What National Farm Policy Trends Could Mean for Efforts to Update WTO Rules on Domestic Support

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Executive Summary

Global trade rules on the support governments can provide to their farm sectors need urgent reform if countries are to make progress on Agenda 2030—and in particular on Sustainable Development Goal 2, which aims to end hunger and malnutrition, achieve food security, and promote sustainable agriculture. Trade rules must balance the need to ensure that domestic support does not harm producers elsewhere with the need to increase public investment in agriculture and food systems. With the coronavirus pandemic and climate-related volatility affecting global markets, improved rules on domestic support would also help improve stability and predictability in the global food system.

At the Twelfth Ministerial Conference of the World Trade Organization (WTO), governments will have a critical opportunity to take action in support of more equitable, sustainable, and efficient markets for food and agriculture, delivering on their commitment to trade reform under article 20 of the Agreement on Agriculture (WTO, 1994) and their stated intention to address unresolved issues on the agricultural trade agenda.

This report looks in detail at agricultural support in a dozen WTO members. It examines how this support relates to public policy goals, the type of domestic support instruments chosen, and countries' current WTO limits on support. It finds that as much as three quarters of all support classed as trade-distorting by the WTO is concentrated in a handful of members—China, India, the United States, and the European Union. It puts this spending in context, looking also at the value of agricultural production in each of these members and their share of the total global value of agricultural production. The report also looks at support in a cross-section of eight other WTO members: Japan, Russia, Indonesia, Brazil, Canada, Norway, Panama, and Togo. The country-level analysis informs a discussion of what the evolution of agricultural domestic support implies for future WTO rules.

Current WTO rules fail to discipline the considerable leeway to increase domestic support enjoyed by those members that historically provided the largest amounts, such as the United States and the European Union. The rules also have no answer to the fast-growing support in emerging economies, such as China and India. Nor have WTO members yet redressed underlying problems of inequity in the Agreement on Agriculture.

A large number of WTO members need to increase their public investment in agriculture and food systems if they are to have any chance of achieving the SDGs. Current rules allow ample room for this investment: in particular, the so-called green box (Annex 2 of the Agreement) allows unconstrained spending on programs that are thought to have limited effects on trade, including for research, pest and disease control, rural infrastructure, and extension and advisory services.

The report proposes to simplify domestic support rules by allowing countries to provide a certain minimal level of trade-distorting support, based on a percentage of the value of production. It also makes the case for much stronger transparency requirements on government notifications. Specifically, the report recommends:

1. New overall limits on domestic support that can harm producers in other countries, which are gradually cut over time. The aim is to redress inequalities among countries and harmonize support levels in the future. The new limits would be tied to an objective measurement of support as a share of agricultural output that reflects current market and policy realities, rather than using fixed levels that reflect past support.
2. By providing special and differential treatment to developing countries that require it, negotiators would provide those WTO members with a longer phase-in period, a higher initial cap, or both.
3. Limits on how much support can be focused on any one commodity, including agreement on product categories.
4. Food bought at administered prices fixed by governments under public stockholding programs will not count toward domestic support limits when the administered price is below an agreed international market price.

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Abbreviations and Acronyms

AMS	Aggregate Measurement of Support
CAP	Common Agricultural Policy
CPTPP	Comprehensive and Progressive Trans-Pacific Partnership
EU	European Union
FAO	Food and Agriculture Organization of the United Nations
IFPRI	International Food Policy Research Institute
IISD	International Institute for Sustainable Development
LDC	least-developed country
MC12	Twelfth Ministerial Conference of the World Trade Organization
OECD	Organisation for Economic Co-operation and Development
PSE	Producer Support Estimate (originally the Producer Support Equivalent)
SDG	Sustainable Development Goal
VoP	value of production
WTO	World Trade Organization

1.0 Introduction

Arguably the most distinctive feature of the World Trade Organization's (WTO) Agreement on Agriculture is its establishment of rules that limit the level of support[1] WTO members can provide for agricultural production (WTO, 1994). No other trade agreement attempts these rules. The rules classify domestic support for agriculture into two categories—trade-distorting and minimally trade-distorting—and set thresholds for what programs are large enough to merit review at the WTO. The rules are imperfect, disliked by some WTO members for giving too much leeway to countries with large public budgets for agriculture and by others for not granting them enough. Almost everyone agrees that the existing rules need to be revised and updated, but as yet there is no agreement on just what the updated rules would contain. This is despite a 2008 blueprint for a deal and declarations made since, such as the 2013 commitment to clarify how domestic support rules affect the administration of public stockholding programs for food security purposes.

Negotiations on agricultural trade issues, including both support and protection, are mandated under article 20 of the trade body's Agreement on Agriculture, agreed in 1994: seven years later, these were incorporated into the Doha Round of trade talks, which aimed to achieve "substantial reductions" in trade-distorting domestic support. In 2015, the trade ministers who met at the WTO's Nairobi ministerial conference acknowledged that there was no consensus among members on the Doha negotiating mandates while asserting their "strong commitment" to advancing negotiations on remaining Doha issues, including explicitly agricultural domestic support.[2]

Today's negotiating context is difficult: trade tensions are high, while progress toward the Sustainable Development Goals (SDGs) is slow. Governments face an urgent and complex challenge in ensuring that global policy frameworks, including the WTO trade rules, can simultaneously address multiple goals, not least addressing climate change and environmental sustainability,[3] ending hunger, overcoming poverty, and enabling countries to address public health challenges such as the coronavirus pandemic. Given this context, what can trade negotiators expect as they prepare for the WTO's Twelfth Ministerial Conference[4] (MC12)? Specifically, what contribution could they make to the reform of domestic support rules for agriculture?

This paper revisits WTO rules on agricultural domestic support in light of recent trends in national farm policy. By reviewing the domestic support trends in a number of countries,

[1] In the WTO context, "support" covers both spending (budgetary outlays) and calculations of equivalents derived from the advantage a measure is said to offer. Box 1 provides more information.

[2] Paragraphs 30 and 31 of the WTO Nairobi Ministerial Declaration provide further details. See: https://www.wto.org/english/thewto_e/minist_e/mc10_e/mindecision_e.htm

[3] Charveriat (2018) and Bellmann, Lee, and Hepburn (2019) examine the significance of policies affecting trade and markets for the environment, including their significance for soil health, greenhouse gas emissions, land conversion, biodiversity, water use and pollution, and deforestation.

[4] The outbreak of the coronavirus pandemic has meant that WTO members have to decide on a new date for the ministerial conference, which was originally scheduled to be held in June 2020 in Nur-Sultan, Kazakhstan. At the time of going to press, new arrangements for the conference have not yet been decided upon.

the study seeks to contribute to better-informed trade negotiations in the preparations for MC12 and beyond. The intent is to show how support has evolved and what the changes in domestic support imply for proposed reforms to the trade rules in this area. Ultimately, the International Institute for Sustainable Development (IISD) and the International Food Policy Research Institute (IFPRI) are committed to trade rules for agriculture that support equitable, sustainable, and efficient agriculture and food systems.

Box 1. What do WTO rules say about domestic support?

Only some domestic support is subject to disciplines under WTO rules. The WTO uses the metaphor of traffic lights to indicate whether countries should go ahead or apply the brakes. The kinds of support are put into "boxes."

Green box: Support that causes no more than minimal trade distortions and is therefore exempt from support limits. Green box rules are set out in Annex 2 of the Agreement on Agriculture (WTO, 1994).

Amber box: Support that is linked to production and prices and is therefore considered to be trade-distorting; support that also exceeds "de minimis" thresholds (see below). Amber box support is expressed as an "Aggregate Measurement of Support" (AMS) and calculated according to rules set out in Annex 3 of the Agreement on Agriculture (WTO, 1994). WTO members with amber box commitments must keep this support within a pre-defined ceiling.

Blue box: Support to farmers in the form of direct payments that are provided with production-limiting constraints. Support for blue box programs is not limited. Blue box rules are set out in Article 6.5 of the Agreement on Agriculture (WTO, 1994).

De minimis: Article 6.4 of the Agreement on Agriculture allows members to provide product-specific and non-product-specific support that is classed as trade-distorting if it does not exceed an agreed threshold (WTO, 1994). The threshold is defined as a share of the value of agricultural production. WTO members identifying themselves as "developing" can provide up to 10% of the value of production (VoP) in product-specific support and the same in non-product-specific support. Members identifying themselves as "developed" have limits of 5% in both categories. China agreed to limits of 8.5% for both kinds of support when it joined the WTO in 2001.

Input and investment subsidies: Countries identifying themselves as "developing" are allowed to provide unlimited support for input and investment programs if they comply with the conditions set out in article 6.2 of the Agreement on Agriculture (WTO, 1994).

2.0 Assessing Trade-Distorting Support

Bringing agricultural subsidies under the rules-based trading system was one of the signature accomplishments of the Uruguay Round. The trade negotiators used framing work undertaken in the late 1970s and early 1980s by the Food and Agriculture Organization of the United Nations (FAO) and the Organisation for Economic Co-operation and Development (OECD) to classify and measure agricultural support policies. Research in the OECD was instrumental in providing the "traffic light" classification that the negotiators used to distinguish among allowable measures, which were minimally trade-distorting (green), prohibited measures (red), and trade-distorting measures that could continue but with capped levels of support (amber) (see Box 1).

The negotiating history of the green box shows that early proposals called for an exemption from reduction commitments for a limited set of measures that included funds for research and development, animal and plant health inspection services, and other general services that provided public goods. Also included were measures that provided support to producers in response to natural disasters such as floods and droughts (Stancanelli, 2009). Later, the green box criteria were broadened to include direct payment programs that were considered minimally production- and trade-distorting (e.g., decoupled income support, agricultural insurance, and regional aid payments).[5]

As for amber box measures, the compromises leading up to the completion of the Uruguay Round negotiations included the creation of a number of exempt categories, including de minimis support (article 6.4), support for production-limiting programs or blue box programs (article 6.5), and investment subsidies for developing countries (article 6.2).

The measurement of agricultural support was key to the development of disciplines. Early conceptual work by Josling (1977) and later the OECD (1987) resulted in a single support measure, the Producer Support Equivalent[6] (PSE), which could measure the degree of support relative to the VoP of the commodity and hence establish a means by which support could be aggregated across commodities and compared across countries. The AMS was based on the PSE with notable differences (see Box 2). First, under the AMS, price support is measured relative to a fixed base period, unlike the current market prices against which the PSE is measured. The use of a base period now over 25 years old has raised concerns that the AMS is a flawed measure of price support, as global nominal price levels are higher than in the late 1980s.

Second, domestic support disciplines under the Agreement on Agriculture concentrated on reducing absolute levels of total AMS from their 1986–88 averages, rather than reducing the total AMS as a percentage of the total VoP. Thus, there was little attempt to harmonize levels of support across WTO members under the reduction formula in the WTO Agreement on

[5] More recently, Charveriat (2018) has proposed revisiting domestic support criteria for both trade-distorting and non-trade-distorting support on the basis of whether it has positive or negative environmental impacts.

