future stability of the palm oil sector and its contributions to food security, economic prosperity and global environmental improvement."

(Prospects and Challenges of Sustainable Palm Oil for China. China Chamber of Commerce of Foodstuffs and Native Produce, 2012: 12.)

4.4 This Opportunity

These efforts provide an unprecedented opportunity for the world and for China to assure long-term sustainable supply of commodities that are vital to food security and the economy. They have strong and rapidly growing support across a broad base of international companies, including many companies that are already important investors in China,[45] as well as governments and the UN.

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[43] "The New York Declaration on Forests constitutes a call to cut the loss of forests in half by 2020 and, for the first time, to end it a decade later in 2030. It also calls for the restoration of more than 350 million hectares of forests and croplands, an area greater than the size of India." (UN Climate Summit 2014. *Declaration Would End Billions of Tons of Climate Pollution per Year, Restore 350 Million Hectares of Forest; Backed by Tangible Private Sector Commitments: Governments, Business, Civil Society Pledge to End Loss of Forests*. Sep 23 2014.) If fully implemented, the measures outlined in the declaration would cut up to 8.8 billion tons of carbon dioxide each year by 2030.
The Consumer Goods Forum (CGF), a global alliance of 400 large companies with global sales of US$3 trillion, has pledged to eliminate deforestation from their supply chains including soy, palm oil, beef, pulp and paper by 2020. This effort from the private sector has been embraced by 27 national governments of developed and developing countries, including Belgium, Chile, Colombia, Costa Rica, Cote d'Ivoire, DR Congo, Ethiopia, France, Germany, Guyana, Indonesia, Japan, Kenya, Liberia, Lithuania, Mexico, Mongolia, Nepal, Netherlands, Norway, Peru, Philippines, Republic of Korea, Togo, United Kingdom, United States, and Vietnam. (UN Climate Summit 2014. *New York Declaration on Forests: Action Statements and Action Plans*. New York, 2014.)

[44] UN Climate Summit 2014. *New York Declaration on Forests: Action Statements and Action Plans*. New York, 2014.

[45] "In 2011, foreign investment enterprises and private enterprises accounted for 80 per cent of palm oil imports into China. Between 2007 and 2011, imports of foreign investment enterprises accounted for 51.7 per cent of total imports while, over the same time period, imports from private enterprises were about 30 per cent. State owned enterprises accounted for approximately 10 per cent of total imports in 2011 (Global Environmental Institute, 2013). The top 10 largest importers are mainly foreign investment enterprises and private enterprises, including both commodities traders such as Bunge and Cargill, and users such as McDonalds and Unilever." (Potts, Jason et al. *Meeting China's*

These efforts can only succeed if China and Chinese enterprises support the shift to sustainable production. In fact, it appears that many of those producers resisting the move to sustainable production are counting on being able sell their products to China. So, much will depend on the choices made by China and by Chinese enterprises. By taking action to support producers who are adopting sustainable practices, China can make clear that it will not be a market for those who continue to deplete the planet's forests, fisheries, and water resources at the expense of the climate and of future prosperity. These global initiatives offer the opportunity for China to become a partner in shaping and driving a shift to more secure, stable, sustainable supply.

Engagement is an easy way for Chinese companies to begin to meet these challenges – to help screen illegal products out of their supply chains and to move to higher standards. Engagement now would also open up the opportunity for China and Chinese companies to help take current efforts to scale, and to shape their future evolution.

5. ACTION IS IN THE INTERESTS OF CHINA AND OF CHINESE COMPANIES

The Government of China has increasingly been instructing Chinese companies to ensure that their operations, trade and investments are sustainable[46]. The State Council has issued a broad mandate to State-Owned Enterprises to operate in an environmentally and socially responsible manner.[47] In 2013, MOFCOM and MEP issued "Guidelines for Environmental Protection in Foreign Investment and Cooperation" which require Chinese companies operating abroad to comply with local environmental laws, and encourage alignment with standards and practices adopted by international organizations.[48] The State Forestry Administration has issued guidelines for forestry operations overseas, specifying that Chinese companies must strictly observe the laws and policies of the host country, and "safeguard local ecological and environmental security."[49] The China Banking Regulatory Commission has also issued "Green Credit Guidelines", the first of their kind issued by any

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Global Resource Needs and Managing Sustainability Impacts to Ensure Security of Supply: Palm Oil Pilot Study. International Institute for Sustainable Development (IISD), 2014: 21)

[46] See generally, Hao, Fanghua, and William Valentino. *Corporate Social Responsibility in Green Development in China: CCICED Special Policy Study Summary Report*. China Council for International Cooperation on Environment and Development (CCICED), Nov 2013: 10-11.)

[47] "Guidelines to the State-Owned Enterprises Directly under the Central Government on Fulfilling Corporate Social Responsibilities." State-owned Assets Supervision and Administration Commission of the State Council (SASAC), PRC, 2008. Web. 3 Nov. 2014. Available online at: http://www.sasac.gov.cn/n2963340/n2964712/4891623.html.