[6] The name was later changed to the Producer Support Estimate.

Agriculture (WTO, 1994).[7] Members with large absolute AMS levels in the base period (such as the European Union [EU], the United States, and Japan) were left with large absolute bindings once the reduction commitments were implemented, while other countries were unable to provide support under this WTO category unless they were able to negotiate the ability to do so as part of their accession commitments.

Nonetheless, the domestic support provisions under the Agreement on Agriculture have resulted in significant reductions in amber box support, in part due to the fact that some developed country members shifted support to direct payments that qualified for an exemption from reduction under the green and blue box criteria. In some cases, members have sharply reduced their AMS levels by eliminating price support programs, even though they maintained price support through high tariff levels. For example, the United States replaced its dairy price support program (which had reported AMS levels of USD 3 billion to USD 5 billion annually) with a dairy margin insurance program whose payment levels have been de minimis. Similarly, Japan (rice) and Canada (poultry) have maintained relatively high commodity support, though at negligible AMS levels, because they eliminated their price supports for those commodities while maintaining high tariff protection.

Box 2. Measuring support: OECD and WTO approaches

The OECD's PSE seeks to measure the value of transfers to producers from taxpayers and consumers. The OECD defines it as "an indicator of the annual monetary value of gross transfers from consumers and taxpayers to support agricultural producers, measured at the farm gate level, arising from policy measures, regardless of their nature, objectives or impacts on farm production or income."

While the PSE is intended to be an economic measure, the WTO's Aggregate Measurement of Support (AMS) is a legal measure. It is set out under the provisions of article 6 of the WTO Agreement on Agriculture, and a detailed methodology for calculating it is specified in Annex 3 of the same agreement (WTO, 1994).

One of the most significant differences between the two measures of support is that the OECD's PSE incorporates the impact of policies at the border affecting trade, such as tariffs, whereas these are not taken into account under the WTO methodology for calculating domestic support.

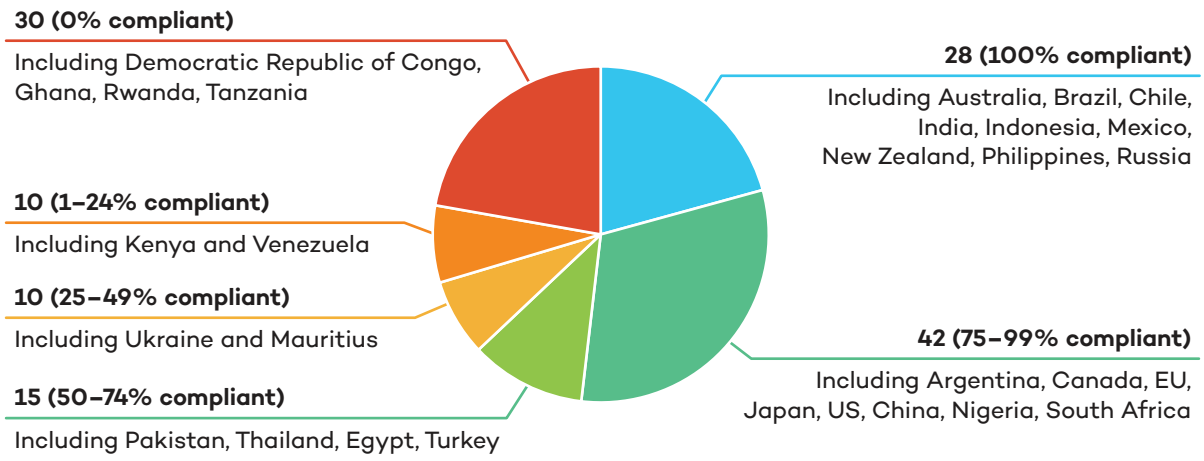
Higher commodity prices and increasing productivity have meant that the VoP has also increased significantly over the past 25 years. One immediate consequence is that the de minimis threshold for trade-distorting support has also increased. For example, the United States reported over USD 7 billion in product-specific and non-product-specific de minimis support in 2016. That includes over USD 2 billion in corn support and USD 1.2 billion in

[7] Developed WTO members with AMS commitments include Australia, Canada, the EU, Macedonia, Iceland, Japan, Moldova, Montenegro, New Zealand, Norway, the Russian Federation, Switzerland-Liechtenstein, Ukraine, and the United States. Developing members with AMS commitments include Argentina, Brazil, Colombia, Costa Rica, Israel, Jordan, Korea, Mexico, Morocco, Papua New Guinea, South Africa, Chinese Taipei, Tajikistan, Thailand, Tunisia, Venezuela, and Vietnam.

soybean support. Likewise, de minimis thresholds for developing countries may be quite large. For example, using its de minimis threshold of 8.5% of the VoP, China's allowable de minimis support is estimated at over USD 128 billion in 2016. Actual allowable de minimis support could be twice that figure if applied to both product-specific and non-product-specific support. While it is highly unlikely that a country would design programs around full utilization of its de minimis allowances, support levels falling below de minimis thresholds can be quite high.

Some WTO members have raised concerns over the extent to which data notified to the WTO is up-to-date and accurate. Analysis of the WTO Secretariat's data on notifications indicates that most countries that are significant exporters and importers of agricultural goods are largely compliant with their notification commitments, as Figure 1 shows.[8] Argentina, Canada, China, the EU, Japan, and the United States have compliance rates of 95% or above, while those at 100% include Australia, Brazil, India, Indonesia, Mexico, New Zealand, Russia, and the Philippines. At the same time, it is noteworthy that small economies such as Cambodia, Panama, and Togo are among those with 100% compliance rates. Overall, for the 1995–2017 period, one third of domestic support notifications remain outstanding.

Figure 1. Compliance with DS:1 notifications, 1995–2017



Source: Based on data from WTO, 2019.

Note: Compliance is defined based on the annual submission of domestic support (Table DS:1) or every other year for least-developed countries (LDCs). The quality or completeness of the notifications is not considered above.

In addition to highly divergent rates of compliance with notification obligations, countries also vary considerably in the quality and type of data they report to the WTO. While data is generally reported using a standardized template, the methodology countries use to report domestic support is often not consistent, leading to variations between WTO members that can affect the extent to which meaningful comparisons can be made across countries. Furthermore, many low-income countries submit a simple statement that their support is in

[8] Notification commitments are set out in WTO document G/AG/2.

compliance with their WTO commitments without detailing the types or amounts of support under different categories and programs.[9]

Among other things, countries may vary in the methodology they use to determine elements of domestic support to agriculture, including their calculation of the VoP, their use of exchange rates, and the definition of "eligible production" used to determine the level of market price support.[10] In other instances, WTO members use seemingly divergent approaches to classifying and reporting domestic support programs, sometimes using conceptual categories that differ from those set out under the Agreement on Agriculture. Furthermore, countries use different terms and categories to categorize support for particular products or product groups, meaning that a comparison of product-specific support across the WTO membership is not always simple or straightforward. The following analysis needs to be considered with these caveats in mind.

[9] Countries notifying the WTO that they provide no domestic support include Bolivia, Cameroon, Côte d'Ivoire, Nigeria, and Tajikistan. Macao (China) and Singapore have notified the WTO that they provide no article 6 support. Notifications from a number of countries indicate that they only provide green box support.

[10] Brink (2012) reviews and analyzes the different approaches that have been used to conceptualize and measure the VoP in a number of WTO members.

3.0 Domestic Support Trends in a Cross-Section of the WTO Membership

Much domestic support that is not classified as "green box" is concentrated in a few large economies: China, India, the United States, the EU, and Japan.[11] Across the WTO membership, a large share of support classified as trade-distorting is also focused on a limited number of agricultural products, such as rice, maize, and dairy.

The following section examines agricultural domestic support trends in an illustrative cross-section of the WTO membership. It includes the WTO members that provide the largest amounts of domestic support in absolute terms—China, India, the United States, and the EU—as well as two members that provide among the least—Panama and Togo. The analysis examines countries that are major exporters of food and agricultural goods, such as Brazil and Russia, and net importers, such as Japan. It includes countries where support to the agricultural sector has been relatively stable over time, such as Norway, and countries where support levels have been rising quickly, such as Indonesia. The mix includes WTO members from different geographical regions, at different income levels, and with different-sized economies, illustrating the diversity of policy objectives and policy instruments across the WTO membership. Among other things, the analysis demonstrates the heterogeneity and diversity of the WTO membership today and shows how the characteristics of members have evolved significantly over the last 25 years.

The WTO rulebook inherited from the Uruguay Round continues to treat members as falling within three distinct categories: LDCs (based on objective indicators established by the United Nations), developing countries (a status that the countries concerned designate themselves), and developed countries. However, while income levels and other human development indicators continue to vary widely across the WTO membership, with income inequality a persistent feature of the policy landscape,[12] rapid economic growth in a number of large developing countries has substantially changed the policy and market environment for food and agriculture. Support trends have not been immune from these changes in the broader context, as the section below demonstrates. We return in Section 4 to an analysis of what these patterns of domestic support might imply for reforms to the rules in this area at the WTO.

[11] In 2016, notified non-green support from these five WTO members represented 83% of all non-green support. Support from China, India, the United States, and the EU alone represented 76% of all non-green support. Using instead the OECD methodology to assess the concentration of support in major economies, Bellmann (2019) notes that more than three quarters of total support is provided by China, the EU, the United States, and Japan. Box 2 explains how agricultural support is conceptualized and calculated differently by the WTO and the OECD.

[12] Hepburn (2019) examines the extent to which countries have made progress toward the SDGs in the related areas of income inequality, food and nutrition security, and trade.

3.1 China

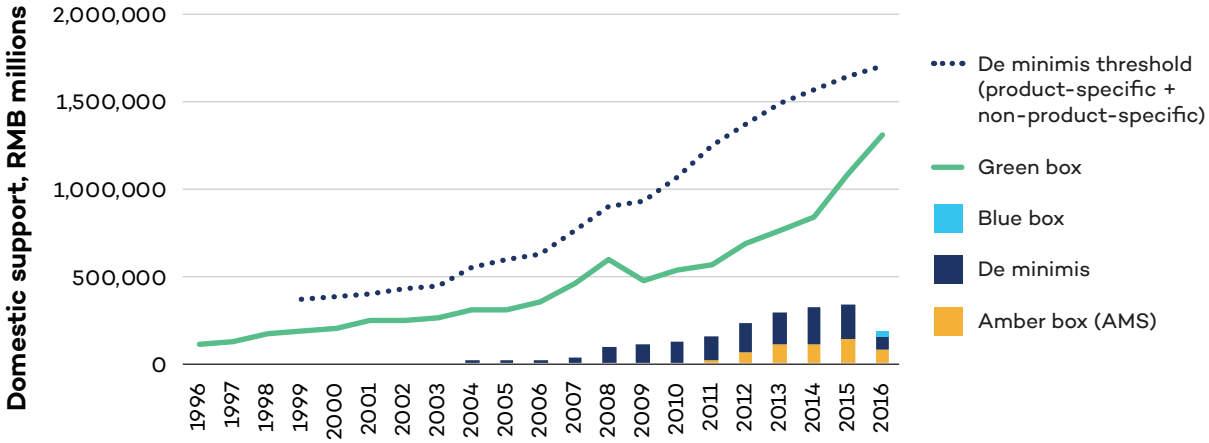
Following its accession to the WTO in 2001, China moved from taxing its large population of agricultural producers to supporting them (Xie, 2009). Rising income inequality between rural and urban areas, as well as food security concerns, have frequently been cited as the drivers behind policy design (Ni, 2013). Chinese domestic support policies sought to promote high levels of self-sufficiency, especially for grains such as wheat, rice, and maize. Market price support instruments were among a range of policies that the government introduced to achieve these goals.

However, China's ability to use certain types of domestic support policies was affected by the low tariffs it had agreed to respect when joining the WTO. These meant that the use of market price support instruments led to the development of large stocks for core commodities (Yu, 2017), as domestic consumers and intermediate users of agricultural products such as livestock producers preferred lower-cost agricultural imports over more expensive domestic production. China faced a combination of high production costs, high levels of government stockholding, and high and rising imports.

In April 2019, the panel in a WTO dispute case (DS511) brought by the United States found that China had exceeded its agreed limits on trade-distorting support for wheat and rice. The panel declined to rule on allegations concerning China's support to maize on the basis that the measures concerned had been discontinued. China agreed to reform those measures that had been found not to be in conformity with WTO rules by the end of March 2020.

In December 2018, China submitted domestic support notifications for 2011 to 2016. These showed that amber box and de minimis support had recently declined and that China had begun using blue box provisions for production-limiting programs (Figure 2). Although China agreed not to exceed its de minimis thresholds when it joined the WTO, its newly submitted notifications indicated that it had done so at various times during the 2011–2016 period for corn (maize), cotton, rapeseed, soybeans, and sugar. The notifications for this same period also showed rapid growth in green box support, which almost doubled over the five years notified, reaching RMB 1,313 billion (USD 197 billion) in 2016. While around half of this covered general services programs (including infrastructural and extension services), regional assistance programs, decoupled income support, and environmental programs were also important.

Figure 2. China's agricultural domestic support



Source: IISD and IFPRI calculations, based on WTO notifications.[13]

IISD and IFPRI analysis of FAOSTAT data (FAO, n.d.) indicates that China's agricultural VoP is expected to continue growing, albeit more slowly than in recent years, with output 3.6 times greater in 2030 than in 1990. The rapid growth over these four decades is expected to propel the country to become the most significant producer country by 2030, accounting for almost a quarter of all global output at USD 727 billion (see Figure 17 in Section 4).

3.2 India

India has sought jointly to address the twin challenges of ensuring domestic food security and the livelihoods of its large farming population through the expansion of domestic food aid to poor consumers and the procurement of food stocks at minimum prices.[14] However, government reports have highlighted concerns around the levels of "leakage" from the stockpiling system, including waste and corruption (Government of India, 2015; Hoda & Gulati, 2013).

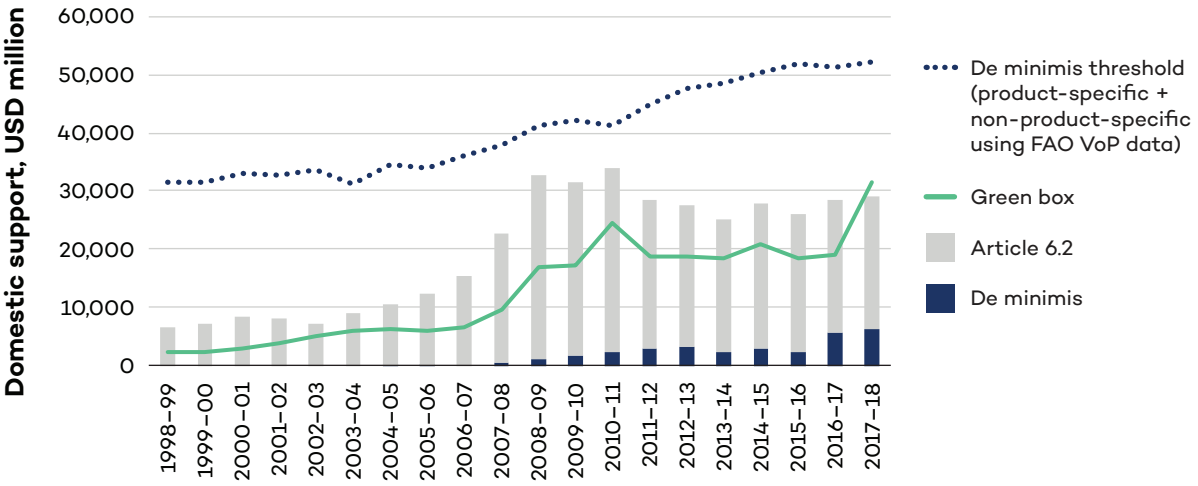
At USD 22.6 billion, India's input and investment subsidies under article 6.2 are larger than those of any other WTO member. Subsidies in this category account for over a third of India's domestic support and include subsidies for irrigation, fertilizers, and electricity. India's most recent notification reports that low-income or resource-poor farmers account for 99.43% of farm holdings.

India has reported another USD 6.5 billion in de minimis support, a figure that has grown quickly in recent years (Figure 3). Product-specific support for rice has tended to represent the bulk of the support in this category. In the two most recent years notified, growth in subsidized insurance premiums has also led to an increase in non-product-specific support.

[13] All figures are derived from authors' calculations based on country-submitted notifications to the WTO, which are compiled online at https://docs.wto.org/. Subsequent references to "based on WTO notifications" refer to data from various documents found at this link.

[14] Separate WTO talks are seeking to find a permanent solution to problems some developing countries say they face when buying food at administered prices for public stockholding programs for food security purposes.

Figure 3. India's agricultural domestic support



Source: IISD and IFPRI calculations, based on WTO notifications.

Note 1: VoP data used to calculate de minimis threshold is derived from FAOSTAT data (FAO, n.d.).

Note 2: As India's WTO notifications do not indicate the total value of agricultural production, FAOSTAT data (FAO, n.d.) has been used instead to determine an indicative historical de minimis threshold for combined product-specific and non-product-specific support.

Other WTO members have questioned India's domestic support figures. In 2018, the United States submitted a counter-notification (WTO, 2018a)[15] that queried India's exchange rate calculations, its determination of the volume of eligible production used to compute the amount of market price support, and the extent to which subnational support was included in the amounts reported to the WTO.[16]

India's green box spending grew quickly following the period of high and unstable prices in international food commodity markets in 2007–2008. It is now over USD 31 billion per year, of which some USD 18 billion is related to public stockholding programs and another USD 8 billion is provided in the form of investment aids.

Note that, using a different and more comprehensive methodology to examine India's policies,[17] recent OECD analysis has suggested that net support to agriculture is in fact negative, with the combined effect of multiple policy instruments having the effect of taxing producers (OECD, 2018). However, while this may be a factually accurate assessment of the combined effect of many policies, it does not change the legal weight of the WTO rules in the Agreement on Agriculture and the measures set out in that agreement to calculate (and constrain) domestic support.

[15] Note this is the first time a country had officially challenged another member's notification by offering an alternative account.

[16] Brink (2014) raises similar questions.

[17] The OECD analysis measures transfers from taxpayers and consumers to producers, including through the effect of border measures such as tariffs (which are excluded under WTO domestic support measurements).

Analysis of FAOSTAT data (FAO, n.d.) indicates that India's value of agricultural output is due to grow by a factor of three between 1990 and 2030 to reach USD 373 billion, rising from USD 125 billion three decades ago. By 2030, the country's value of agricultural output is set to be second only to China's, representing an eighth of all world agricultural output.

3.3 United States

Most U.S. domestic support is provided through three distinct programs: 1) direct income support for cereal, oilseed, and cotton producers through price- and revenue-based countercyclical payment programs; 2) premium subsidies for an extensive agricultural insurance program; and 3) conservation and other environment-based programs, which include long-run land set-asides as well as cost-share programs for so-called working land conservation practices. In addition, a host of smaller programs is offered, most notably the dairy margin protection program (an insurance-type program that guarantees dairy farmers a margin based on the difference between a fluid milk price and feed costs) and the price support program for sugar producers.

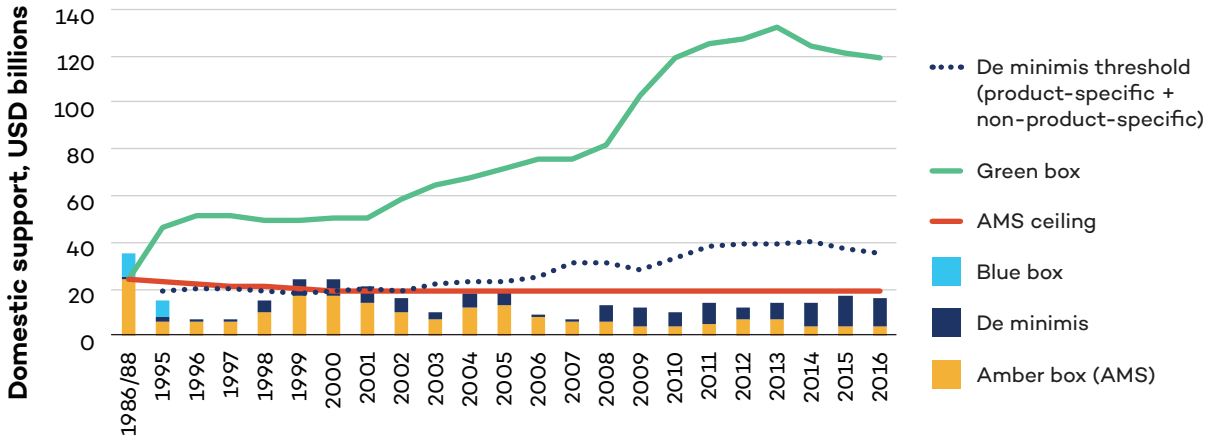
The United States notifies all those programs as amber box, with the exception of the conservation programs, which are notified as green box programs under paragraph 12 of Annex 2 of the Agreement on Agriculture (WTO, 1994). The United States has generally notified payments under the price- and revenue-based countercyclical programs as non-product-specific amber programs, arguing that while both programs establish payment rates based on commodity-specific prices and yields, a producer receives a payment determined by the amount of the crop historically grown on the farm, not the area planted in the current year. In addition to conservation programs, the United States also notifies its nutrition programs as green box. Green box programs totalled USD 119 billion in 2016, of which domestic food aid was USD 102 billion.

Since 1995, the country's current total AMS has generally remained far below the U.S.-bound total AMS of USD 19.1 billion. In its 2016 domestic support notification, the United States reported that its current total AMS was USD 3.8 billion. However, due to the countercyclical nature of many U.S. farm programs, subsidy outlays, and total AMS, levels can fluctuate from year to year. In recent years, the levels of reported de minimis support have been quite high, often two to three times the level of the reported total AMS. Premium subsidies for crop insurance account for the bulk of product-specific de minimis support, while, since 2014, payments under the price- and revenue-based countercyclical programs have accounted for most of the non-product-specific de minimis support. No clear trend toward less distorting policy instruments is apparent in U.S. farm policy design.