[48] "Notification of the Ministry of Commerce and the Ministry of Environmental Protection on Issuing the Guidelines for Environmental Protection in Foreign Investment and Cooperation." Ministry of Commerce, PRC (MOFCOM) and Ministry of Environmental Protection, PRC (MEP), 2013. Web. 3 Nov. 2014. Available online at: http://english.mofcom.gov.cn/article/policyrelease/bbb/201303/20130300043226.shtml.

[49] "A Guide on Sustainable Overseas Forests Management and Utilization by Chinese Enterprises." Ministry of Commerce, PRC (MOFCOM) and Ministry of State Forestry Administration, PRC (SFA), 2010. Web. 3 Nov. 2014. Available online at: http://www.forestry.gov.cn/portal/main/s/224/content-401396.html.

country, which require Chinese financial institutions to establish lending policies in consideration of the borrower's environmental and social compliance when lending at home and abroad.[50]

It has often been challenging to translate these broad mandates into action, and implementation has been uneven. The international initiatives described above reflect a broad and growing global consensus on what that these mandates should mean in global commodity production – what is "responsible" and "sustainable."

5.1 China's Interests

Engaging these efforts will serve China's interests in many ways.

Climate Change: Shifting to sustainable production of commodities is fundamentally important to controlling climate change. As discussed above, commercial agriculture is a major source of greenhouse gas emissions in its own right, and the primary cause of deforestation. To get more specific – Indonesia's pledge to reduce its greenhouse gas emissions by 41% by 2020, with international assistance, and Brazil's parallel pledge to achieve a 36-39% reduction, depend upon their ability to curb the conversion of forest to produce palm oil, soy, and beef. Shifting those commodities to sustainable (deforestation-free) production is thus essential to their success.[51] As the largest market for soy, and the second largest market for palm oil, China has the opportunity to make the critical difference.

Food Security: Many of the consequences of current production practices outlined above are serious threats to China's food security. Climate change, of course, poses grave risks to agricultural productivity across China and in many other regions that supply China.[52]

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[50] In particular, creditors "shall strengthen the environmental and social risk management for overseas projects … [to ensure] project sponsors abide by applicable laws and regulations on environmental protection … of [the host country]." "Green Credit Guidelines." China Banking Regulatory Commission (CBRC), 2012. Web. 3 Nov. 2014. Available online at: http://www.cbrc.gov.cn/EngdocView.do?docID=3CE646AB629B46B9B533B1D8D9FF8C4A.

[51] More than half of Indonesia's GHG emissions come from deforestation and land-use change. Indonesia – currently the third largest GHG emitter of the world behind China and the US – has made reduction of emissions from deforestation a core strategy of its national mitigation plan. (Boer, Rizaldi et al. *Indonesia Second National Communication Under The United Nations Framework Convention on Climate Change*. Ministry of Environment, Republic of Indonesia, 2010: iii, xiii) Brazil, on the other hand, saw its GHG emissions fall nearly 40% from 2005 to 2010 partly due to significant success in reducing deforestation in the Amazon. It will be critical to ensure that the continued growth of beef and soy production does not reverse that progress. (Tollefson, Jeff. "Brazil Reports Sharp Drop in Greenhouse Emissions." *Nature* (2013))

[52] Production of rice, maize and wheat in the past few decades has declined in many parts of Asia due to increasing water stress, arising partly from increasing temperatures and changing rainfall patterns. (Bates, Bryson et al. *Climate Change and Water. Technical Paper of the Intergovernmental Panel on Climate Change*. Geneva: IPCC Secretariat, 2008: 87) See also Garnett, Tara, and Andreas Wilkes. *Appetite for Change: Social, Economic and Environmental Transformations in China's Food System*. Food Climate Research Network, Oxford University, 2014: 24.

Deforestation may disrupt local rainfall patterns.[53] The depletion of surface and ground water resources through overextraction, compounded by climate change, is a looming catastrophe in many important growing regions.[54] And, of course, overfishing is already depressing harvests – a World Bank study estimated that over 75% of the world's fish stocks were underperforming, resulting in an annual loss of US$50 billion to the global economy.[55]

Being a good trade and investment partner: For decades, China's leaders have emphasized their commitment to being good partners in trade and investment.[56] The government has been explicit that being a good partner requires that Chinese companies ensure compliance with each country's laws and regulations.[57] By its terms, that commitment requires vigilance that traded goods were legally produced. The voluntary global initiatives described here provide invaluable new tools for curbing illegal trade, to ensure that trade and investment uphold local laws. They also provide a basis for being a good partner to producers who are not only complying with the law but also achieving accepted standards for sustainable production.

China's exports: As the world increasingly demands sustainable products, China has the chance to establish itself as a leader in sustainability, and to use that position to expand its export markets.[58] One clear opportunity is in markets for commodities produced in China, such as farmed fish, for which some international standards are now in place.[59] A second opportunity is in the markets for products made in China from commodities sourced

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[53] Spracklen, D V, S R Arnold, and C M Taylor. "Observations of Increased Tropical Rainfall Preceded by Air Passage over Forests." *Nature* 489.7415 (2012): 282–285.

[54] Rain-fed crops in the plains of north and north-east China could face water-related challenges in future decades due to increases in water demand and soil-moisture deficit associated with projected declines in precipitation. Irrigation from surface water and groundwater sources is projected to meet only 70% of the water requirement for agricultural production, due to the effects of climate change and increasing demand. (Bates, Bryson et al. *Climate Change and Water. Technical Paper of the Intergovernmental Panel on Climate Change*. Geneva: IPCC Secretariat, 2008: 88)

[55] Arnason, Ragnar, Kieran Kelleher, and Rolf Willmann. *The Sunken Billions: The Economic Justification for Fisheries Reform*. World Bank, Food and Agriculture Organization of the United Nations, 2009.

[56] China, in its White Paper on Foreign Trade released in 2011, emphasized its commitment to being a "balanced, inclusive and mutually beneficial" partner and to realizing sustainable trade partnerships. The white paper is available online at: http://www.gov.cn/english/official/2011-12/07/content_2014019.htm.

[57] Examples of China's voluntary regulations include "Guidance on Environmental Protection in Foreign Investment and Cooperation" released jointly by the Chinese Ministry of Commerce (MOFCOM) and Ministry of Environmental Protection (MEP) in 2013 and "Green Credit Guidelines" issued by China Banking Regulatory Commission (CBRC) in 2012.

[58] See Potts, Jason, and David Runnalls. *Sustainable Development and China: Recommendations for the Forestry, Cotton and E-Products Sectors*. International Institute for Sustainable Development (IISD), 2008: 7.) See also *China Fish and Fish Products Supply Chain Analysis Final Report to DFID*. Ministry of Commerce of the People's Republic of China (MOFCOM) and International Institute for Sustainable Development (IISD), 2011: 125.

[59] See the Aquaculture Stewardship Council (ASC). Visit: http://www.asc-aqua.org/.

elsewhere – China is the largest producer and exporter of wood panels and furniture[60], for example, and of seafood. Chinese enterprises that sell into international markets are already seeing the growing attention of those markets to the sustainability of products – demanding that furniture is made with certified wood, for example, or seafood products from certified fish.

China's "brand": Two years ago, the CCICED Task Force on Investment, Trade and Environment concluded that China's "brand will have to be green for the country to thrive."[61] It is clear that enterprises chasing short-term profits overseas have often damaged China's long-term relationships and interests. Their inattention to social responsibilities "has tarnished the overall reputation of Chinese enterprises, brands, and the country as a whole, greatly hindering the ability for new Chinese companies to continue the going out strategy."[62] China's commitment to building an "ecological civilization" is the philosophical foundation for a green brand. The global standards that have been developed in major commodity sectors are becoming widely accepted global norms for ecologically responsible commerce. They offer a clear path for translating the idea of an ecological civilization into practice, and for ensuring China's brand actually becomes green.

5.2 The Interests of Chinese Enterprises

As described above, a growing number of the world's largest companies have found that action on sustainability in their supply chains is vitally important to the success of their business.[63] They have found that action is important to ensuring that they can get the resources they need, and in many cases, to their social license to operate in the communities and countries where they do business. They also have found that a strong commitment to sustainability is important to attracting loyal customers, and to attracting and retaining the most talented staff. As the Chinese market continues to change rapidly, and as some of China's most prominent companies grow from national brands to global brands, these interests will become increasingly significant.

Social license to operate: For Chinese companies operating overseas, adherence to global standards can be a vital part of maintaining social license to operate.[64] Chinese companies

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[60] Potts, Jason, and David Runnalls. *Sustainable Development and China: Recommendations for the Forestry, Cotton and E-Products Sectors*. International Institute for Sustainable Development (IISD), 2008: 4.

[61] As an increasingly important trade and investment partner in every region, "China is … exposed to growing public scrutiny and constant examination about its actions and policies affecting its business interests both at home and abroad." (Jihua, Pan, and John M. Forgach. *Going Global, Going Green: CCICED on Investment, Trade and Environment*. International Institute for Sustainable Development (IISD), 2012: 51)

[62] Chen, Dun, and Jialei Zhou. "Social Responsibility: A Problem Chinese Enterprises Overseas Must Confront [社会责任：中国企业"走出去"必须应对的问题]." *China Economy and Trade* May 2012: 40.

[63] Linich, David. *The Evolving Supply Chain: Lean and Green*. Deloitte, 2012.

[64] "China needs to take proactive positions regarding environment and development that will … secure goodwill and the right to operate in countries abroad … and be an open and declared advocate in developing and promoting international green transformation." (Jihua, Pan, and John M. Forgach.

are increasingly important as overseas producers. Following the government's advice,[65] many Chinese companies have invested directly in production of soy in Latin America,[66] for example, in palm oil plantations in Southeast Asia,[67] or timber operations and palm plantations in Africa.[68] The success of those operations will depend on ongoing support by the host governments and communities.