In 2018 and 2019, the United States provided over USD 28 billion in additional support to compensate producers adversely affected by retaliatory tariffs imposed by WTO members facing unilateral trade actions by the United States (such as China, the EU, Canada, and Mexico). Glauber (2019) points out that those outlays will likely push the U.S. current total AMS for 2018 and 2019 near, and potentially over, its bound AMS.

The United States has not provided any blue box support since 1995. In 2014, it also moved away from decoupled direct payments to producers, in favour of other support programs that were more closely coupled to price and revenue.

Figure 4. U.S. agricultural domestic support



Source: IISD calculations, based on WTO notifications.

Analysis of FAOSTAT data (FAO, n.d.) indicates that the value of U.S. agricultural production is due to grow by 73% from 1990 to 2030, rising from USD 154 billion to USD 266 billion. The growth in farm output would place the United States as the third most significant producer country in value terms, behind only China and India, with the United States representing 8.7% of total world agricultural production in 2030.

3.4 EU

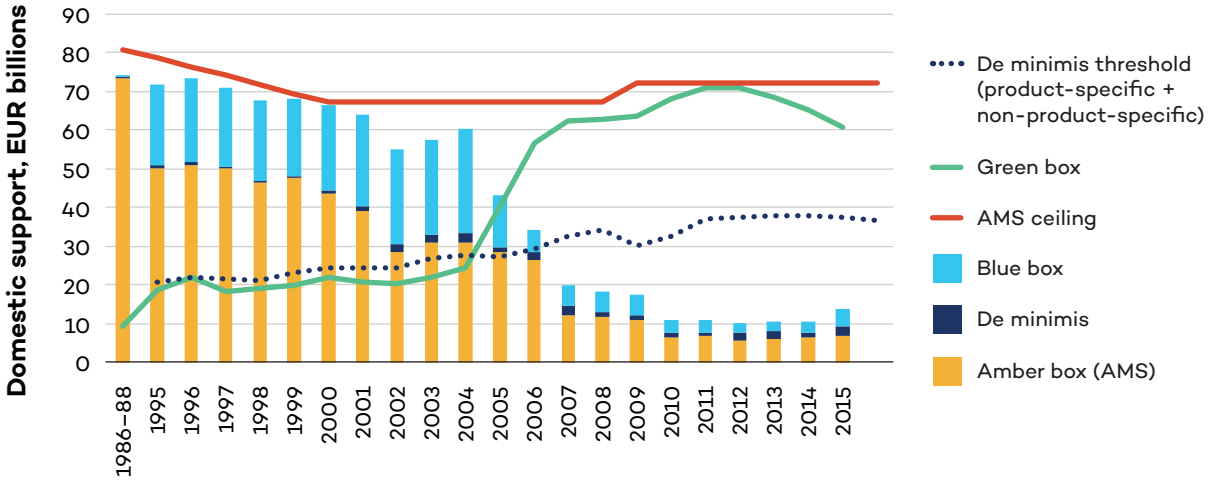
Agricultural policy reforms of the EU's Common Agricultural Policy (CAP) instituted in the early 1990s moved EU farm programs away from market price support toward direct income support programs and helped pave the way for the completion of the Uruguay Round through the creation of the blue box (article 6.5). The blue box allowed the EU to keep its production-limiting direct payment programs exempt from reduction commitments while reducing price supports, thereby effectively reducing amber box outlays. Those reforms were furthered in the early 2000s as payments were delinked from production altogether under the Basic Payment Scheme and the Single Area Payment Scheme. Decoupling payments from output also allowed the EU to move most of its producer support from the blue box to the green box under paragraph 6 of Annex 2.

In addition to market intervention and direct payment schemes financed under Pillar 1 of the CAP, the EU provides regional aid for rural development programs financed under Pillar 2 and reported to the WTO under Annex 2.

The sharp fall in EU amber box support since the end of the Uruguay Round, as a consequence of the EU's reforms to farm policy, has meant that the EU now has a considerable gap between its actual level of trade-distorting support and the ceiling that it has

committed to remain below at the WTO, as Figure 5 shows. After 2004, EU blue box support also declined significantly.

Figure 5. EU agricultural domestic support



Source: IISD and IFPRI calculations, based on WTO notifications.

Although considerably lower than past levels, in absolute terms the EU continued in 2016 to provide EUR 6.9 billion (USD 7.8 billion) in amber box support, along with another EUR 2.4 billion (USD 2.7 billion) in de minimis support, and EUR 4.6 billion (USD 5.2 billion) in blue box support, meaning total domestic support outside the green box amounted to EUR 13.9 billion (USD 15.7 billion).

Product-specific support in the amber box and de minimis is concentrated on dairy products such as butter and skimmed milk powder (together amounting to around EUR 4.6 million or USD 5.1 billion) and wheat (EUR 2.1 million or USD 2.4 million).

Green box support equated to EUR 61.6 billion (USD 69.6 billion) in 2016, of which almost half was provided in the form of decoupled income support payments to producers (EUR 29.7 billion or USD 33.5 billion). Since the 2014 CAP reform, some support has been "recoupled" to production, with some additional discretion provided to EU member states over how this support is provided. The post-2021 reform is widely expected to continue this trend toward "re-nationalizing" the CAP, as well as responding to producer concerns about the need for "simplification" and environmentalists' concerns about the need for greater coherence with local environmental priorities.[18]

Analysis of FAOSTAT data (FAO, n.d.) indicates that the EU agriculture sector is due to grow by 15% from 1990 to 2030, from USD 222 billion to USD 255 billion. This would make the EU the world's fourth-largest agricultural producer in value terms, accounting for 8.4% of total world agricultural output.

[18] The bloc's future policy trajectory may be affected by the United Kingdom's withdrawal from the EU. Matthews (2018) explores some of the associated issues.

3.5 Japan

An important objective for Japan's farm policy programs is to support incomes among Japan's predominantly aging and often part-time farming community in rural areas (Yamashita, 2015). With rice farming long associated with traditional landscapes and associated biodiversity, some measures are also justified based on environmental objectives. Japan introduced a number of reforms in the late 1990s that removed, or sharply reduced, price supports for sensitive agricultural products like rice while maintaining high tariffs that helped maintain domestic prices at higher levels than world market prices. Price supports were replaced by price-based countercyclical income support tied to production-limiting provisions. The net effect was to significantly reduce Japan's amber support while maintaining producer income through tariffs and blue box payments.

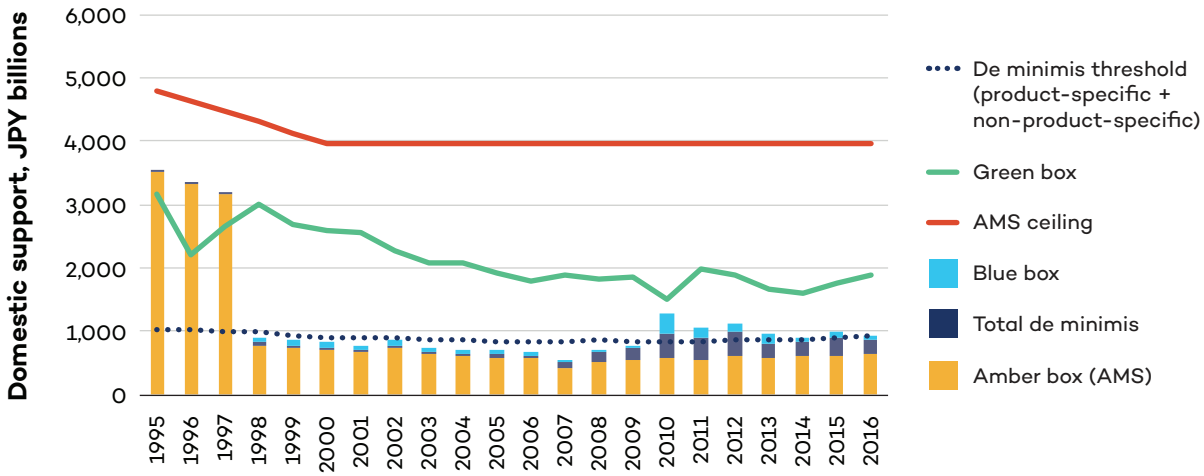
In 2016, the most recent year notified, Japan provided the bulk of its support in the form of trade-distorting amber box support (JPY 636 billion or USD 5.7 billion), with another JPY 229 billion (USD 2.0 billion) provided as de minimis support (Figure 6). Certain categories of meat products (beef and veal, and meat from swine) received the highest levels of product-specific support. Notifications reveal a sudden drop in amber box support in 1997, reflecting the removal of market price support, although tariff barriers meant domestic prices remained above international levels.

Japan also provides support to producers through a subsidized agricultural insurance program (outside of the United States and China, one of the largest programs in the world). Japan's producers have long been able to insure crops and livestock against production losses, and a program that insures total farm revenue was introduced in 2019 (OECD, 2019). Rice production quotas were abolished in 2018. In addition, Japan offers its paddy rice producers a crop diversification payment to switch to other crops such as soybeans and wheat.

In recent years, Japan introduced a number of domestic policy reforms with a view to preparing the agricultural sector for membership in a major regional trade deal, the Comprehensive and Progressive Trans-Pacific Partnership (CPTPP). Under the CPTPP, Japanese border measures for agricultural products, including tariffs, safeguards, and tariff-rate quotas, are eliminated or reduced.

Green box support continues to be important in Japan, with this category amounting to JPY 1,905 billion (USD 17 billion) in 2016. Over 40% of this (JPY 565 billion or USD 5.0 billion) was provided in the form of infrastructural services, including irrigation and drainage facilities, and land consolidation. Another 30% of the green box support was provided for environmental programs (JPY 378 billion or USD 3.4 billion).

Figure 6: Japan's agricultural domestic support



Source: IISD and IFPRI calculations, based on WTO notifications.

Analysis of FAOSTAT data (FAO, n.d.) suggests that the value of Japan's agricultural output is set to decline gradually in absolute terms between 1990 and 2030. By the end of this period, the country's farm output will have fallen to around three quarters of the level it reached at the beginning, dropping from USD 21 billion to USD 16 billion. By 2030, Japan's farm output is due to equate to 0.5% of total world agricultural production.