There are many examples of international[69] and Chinese enterprises[70] that have had project proposals blocked, or active projects shut down, because of local concern about environmental impacts. It is thus increasingly recognized that "firms need to operate at international standards or risk losing out over the long run."[71]

Building a brand: It is not coincidental that the global efforts to move commodity markets to sustainability are led by companies that own some of the world's most valuable brands – companies like Unilever, Nestle, Walmart, and Proctor and Gamble. These companies have

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Going Global, Going Green: CCICED on Investment, Trade and Environment. International Institute for Sustainable Development (IISD), 2012: 52)

[65] See "Guiding Opinion on Encouraging Agricultural Investment and Cooperation Abroad [鼓励开展境外农业投资合作指导意见]" released by the National Development and Reform Commission (NDRC) and the Chinese Ministry of Commerce (MOFCOM) in May 2013.

[66] According to the 2012 Statistical Bulletin of China's Outward Foreign Direct Investment, China's total agricultural, forestry, and fishery ODI in 2012 totaled US$1.46 billion, showing an 83.2% increase from the 2011 and a four-fold increase since 2004.

[67] *Prospects and Challenges of Sustainable Palm Oil for China*. China Chamber of Commerce of Foodstuffs and Native Produce, 2012: 13.

[68] Brack, Duncan. *Chinese Overseas Investment in Forestry and Industries with High Impact on Forests: Official Guidelines and Credit Policies for Chinese Enterprises Operating and Investing Abroad*. Forest Trends, 2014: 2.

[69] In the Indian state of Kerala, for example, Pepsi and Coca Cola lost their rights to water usage because of concerns about pollution and excessive water consumption in drought prone areas. Dauvergne, Peter, and Jane Lister. *Eco-Business: A Big-Brand Takeover of Sustainability*. MIT Press, 2013.

[70] China's overseas investors have encountered significant risks arising from local environmental concerns, resulting in serious delays or suspension of projects. For example, the Burmese government suspended the construction of the Myitsone Dam backed by China Power Investment Corporation in 2011 amid growing environmental (and to some extent, social and geopolitical) concerns amongst the Burmese populace; also in 2011, China's Zijin Mining Group faced hefty fines and significant local opposition for failing to disclose environmental and social risks as required by the local government for the Rio Blanco mines in the cloud forests of Peru. (Han, Xiu-Li. "Environmental Issues of China's Overseas Investments [中国海外投资中的环境保护问题]." *China International Studies* 5 (2013)). Thus, a CCICED task force concluded that it is important for China to take proactive positions to secure goodwill and right to operate in other countries, consistent with the positive attitude and action China has shown at home in the 11th and 12th FYP. (Jihua, Pan, and John M. Forgach. *Going Global, Going Green: CCICED on Investment, Trade and Environment*. International Institute for Sustainable Development (IISD), 2012: 52-54)

[71] Economy, Elizabeth, and Michael Levi. *By All Means Necessary: How China's Resource Quest Is Changing the World*. Oxford University Press, 2014: 98.

concluded that leadership on sustainability is critical to the future of their brands.[72] These considerations are relevant as China's biggest enterprises build their brands globally and at home.[73]

The relevance of these issues for companies that are "going global" is well established. Adherence to international norms for sustainability and other aspects of social responsibility is important to building trust with consumers and communities.[74] Globalized operations are fraught with risk, and at a time when a burning forest or a toxic spill can be quickly broadcast around the world, compliance with internationally-accepted standards can be a vitally important safeguard.

But in China's domestic markets, too, there is reason to expect that sustainability will become a brand issue of increasing importance. Some observers have noted that middle-class Chinese consumers are starting to mirror the consumption behavior of consumers in Western markets.[75] International surveys indicate that consumers in China already express a much greater concern for companies' social and environmental performance than consumers in other countries.[76] In a recent Accenture survey of 30,000 consumers across 20 countries, 44% of Chinese consumers surveyed said they "actively look for information on product sustainability," compared to only 13% in Germany and 14% in the US. Working mothers are especially vocal – 90% of working mothers surveyed in China said "they actively recommend ethical, sustainable brands."[77] The most successful global brands have made a point of being ahead of such emergent concerns.

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[72] According to the 2013 Accenture CEO Study on Sustainability, 93% of CEOs across 103 countries and 27 industries "see sustainability as important to the future success of their business."

[73] In the global market, a big advantage of multinational corporations is brand equity. A key challenge for Chinese firms will be building their brands for international markets, and to build loyalty among Chinese consumers. (Towson, Jeffrrey Alan, and Jonathan R. Woetzel. *The One Hour China Book: Two Peking University Professors Explain All of China Business in Six Short Stories*. Jeffrey Towson, 2014: 50-57)

[74] "SOEs establishing themselves as international operators or global brands … found that CSR frameworks and standards offered a useful tool for moving up the value chain and negotiating the complex demands of consumers and civil society in diverse environments." (Zadek, Simon, Maya Forstater, and Kelly Yu. *Corporate Responsibility and Sustainable Economic Development in China: Implications for Business*. U.S. Chamber of Commerce, Mar 2012: 9.