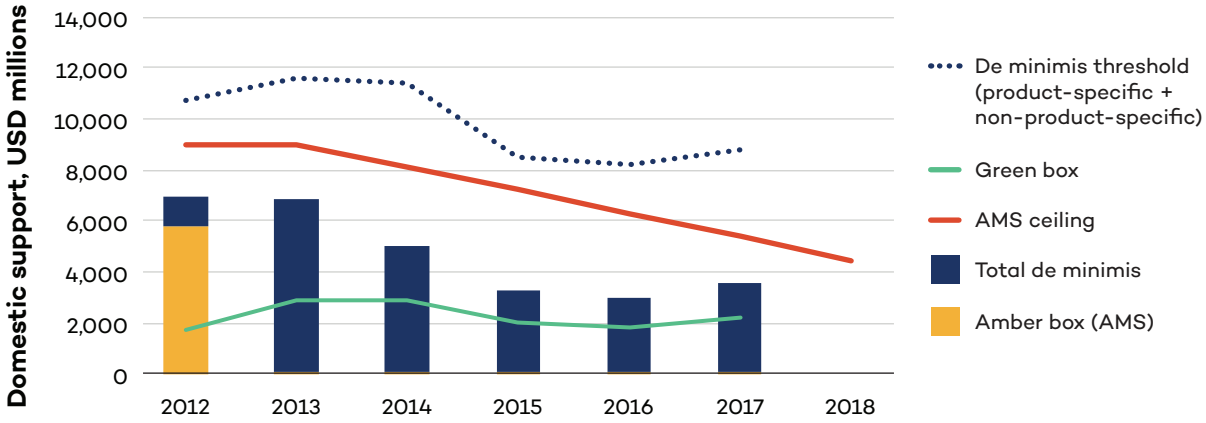
3.6 Russia

Russia's agricultural sector is heterogeneous. Russian grains compete effectively on global export markets, but livestock producers struggle to compete as exporters. While domestic support has risen in domestic currency terms, exchange rate fluctuations since Russia's accession to the WTO in 2012 have meant that support in USD terms fell in all years apart from the most recently notified, 2017 (see Figure 7).

Russia's accession commitments also required the country to gradually reduce its domestic support (in USD terms) over the 2013–18 period. Product-specific support to milk has consistently been the most important supported item in absolute terms, with annual support reaching around USD 500 million, even though the support provided was considered de minimis as it fell below 5% of the VoP. While non-product-specific support exceeded the de minimis threshold and was counted as amber box support in 2012, it has since decreased considerably, falling by half five years later.

Green box support was around USD 2 billion in 2017. However, while decoupled income support payments accounted for as much as USD 1 billion in 2013, they have since fallen steadily and are now USD 316 million.

Figure 7. Russia's agricultural domestic support



Source: IISD and IFPRI calculations, based on WTO notifications.

Analysis of FAOSTAT data (FAO, n.d.) indicates that Russia's agricultural VoP between 1992 and 2030 is likely to grow by 38%, rising from USD 42 billion to USD 58 billion. If these projections are accurate, Russia will remain in seventh place by the value of its farm output, representing 1.9% of total world production by 2030.

3.7 Indonesia

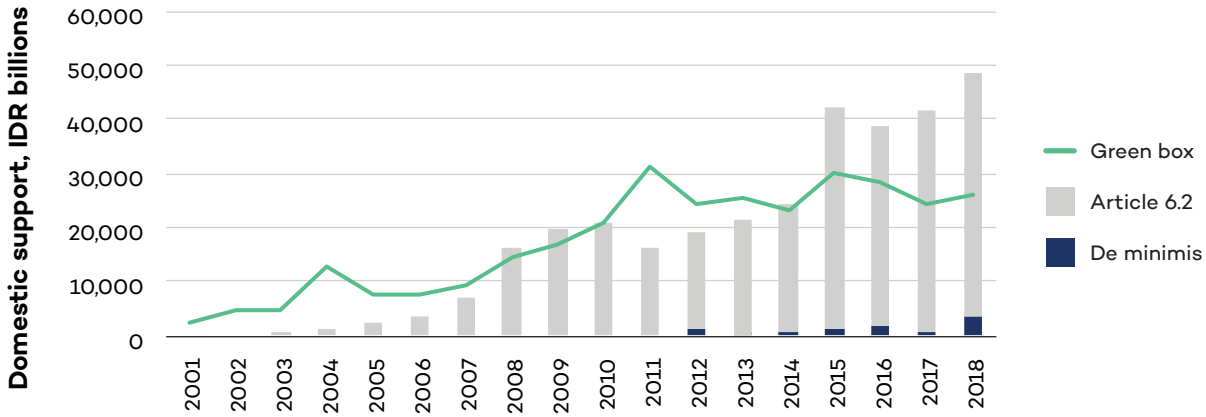
With rice as an important staple food crop, Indonesian farm policy has tended to focus on supporting self-sufficiency in production, even though the country is also a major rice importer (WTO, 2013). Indonesia purchases some domestic rice production at minimum prices as part of a public stockholding scheme for food security purposes (International Centre for Trade and Sustainable Development, 2016), although the most recent notification indicates that less than 1% of the overall VoP is purchased at prices set by the government.[19]

As Figure 8 shows, input and investment subsidies that are notified under article 6.2 have grown dramatically in recent years, approximately tripling in the decade up to 2018, when they reached IDR 45,000 billion (USD 3.2 billion). Of these, input subsidies accounted for the bulk of the growth.

Cash-based and in-kind food aid for poor citizens has consistently represented the bulk of Indonesia's green box spending, amounting to IDR 19,000 billion in 2018 (USD 1.3 billion). Spending on infrastructural services has also tended to be important under the "general services" category of green box support, with support levels in this category averaging just over IDR 4,000 billion (USD 0.3 billion) in the last four years notified.

[19] Montemayor (2014) explores the significance of the jurisprudence from the U.S.-Korea beef case (DS 161) for the calculation of market price support and looks in particular at the circumstances in which countries might reasonably notify an amount that is less than the total production value as representing the production that is "eligible" to receive support under WTO rules. For example, governments procuring only a small percentage of the overall production value could pre-announce the amount they intend to buy.

Figure 8. Indonesia's agricultural domestic support



Source: IISD and IFPRI calculations, based on WTO notifications.
Note: Indonesia's WTO notifications do not indicate the total value of agricultural production.

Analysis of FAOSTAT data (FAO, n.d.) indicates that, between 1990 and 2030, Indonesia's agricultural VoP is due to grow by 2.7 times, rising from USD 29 billion in 1990 to USD 80 billion in 2030. Projected trends indicate that this would place Indonesia sixth in a ranking of countries on the basis of VoP, with its farm output representing 2.6% of the global total.

3.8 Brazil

Brazil's support to agriculture is relatively low compared to other major economies. Most producer support is provided through market price support and input payments, including crop insurance subsidies and concessional credit.

As Figure 9 shows, trade-distorting support in Brazil has fallen sharply since the 2013/14 marketing year, after having risen from relatively low levels from 2007 onwards. Green box payments for general services have been especially affected by cuts, while input and investment subsidies notified under article 6.2 have also been reduced. The reductions in spending have been motivated in particular by a desire to reduce the fiscal burden associated with farm subsidies.

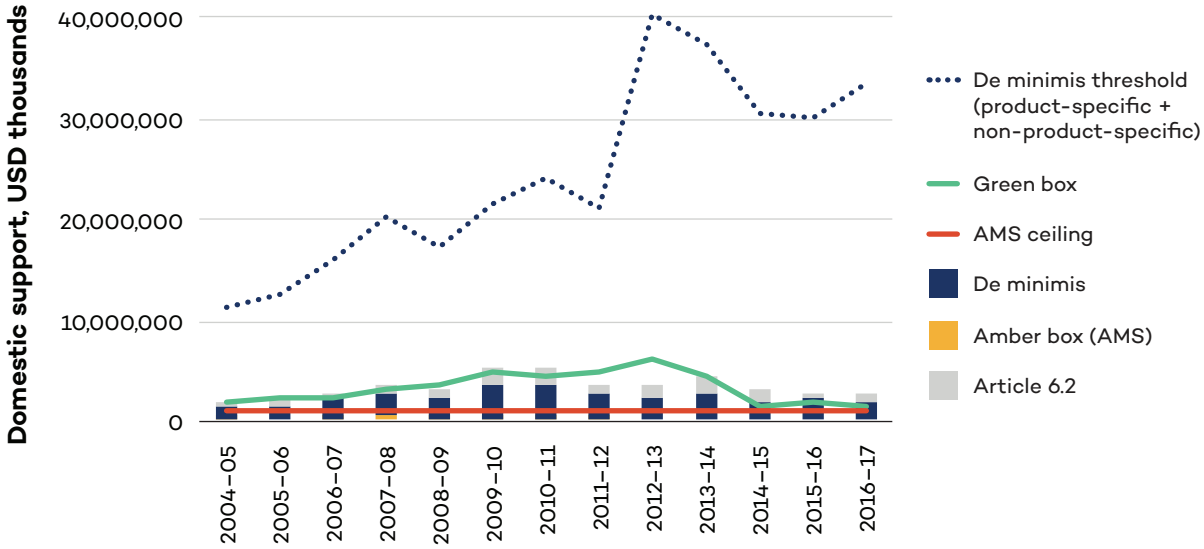
Brazil has not reported any support in the amber box since the 2011/12 marketing year, although its most recent notification indicates that nearly USD 2 billion was provided in de minimis support. Amber box support reached a high point of USD 520 million in the 2007/08 marketing year and has since declined. In the most recent year notified, the vast majority of amber box support was provided in the form of non-product-specific support: of this, debt rescheduling programs were particularly important, accounting for USD 1 billion, with non-product-specific production, marketing credit programs, and insurance credit schemes representing the remainder.

While input and investment subsidies under article 6.2 have tended to fluctuate, they have also fallen sharply since the 2013/14 marketing year, when they amounted to nearly USD 1.9 billion. By the 2016/17 marketing year, the most recent year notified, they had fallen to

around a third of that peak. A decrease in the provision of investment credits lies behind the fall in support in this category.

The government has introduced sharp cuts to support for green box programs such as those notified as general services: in aggregate, these fell from USD 3.8 billion in the 2012/13 marketing year to around a seventh of that level four years later. Within this category, cuts were particularly sharp for extension and advisory services: these dropped from USD 2.7 billion to just USD 87 million over the same period. Support for domestic food aid also fell from over USD 1.5 billion in 2013/14 to less than USD 1 billion four years later.

Figure 9. Brazil's agricultural domestic support



Source: IISD and IFPRI calculations, based on WTO notifications.

Analysis of FAOSTAT data (FAO, n.d.) indicates that Brazil's value of agricultural production is due to grow by 3.2 times between 1990 and 2030, from USD 56 billion at the start of this period to USD 176 billion at the end. This would make Brazil the fifth largest country if ranked in 2030 by its value of agricultural output, with 5.8% of total world production.