[75] Towson, Jeffrey Alan, and Jonathan R. Woetzel. *The One Hour China Book: Two Peking University Professors Explain All of China Business in Six Short Stories*. Jeffrey Towson, 2014: 57.

[76] Zadek, Simon, Maya Forstater, and Kelly Yu. *Corporate Responsibility and Sustainable Economic Development in China: Implications for Business*. U.S. Chamber of Commerce, Mar 2012: 7. In the 2010 goodpurpose survey by Edelman, nearly 80% of consumers in China expect brands to be involved in good causes and at least 70% of them will more likely recommend a brand if it supports social causes (higher than mid-50% in Western Europe).

[77] Hayward, Rob, Edd McLean, and Angela Jhanji. *The Consumer Study: From Marketing to Mattering - The UN Global Compact-Accenture CEO Study on Sustainability*. Accenture, UN Global Impact, Havas Media, Jun 2014: 12.

6. IMPORTANT STEPS HAVE ALREADY BEEN TAKEN

Some Chinese ministries, trade associations, and enterprises have begun to move in the directions suggested here – to establish systems for traceability, and to embrace certification.

6.1 Traceability

Many Chinese companies are already putting in place measures to assure they can trace where their products come from and how they are produced.

Some have taken action to meet the demands of export buyers. Chinese fish processors have obtained "chain of custody" certification under the Marine Stewardship Council so that they can sell certified seafood products into foreign markets.[78] More than 3,000 Chinese companies have obtained similar certification under the Forest Stewardship Council, for selling furniture, paneling, and other wood products (see box[79]).

Others are responding to consumer interest in transparency, prompted at least in part by concern about food safety. COFCO, which is China's largest importer of agricultural commodities and reaches 93 percent of Chinese households, has adopted a strategy of "farm field to the dining table," to trace entire supply chains for its products.[80] Meng Niu, the dairy firm hit by a milk contamination scandal in 2008, lets customers trace products by WeChat.[81] Now Dachan, China's largest chicken processor, has announced that it will place a QR code on every product so that customers can see via WeChat who produced it, what it was fed, and where it was processed.[82] Dachan hopes eventually "to create an online "Whole Foods"[83] where all products are traceable."[84] Recognizing this growing interest, the Chinese government is also exploring options for better traceability.[85]

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[78] Hanson, Arthur J. et al. *Greening China's Fish and Fish Products Market Supply Chains*. International Institute for Sustainable Development (IISD), 2011: 135-140

[79] More information on FSC's development in China can be found online at WWF websites: http://awsassets.panda.org/downloads/fsc_in_china_fact_sheet.pdf; http://gftn.panda.org/gftn_worldwide/asia/china_ftn/fsc_china_national_initiative.cfm and FSC website: https://cn.fsc.org/newsroom.43.6.htm

[80] The "COFCO Supply Chain Safety Risk Management System Implementation Plan [中粮控股全产业链质量安全风险控制体系建设规划方案]" released in 2012 as part of China's 12 FYP provided the basis for COFCO to employ a systematic approach to manage supply chain food safety risks for its rice, corn, wheat, oil, and meat products.

[81] Yue, Wang. "China's Largest Chicken Producer Opens up to Smart Phone Users." *chinadialogue: Advancing sustainable business in China* 2014: 24–25.

[82] Ibid.

[83] Whole Foods Market is the largest American retailer of natural and organic foods with annual sales surpassing US$13 billion. (*Whole Foods Market 2013 Annual Report*. Whole Foods Market, 2013: 3.)

[84] Yue, Wang. "China's Largest Chicken Producer Opens up to Smart Phone Users." *chinadialogue: Advancing sustainable business in China* 2014: 25.

[85] Wang, Fengyun et al. "Food Traceability System Tending to Maturation in China Fengyun" in *Computer and Computing Technologies in Agriculture III*. Ed. Daoliang Li and Chunjiang Zhao. Vol. 317.

6.2 Certification

Chinese companies and the government have also begun to engage in some of the voluntary global sustainability initiatives discussed above. What began with fisheries and forests, has now extended to newer efforts on palm oil and soy.[86]

Trade associations are playing a particularly important role in these efforts. The China Soybean Industry Association, with more than 650 members, has supported the Roundtable on Responsible Soy. The Chinese Chamber of Commerce of Foodstuffs and Native Produce (CFNA), operating under MOFCOM, which includes more than 6,300 companies, has worked with the UK government to develop recommendations for promoting sustainable palm oil in China. They recommended the establishment of a national policy objective for sustainable palm oil, creation of a Chinese market-based sustainability certification standard compatible with the international RSPO standard, issuance of guidelines governing environment and sustainable development requirements for Chinese overseas investments, and initiation of an international cooperation program to address China's expanding ecological footprint related to its commodity imports.[87] CFNA has now entered an MOU with the RSPO to pursue greater cooperation through dialogue, visits, information sharing, and policy recommendations.[88]

The Forest Stewardship Council in China

Founded in 1993, the Forest Stewardship Council (FSC) is an international non-profit organization aiming to promote responsible management of the world's forests. In 2007, a unique multi-stakeholder FSC National Initiative was established in China with the support of China's State Forestry Administration (SFA), the Chinese Academy of Forestry (CAF), WWF China and many others.