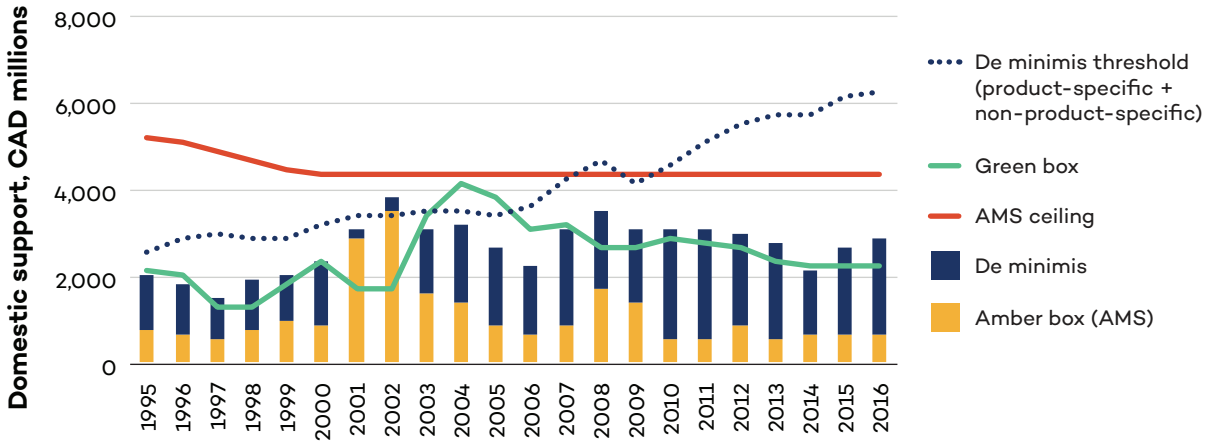
3.9 Canada

Canada's agricultural sector is split into the supply-managed commodities (eggs, poultry, dairy), and other products, some of which are highly competitive on global markets and others which are grown predominantly for the domestic market and require imports to make up supply shortfalls. Only the supply-managed commodities receive high levels of protection. Market price support for grains was eliminated in the mid-1990s, and support for supply-managed commodities is provided through tariff protection and supply control at very little cost to the treasury. The other main forms of support are an extensive agricultural insurance program, a whole farm margin program, a producer-financed income savings account, and a disaster-relief program.

Support levels have fluctuated in part due to changes in global milk prices, as they are calculated against an external "world" price for milk based on the cost of New Zealand's dairy exports. An increase in non-product-specific support levels above the de minimis threshold led to amber box levels increasing dramatically in 2001 and 2002, although this support was not maintained. In the last three years, non-product-specific support increased again but remains below the de minimis limit.

Support in the amber box and de minimis together equalled CAD 2.9 billion (USD 2.2 billion) in 2016, the most recent year notified (Figure 10). Canada has not provided any support in the blue box at any time over the last two decades. Another CAD 2.2 billion (USD 1.6 billion) is provided as green box support, with support for general services representing most of the outlays in this category.

Figure 10. Canada's agricultural domestic support



Source: IISD and IFPRI calculations, based on WTO notifications.

Analysis of FAOSTAT data (FAO, n.d.) indicates that Canada's agricultural VoP is due to grow by 82% from 1990 to 2030, from USD 18 billion in 1990 to USD 32 billion in 2030. Canada is expected to account for almost 1.1% of total world agricultural production in 2030.

3.10 Norway

Norway has maintained relatively high levels of producer support compared to other OECD countries. Norway's food and agriculture policy aims to promote food security and production that is distributed throughout the country's territory, increase value addition, and support sustainable agriculture (including by reducing greenhouse gas emissions) (WTO, 2018b).

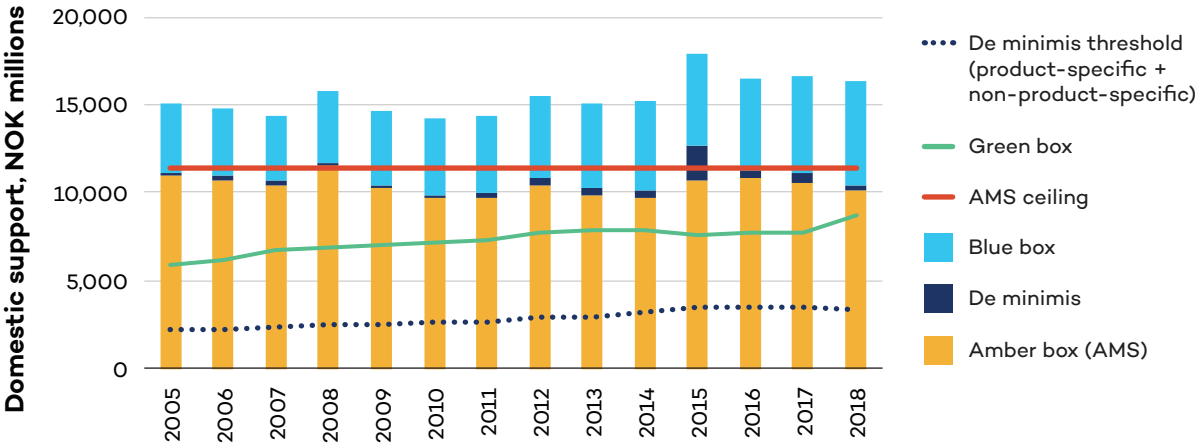
At around NOK 10 billion (USD 1.2 billion), Norway's amber box support has consistently remained very close to the country's maximum permitted WTO ceiling (NOK 11.5 billion or USD 1.4 billion) for AMS (Figure 11). Product-specific support to milk producers amounted to around half of the notified amber box support in 2018, the most recent year notified, with support for pork producers representing another quarter of the amber box total. Producers of barley, beef, sheep, wheat, and oats also received coupled domestic support payments

that were notified as amber box, while producers of fruit, vegetables, and berries received de minimis support, as did poultry and egg producers.

Blue box payments have also consistently represented an important category of domestic support in Norway, rising to NOK 5.9 billion (USD 0.7 billion) in the 2018 notification.

Green box support accounted for another NOK 8.7 billion (USD 1.1 billion), with environmental programs representing more than two-fifths of this. Relief payments for natural disasters were also important, along with general services support such as marketing and promotion services.

Figure 11. Norway's agricultural domestic support



Source: IISD and IFPRI calculations, based on WTO notifications.

Analysis of FAOSTAT data (FAO, n.d.) indicates that the value of Norway's agricultural production is set to increase marginally (by just 4%) during the 1990–2030 period, by the end of which it is set to reach just under USD 1.5 billion or just 0.05% of total world agricultural output.

3.11 Panama

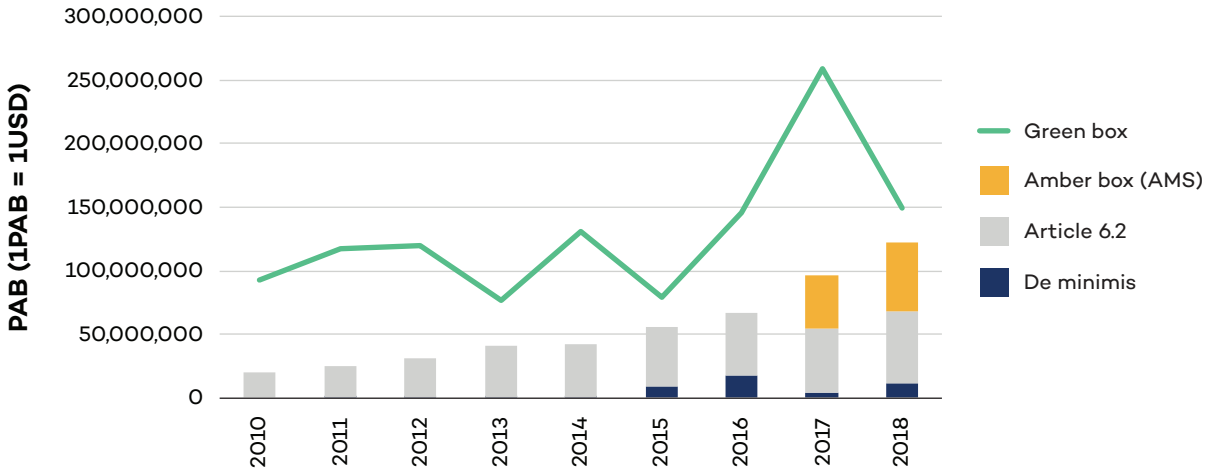
Panama's domestic support for agriculture has primarily been focused on green box measures, with trade-distorting support to producers mostly provided in the form of input and investment subsidies under article 6.2 (Figure 12).

Although the country does not have an AMS commitment at the WTO, support for rice in the two most recent years notified has exceeded the de minimis threshold, representing almost a third of the VoP. Support for milk and maize fell below the de minimis level, as did support for tomatoes in previous years.

In the most recent year notified (2018), Panama reported that it provided PAB 56 million (USD 56 million) in the form of loans to small-scale producers with an annual income that does not exceed USD 100,000. The support was notified under article 6.2 of the Agreement on Agriculture (input and investment subsidies for developing countries).

The bulk of Panama's green box support is allocated to just one general services category, entitled "other general services," and seemingly covers the operating budget and other costs associated with running the Ministry of Agricultural Development. PAB 97 million (USD 97 million) was reported as falling under this category in 2018.

Figure 12. Panama's agricultural domestic support



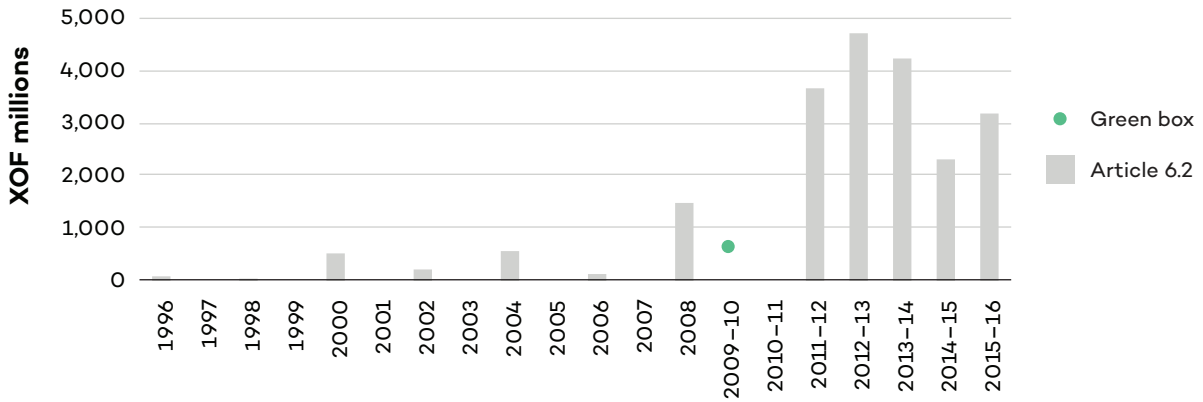
Source: IISD and IFPRI calculations, based on WTO notifications.
Note: Panama's WTO notifications do not indicate the total value of agricultural production.

3.12 Togo

As Figure 13 shows, Togo's notifications to the WTO indicate that the country's agricultural domestic support is provided essentially in the form of input and investment subsidies under article 6.2. The country also reported some green box support in 2009/10, in the form of quarantine and veterinary services (notified under "general services") and natural disaster relief, which the notification indicates was for seeds and fertilizer. In the last three years notified, input and investment subsidies provided under article 6.2 averaged around XOF 3 billion (USD 6 million). Input subsidies are granted to vulnerable producers, and applicants are required to have a sown area of between 0.5 and 1 hectares (WTO, 2017).