Today, the FSC China National Initiative leads the development of China's national forestry standards and builds on a set of criteria and indicators developed for the SFA to produce a localized, yet internationally recognized, standard suitable for China. As of September 2014, more than 3.4 million hectares of forest and 3,627 businesses in China are certified by the FSC. Companies involved in the production, use and sale of FSC products span not only multinational business like Wal-Mart, Tetra Pak, IKEA, and Kimberly Clark but also leading Chinese businesses such as Vanke, Jilin and Heilongjiang Forest Industry Groups, Yi Hua Timber, and An Xin Floors. Seven out of China's top ten paper manufacturers are FSC certified.

Berlin, Heidelberg: Springer Berlin Heidelberg, 2010. IFIP Advances in Information and Communication Technology.

[86] Seventeen Chinese companies, for example, have joined the Roundtable on Sustainable Palm Oil (RSPO).

[87] *Prospects and Challenges of Sustainable Palm Oil for China*. China Chamber of Commerce of Foodstuffs and Native Produce, 2012: 12-16.

[88] "RSPO Signs MOU with Chinese Chamber of Commerce." Roundtable on Sustainable Palm Oil, 2013. Available online at: http://www.rspo.org/news_details.php?nid=171.

7. RECOMMENDATIONS FOR ACTION

As we've seen in the experience with forest products, effective engagement of the global effort to build more sustainable commodity markets will require action by government, by business, and by diverse non-government organizations.

7.1 Government

While these initiatives are centered in the private sector, they will not become mainstream in China unless there is strong direction from the government. The government should give that direction, reinforce it with policy reforms, and deploy its own resources in support.

1. Issue a clear mandate

The single most important step the government can take is to issue a clear mandate that Chinese enterprises must ensure that the commodities they import are sustainably produced, and that to that end they should participate in credible international certification schemes.[89] Such a mandate seems a natural, one might say essential, component of China's commitment to building an "ecological civilization"[90] – commodity production is at the very interface between development and healthy ecosystems. By participating in these initiatives, China can ensure its imports are legal and sustainable, and it can take its place at the table to shape the standards for each sector.[91]

2. Control illegal trade

The government should also crack down on illegal trade. Timber and fish are two clear priorities. The EU, US, and Australia have all taken action on illegal timber trade. The 2008 amendment of the US Lacey Act, for example, holds buyers liable for importation of wood products harvested or transported in violation of regulations in the country of origin. The Port State Measures agreement negotiated under the UN FAO, could help control illegal

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[89] "The Government of China needs to send appropriate signals to enterprises, the financial sector and stakeholders inside and outside of China that it endorses the adoption of sustainable practices on … palm oil." (*Prospects and Challenges of Sustainable Palm Oil for China*. China Chamber of Commerce of Foodstuffs and Native Produce, 2012: 4.)

[90] Zadek, Simon et al. *Meeting China's Global Resource Needs and Managing Sustainability Impacts to Ensure Security of Supply: Synthesis Report*. International Institute for Sustainable Development (IISD), 2014: 21. Jihua, Pan, and John M. Forgach. *Going Global, Going Green: CCICED on Investment, Trade and Environment*. International Institute for Sustainable Development (IISD), 2012: 53.

[91] Where needed, those regimes could be adapted to Chinese circumstances. The crucial point is that the Chinese version should be consistent with the global standards, so that ultimately China assures that its market advances those global sustainability efforts and does not undercut them. (Jihua, Pan, and John M. Forgach. *Going Global, Going Green: CCICED on Investment, Trade and Environment*. International Institute for Sustainable Development (IISD), 2012: 59.) See also: *Prospects and Challenges of Sustainable Palm Oil for China*. China Chamber of Commerce of Foodstuffs and Native Produce, 2012: 5.

fishing.[92] As the world's largest importer of timber and fish, China could make a big difference in these markets. China should institute stronger measures to control illegal import of timber and ratify the Port State Measures agreement to join the international effort to control illegal fishing.

The government should also address illegality in other commodity sectors. To support Brazil's efforts to control deforestation from soy production, for example, the government of China should require that all soy imported into China must have been produced in compliance with Brazil's Forest Code and related laws.

3. Ensure transparency

In support of these shifts, the government should demand greater transparency in trade, requiring importers to establish the provenance of their goods. Such a system would raise the bar for all importers, and thus ensure that responsible enterprises are not undercut by others. It would also provide a vital safeguard for China's brand – helping to ensure that China's trade is not fueling corruption or crime.

4. Create financial incentives

A government mandate should be supported by policies that help Chinese enterprises move to sustainable sourcing. These policies could include preferential tariffs for certified sustainable commodities, other incentives for enterprises that take action, and accreditation of certification regimes to guide engagement.[93]

Sustainability should also be built more strongly into China's guidelines and regulations for overseas direct investment in commodity production. The CBRC has been a world leader in setting guidelines for sustainability of bank investments. Those guidelines should now explicitly mandate that when banks finance commodity production overseas – as in the

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[92] "Port State Measures Agreement." Food and Agriculture Organization of the United Nations. Web. 21 Oct. 2014. Available online at: http://www.fao.org/fishery/topic/166283/en.