Cotton, cocoa, and coffee are the most important export crops for Togo. The country's WTO Trade Policy Review indicates that cocoa pods and rooted coffee bush cuttings are also distributed to producers at prices that are generally below 50% of the cost of production (WTO, 2017). The same publication also notes the existence of a mechanism for setting producer prices for cotton. Although the country is in a customs union (the West African Economic and Monetary Union), subsidies on inputs are not coordinated across the members but established separately by individual members.

Figure 13. Togo's agricultural domestic support



Source: IISD and IFPRI calculations, based on WTO notifications.

Note: Togo's WTO notifications do not indicate the total value of agricultural production.

4.0 Where Next for the WTO Negotiations on Domestic Support?

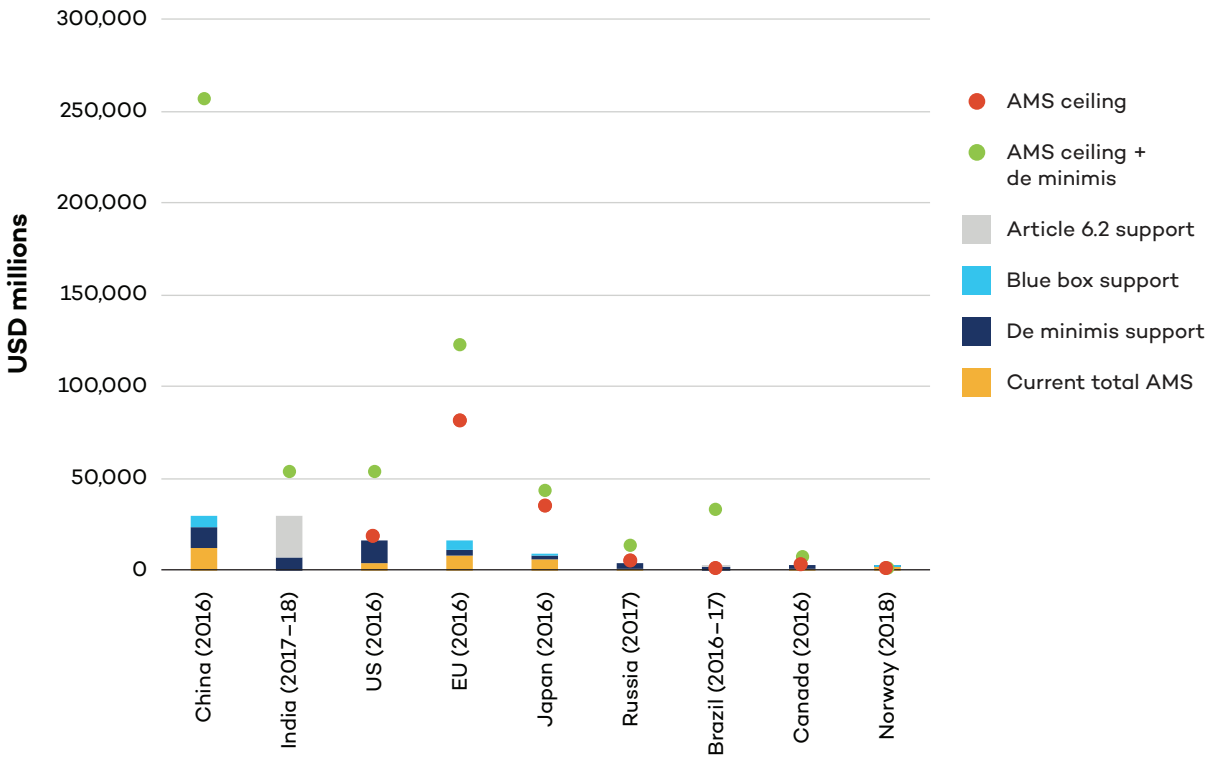
4.1 What Do Existing WTO Domestic Support Ceilings Mean for Different Countries?

To understand how domestic support affects trade and markets, negotiators and policy-makers need to consider two factors: the absolute level of support that affects trade and markets, and the significance of that support as a share of the value of agricultural production.

Although the non-green box domestic support[20] provided by China is larger than that provided by any other country in absolute terms (Figure 14), the support it has notified is actually considerably lower than that of other WTO members when expressed as a share of the VoP (Figure 15). Given the immense size of China's farm sector and the significance of the country's farm output as a share of the global total, it should not be surprising that support levels are higher in absolute terms than in smaller countries. What matters is the extent to which the government is providing trade-distorting support relative to the overall size of the farm sector.

[20] Although the analysis in this section focuses on non-green box support, it is worth noting that a number of WTO members have recently notified that they only provide green box support. Countries in this category include, for example, Cambodia, Ecuador, Georgia, Jamaica, New Zealand, Samoa, United Arab Emirates, and Vanuatu.

Figure 14. Notified domestic support relative to current WTO ceilings (USD millions)



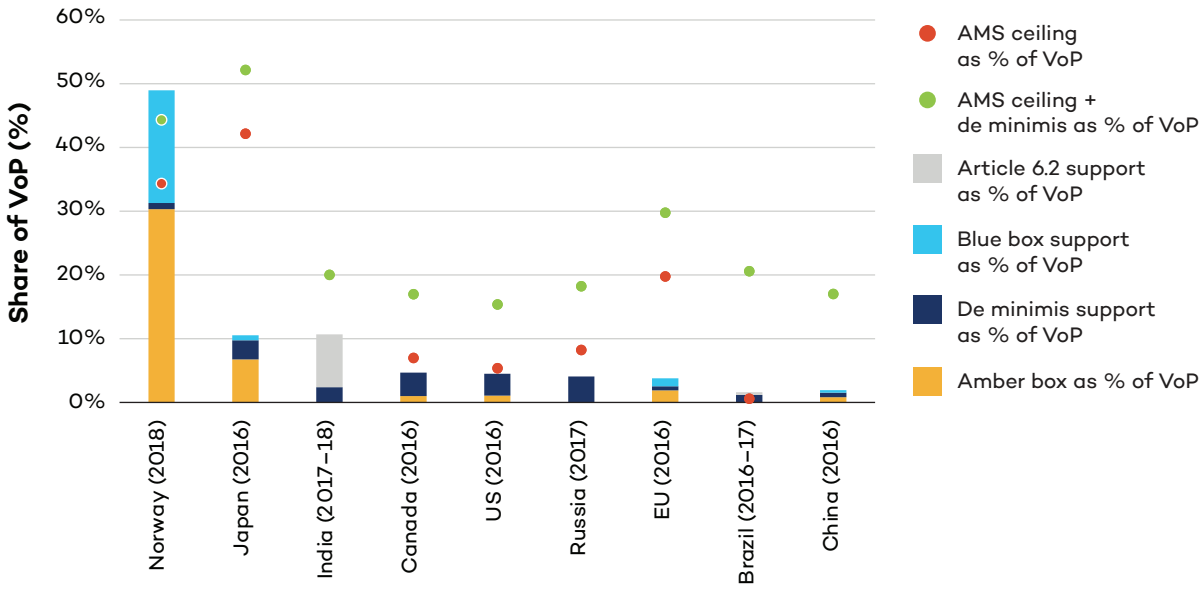
Source: IISD and IFPRI calculations, based on WTO notifications. VoP data for India is from FAOSTAT data (FAO, n.d.).

At the other extreme, Norway provides trade-distorting support equivalent to half of its total value of agricultural production. Although it appears as an outlier in the cross-section of countries examined in this paper, a few other relatively small high-income countries with protected agricultural sectors also provide large amounts of trade-distorting support compared to the overall size of their farm sector.[21] However, Norway's non-green box support equates to just over USD 2 billion and is tightly constrained by existing WTO ceilings, whereas other larger economies have the potential to distort markets far more significantly. They accomplish this by providing much greater amounts of support in absolute terms and increasing support to WTO ceilings that provide a less significant constraint.

Figure 14 shows that, in absolute terms, China and India have the largest levels of non-green box support (at around USD 29 billion in both cases), followed by the United States and the EU (both around USD 16 billion), and then Japan (USD 8 billion). The remaining five countries examined each provide less than USD 4 billion in non-green box support: Russia (USD 3.6 billion), Indonesia (USD 3.4 billion), Brazil (USD 2.6 billion), Canada (USD 2.2 billion), and Norway (USD 2 billion). If updated WTO rules are to limit the extent to which countries are able to provide large amounts of trade-distorting support, which risks harm to producers in other countries and may create incentives for unsustainable patterns of production and consumption, negotiators will need to keep these absolute figures in mind.

[21] Farm policies in countries such as Switzerland and Iceland share characteristics of those in Norway.

Figure 15. Notified domestic support relative to current WTO ceilings, as a share of VoP



Source: IISD and IFPRI calculations, based on WTO notifications. VoP data for India is from FAOSTAT data (FAO, n.d.).

Apart from Norway, Figure 15 shows that the WTO members examined fall into three broad groups when non-green box support is assessed as a share of the VoP. Japan and India are at 11% and 10%, respectively; Canada and the United States are at 5%; Russia and the EU are at 4%; and Brazil and China are at 2%. Again, negotiators will need to take into account the extent to which support deemed to be trade-distorting represents an important share of overall output when updating global rules in this area.

While the levels at which domestic support ceilings[22] are set at the WTO today ought perhaps to be irrelevant to the design of more equitable rules for the future, these commitments nonetheless have consequences for the politics of negotiations in this area and for the extent to which different WTO members perceive different reform options as representing a fair and balanced outcome. The following section therefore reviews current WTO ceilings, both in absolute monetary terms and as a share of the VoP.

In absolute terms, China's de minimis ceiling is far higher than other WTO members, at about USD 257 billion. This level is a function of its huge overall farm output and the level at which China's de minimis commitments were established when it joined the global trade body. While the EU's AMS commitment level is much lower, at around USD 81 billion, support could in theory increase some way toward the USD 123 billion ceiling created by the combined AMS

[22] It is important to note that, for countries with AMS commitments, the current WTO ceiling has been calculated as the AMS commitment level plus de minimis (including both product-specific and non-product-specific thresholds). While a country could theoretically provide support up to its AMS ceiling for a given product (e.g., soybeans) while maintaining all other support just below the de minimis thresholds, it would then be necessary to subtract the support for soybeans from the de minimis amount. The theoretical maximum ceilings discussed in this section and represented in the associated figures do not reflect the requirement that support for a given product would in reality be accounted for either in the AMS or in the de minimis, but not in both categories.

commitment and de minimis threshold. Both China and the EU thus have a substantial gap between actual support levels and the maximum permitted level that they have agreed to respect at the WTO.

If de minimis thresholds are taken into account alongside AMS commitments, three other countries are the next most constrained by existing WTO rules on domestic support: India, the United States, and Japan. India's de minimis ceiling is around USD 54 billion, and, while the United States must respect its AMS commitment of USD 19 billion, its de minimis thresholds mean it also could conceivably provide a level of total non-green box support that is similar to that provided by India. Japan's AMS ceiling is at USD 35 billion, but de minimis thresholds could allow total non-green box support to increase to USD 43 billion. Support ceilings for Brazil, Russia, Canada, and Norway are lower still, although the gap between actual support levels and current WTO ceilings is particularly large in the case of Brazil.