[93] Industry would benefit from articulation of a robust government policy for sustainable trade and investment. See Jihua, Pan, and John M. Forgach. *Going Global, Going Green: CCICED on Investment, Trade and Environment*. International Institute for Sustainable Development (IISD), 2012: 53; *Prospects and Challenges of Sustainable Palm Oil for China*. China Chamber of Commerce of Foodstuffs and Native Produce, 2012: 14 (Establish a national policy objective for sustainable palm oil); Hao, Fanghua, and William Valentino. *Corporate Social Responsibility in Green Development in China: CCICED Special Policy Study Summary Report*. China Council for International Cooperation on Environment and Development (CCICED), 2013: 21 ("Develop a national strategy and action plan" for CSR); Hanson, Arthur J. et al. *Greening China's Fish And Fish Products Market Supply Chains: Summary Report*. International Institute for Sustainable Development (IISD), 2011: 33 (Establish "enabling policies for … certification" and mandate "that companies should participate in credible certification schemes, incentives, accreditation to identify reputable systems, promotion of certify as part of branding for export products"); Zadek, Simon et al. *Meeting China's Global Resource Needs and Managing Sustainability Impacts to Ensure Security of Supply: Synthesis Report*. International Institute for Sustainable Development (IISD), 2014: 20 (Explore fiscal measures to encourage sustainable sourcing).

recent CDB funding of US$500 million to Golden Agri Resources for a palm oil plantation in Liberia – those facilities must adhere to credible voluntary international standards for sustainable production.[94]

5. Use Development Assistance to Build Capacity

As part of its assistance to developing country partners, China has provided important technical support. Since 2010, for example, China has created Agricultural Technical Demonstration Centers in 17 countries and dispatched more than 1,000 experts to provide training. Similar technical assistance is needed to help trade partners shift to sustainable production of key commodities,[95] and to build their capacity to manage their forests, fisheries, and other resources.[96]

In some cases there will also be a broader need for funding to support the transition to sustainable commodity production. Resources are needed to put new management and monitoring systems in place, for example, to facilitate the expansion of production on to degraded lands, and to support the recovery of depleted fisheries. Through technical and financial support, China can help its partners ensure that the goods they supply to China are sustainably produced.

6. Provide Training

In past efforts to mandate this kind of shift in the business sector, the government has provided training for local agencies and trade associations so that they can then train enterprises on compliance with the new requirements. Such training might be needed here – to help companies understand and implement sustainability standards and join certification regimes.

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[94] "The CBRC could issue more detailed policy guidance for banks focused on assessing environmental and social risks related to overseas investment and supply chains." (Zadek, Simon et al. *Meeting China's Global Resource Needs and Managing Sustainability Impacts to Ensure Security of Supply: Synthesis Report*. International Institute for Sustainable Development (IISD), 2014: 21.) "Chinese enterprises investing in overseas plantation development and production of palm oil need guidelines … including compliance with national … laws and with voluntary standards such as the RSPO." (*Prospects and Challenges of Sustainable Palm Oil for China*. China Chamber of Commerce of Foodstuffs and Native Produce, 2012: 15)

[95] "In enhancing foreign aid, China needs to consider both strategic foreign assistance and public goods, two areas distinct from traditional foreign aid." (Yizhou, Wang. *China 3.0 (ECFR Policy Report Book 66)*. Ed. Mark Leonard. London: European Council on Foreign Relations, 2012: 110.)

[96] Potts, Jason, and David Runnalls. *Sustainable Development and China: Recommendations for the Forestry, Cotton and E-Products Sectors*. International Institute for Sustainable Development (IISD), 2008: 6. China partnered with the UK in 2011 to launch a four-year program to help transfer agricultural technology to low income countries in Africa and Asia. (Economy, Elizabeth, and Michael Levi. *By All Means Necessary: How China's Resource Quest Is Changing the World*. Oxford University Press, 2014: 96.)

China's embassies and consulates could also play a role in strengthening the capacity of Chinese enterprises operating in the countries they are responsible for.[97] Many enterprises are ill-equipped to understand and address sustainability issues in other countries and need support in ensuring that their operations conform to local and international standards.

7. Shift procurement

Given the scale of public procurement in China, the government can also play an important role in building the market for sustainably produced commodities by shifting its own purchasing. Up to this point, the government requirements for green procurement have not focused on sustainability in the supply chain, and have not included agricultural products or most other "soft" commodities.[98] The government should begin with a policy requiring that all imported commodities must have been produced in compliance with the laws of the exporting country, and then phase in a requirement of compliance with recognized international sustainability standards.[99]

8. Start with pilot programs

In the past, the government has sometimes introduced new initiatives by piloting them with a few companies or sectors to build experience and acceptance before rolling changes out to everyone. That approach could be taken here.

A logical place to start would be a pilot program on palm oil with the major importers and the relevant trade association - CFNA. Palm oil is an important commodity in trade and current production has severe environmental consequences, in particular as a huge source of greenhouse gas emissions. And, as noted above, the international palm oil sector is moving strongly toward more sustainable practices, supported by commitments from traders who account for 60% of the market. Notably, those traders also account for a significant share of imports into China, so an effort on palm oil has a good head start.

7.2 Business

Enterprises do not need to wait for government action. Current mandates already provide ample scope for engagement with global sustainability initiatives. Here are three steps every company should take:

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[97] Zadek, Simon et al. *Meeting China's Global Resource Needs and Managing Sustainability Impacts to Ensure Security of Supply: Synthesis Report*. International Institute for Sustainable Development (IISD), 2014: 18.

[98] Zadek, Simon et al. *Meeting China's Global Resource Needs and Managing Sustainability Impacts to Ensure Security of Supply: Synthesis Report*. International Institute for Sustainable Development (IISD), 2014: 20. See also Tang, Dingding, and Gwen Ruta. *Practices and Innovation of Green Supply Chain: CCICED Special Policy Study Report*. China Council for International Cooperation on Environment and Development (CCICED), 2011: 46-47.

[99] Potts, Jason, and David Runnalls. *Sustainable Development and China: Recommendations for the Forestry, Cotton and E-Products Sectors*. International Institute for Sustainable Development (IISD), 2008: 7.

1. Keep it legal

Every Chinese enterprise should be acting to ensure that its trade is legal – that it is not, even unknowingly, trafficking in commodities that were produced in violation of local or international laws.

2. Get transparent

To know with confidence that imported goods are legal and sustainable, an enterprise must be able to trace them from source to market. To give customers and investors confidence that the business is on a sound footing, its supply chain must be transparent. CCICED Task Forces have repeatedly emphasized the central importance of transparency in business. Ensuring transparency in trade and in operations overseas will provide the basis for better relationships with stakeholders at every level.[100]

3. Get certified

To ensure its supply chain is transparent and legal, and that it is also sustainable, the key step for each Chinese company importing commodities is to join the international voluntary certification regimes now in place for most commodities. By certifying chain of custody from producer to the consumer, these systems provide assurance that the goods traded were legally and sustainably produced.[101]

7.3 Non-Government Organizations

Government and business are the lead actors in this arena, but it's clear from the international experience over the past 20 years and from specific experience in China that NGOs can play valuable roles in facilitating the transition to sustainable production.

1. Trade Associations

Trade Associations are already playing important roles in helping translate government mandates into practice, and guiding their industries in implementation. CFNA has engaged the Roundtable on Sustainable Palm Oil; the Soy Association is engaged with the Roundtable

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[100] "Transparency will help protect Chinese investment interests through better relationships with local stakeholders…" (Jihua, Pan, and John M. Forgach. *Going Global, Going Green: CCICED on Investment, Trade and Environment*. International Institute for Sustainable Development (IISD), 2012: 54.) See also Hao, Fanghua, and William Valentino. *Corporate Social Responsibility in Green Development in China: CCICED Special Policy Study Summary Report*. China Council for International Cooperation on Environment and Development (CCICED), 2013: 26.

[101] "Such private, voluntary collectively developed standards are an increasingly important part of the international market, enabling companies to secure their reputation, professionalize sustainability-related supply chain risk management and collaborate with others to solve common problems." (Zadek, Simon et al. *Meeting China's Global Resource Needs and Managing Sustainability Impacts to Ensure Security of Supply: Synthesis Report*. International Institute for Sustainable Development (IISD), 2014: 19.)

on Responsible Soy. With a clear mandate from the government, they could move from exploration to action.

2. Other NGOs

As China begins to more actively engage international standards and initiatives on sustainability, NGOs can be valuable partners. National NGOs like the Institute for Policy and the Environment (IPE), and the Global Environment Institute (GEI) have played important roles in helping reduce pollution in China and in developing guidance for Chinese enterprises operating overseas. International NGOs like WWF and IUCN have helped China translate international standards like the Forest Stewardship Council into the Chinese context and have supported Chinese enterprises as they have pursued certification of their timber operations and of their chain of custody for certified products. These national and international NGOs can help the government in developing its policies in this area, and can help Chinese companies step up to the challenges and opportunity of international sustainability standards.

CONCLUSION

The global markets for "soft" commodities – for food and other renewable resources – are vitally important for China's security and its prosperity. In many cases, production of those commodities is simply unsustainable – depleting fisheries, draining freshwater resources, destroying forests and fuelling climate change. Fundamental changes in production practices are needed if we are to meet the world's growing needs and also conserve the natural systems upon which we all depend. In voluntary global initiatives now underway, a growing number of businesses and countries are rising to this challenge. These initiatives offer a unique opportunity to China and to Chinese enterprises – an opportunity to shape a sustainable future, to position China as a leader in that cause, and to ensure that China's global brand is green.