Figure 15 shows that support ceilings are less heterogeneous across countries when expressed as a share of the VoP. The highest ceilings (again combining both AMS and de minimis) are for Japan (52%) and Norway (44%), with AMS commitments 10% lower in both cases. However, while Norway's actual non-green box domestic support is relatively close to the AMS ceiling; in the case of Japan, there is a considerable gap between the two measures. The ceiling for the EU is next, at close to 30%, with the bloc's AMS commitment set 10% lower. Brazil, India, Russia, Canada, China and the United States all follow: for these countries, support ceilings (including both AMS and de minimis thresholds) range from 21% to 15%.

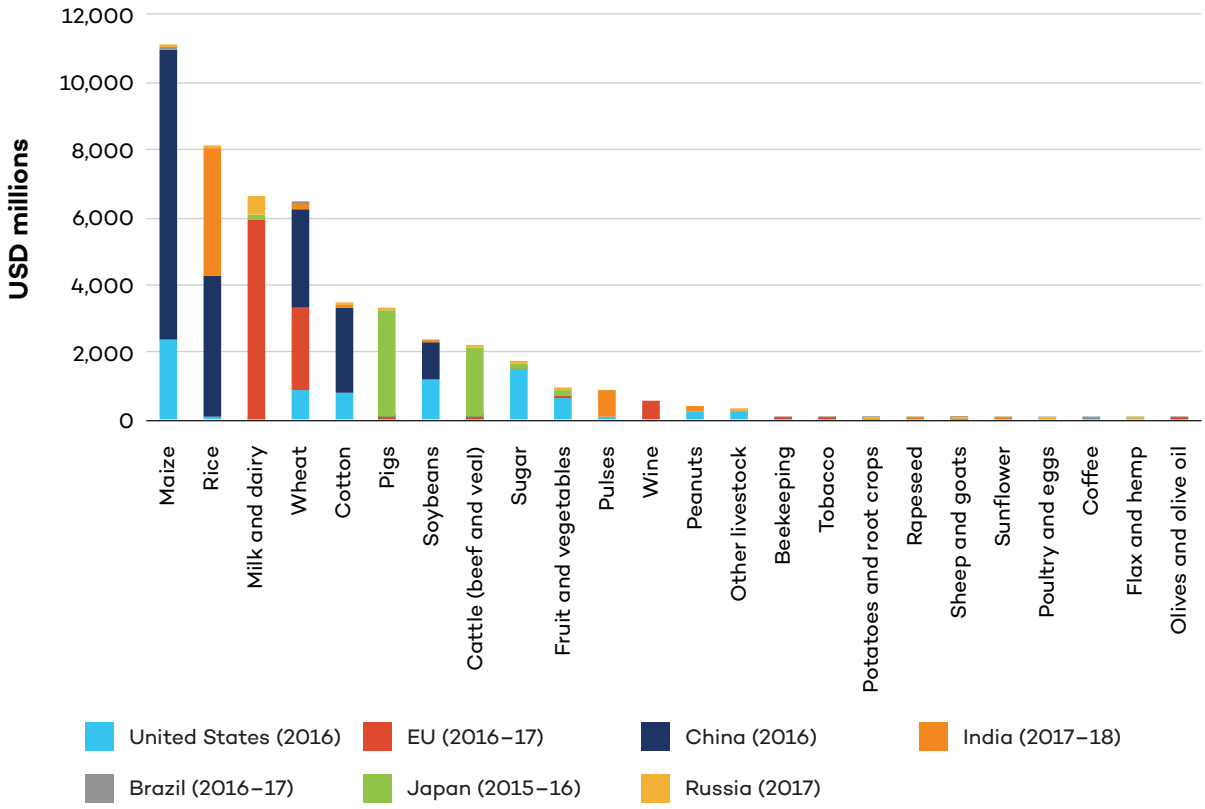
It is noteworthy that, for all countries apart from Norway, a considerable gap exists between the actual non-green box support provided and the maximum amount of amber box and de minimis support that could be provided under WTO rules. Most countries with AMS commitments are also providing considerably less trade-distorting support than that which would be allowed under their commitment levels. WTO members could therefore usefully agree to reduce the risk of increases in the type of support that adversely affects producers in other countries by taking steps to lower gradually these overall ceilings over an agreed period of time. As WTO ceilings set in monetary terms have historically been problematic, both because of their arbitrary nature and because of issues associated with currency fluctuations and inflation, WTO members should consider setting new ceilings as a share of the value of agricultural production. Longer time periods could be provided for developing countries that require special and differential treatment. However, in order to reduce the real impact of support programs on global markets for food and agriculture, WTO members will also need to commit to reducing these ceilings beyond the level of actual support provided so as to deliver effective cuts in non-green box support over time.

In addition to the overall levels of support, it is important to consider the extent to which it is concentrated on specific products and product groups. If governments are able to concentrate domestic support on particular products, they can harm producers of those products in other countries.[23] Figure 16 shows that a handful of products receive the lion's share of product-

[23] Laborde, Piñeiro, and Glauber (2017) show that product-specific disciplines play an important role in addressing the impact of support on the world prices of some commodities and would be beneficial for developing country farmers in particular.

specific support in the amber box and de minimis categories. Maize, rice, milk and dairy, and wheat top this list of commodities; cotton, pigs, soybeans, cattle, and sugar follow close behind.

Figure 16. Product-specific support in selected major economies (amber box and de minimis)



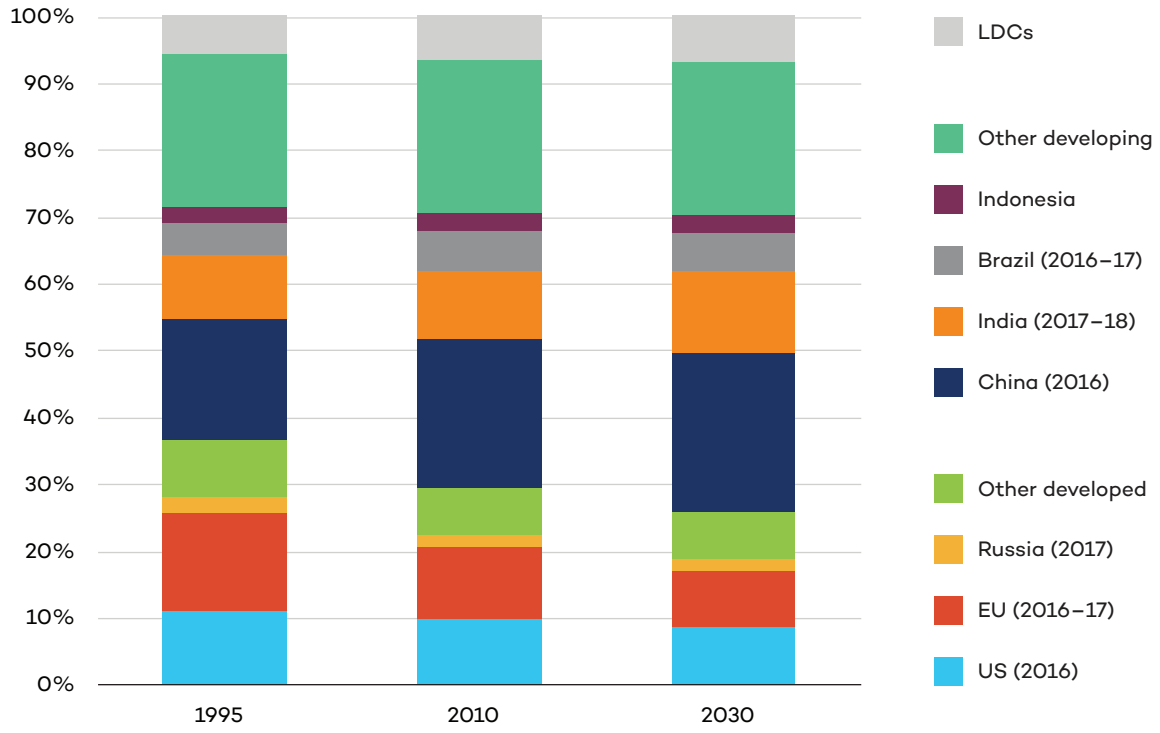
Source: IISD and IFPRI calculations, based on WTO notifications.

Note 1: As countries use different product classification systems to report product-specific support, similar products have been grouped together for the purposes of this graph.

Note 2: The figures include amber box and de minimis support, but not product-specific blue box payments.

Producers of these commodities in a handful of big producer countries have been particularly successful at obtaining, and continuing to obtain, government support for the farm goods they produce. This harms producers in other countries, and where those producers are poor and from low-income countries, this can be particularly damaging. For example, distortions on international markets for products such as cotton remain disproportionately important to producers in many low-income countries, not least because of the importance of these products in supporting farmers' incomes and reducing poverty and food insecurity (Hepburn & Bellmann, 2018; International Centre for Trade and Sustainable Development, 2017). Furthermore, when that support leads to the over-production of goods associated with high greenhouse gas emissions, this exacerbates the negative effects of climate change. Reducing the concentration of support in individual commodities could help improve both the sustainability and the efficiency of markets for food and agriculture and contribute to reducing poverty and food insecurity.

Figure 17. Agricultural VoP (historical and projected) as a share of total world agricultural production



Source: IISD and IFPRI calculations, based on FAOSTAT data (FAO, n.d.).
Note: All other countries represented less than 2% of total world agricultural production in 2017.

If future WTO commitment levels are to be defined as a share of the value of agricultural production, negotiators and policy-makers will need to understand the implications of projected trends in this area for ceilings on domestic support. Assumptions about the extent to which past trends are likely to continue in years ahead are already informing the debate among WTO members in this area. As Figure 17 shows, IISD and IFPRI calculations based on FAOSTAT data (FAO, n.d.) indicate that China's value of agricultural production has increased significantly, today representing almost 23% of the global total compared to under 17% in 1990: however, only a small additional increase to 24% is projected to occur between now and 2030. Although India, the EU, the United States, and Brazil will all remain important agricultural producers, no other single country is expected to come close to China, even though some are expected to continue growing quickly. While just seven major economies represent the bulk of the value of agricultural production, it is also noteworthy that the group of "other developing countries" is expected to represent almost the same level of overall farm output as China by 2030. For this reason, future disciplines on domestic support will need to ensure that support programs in countries at different levels of development do not distort global markets in ways that harm producers elsewhere, including those in developing countries and LDCs.

4.2 Options for Disciplining Agricultural Domestic Support

One of the Agreement on Agriculture's signature outcomes was placing disciplines on domestic support by capping and reducing trade-distorting support and by creating incentives for members to change existing agricultural domestic support programs from trade-distorting measures (amber box) to less trade-distorting measures. Capping overall levels of trade-distorting support is important, as it helps to ensure that scarce productive resources can be allocated more equitably, sustainably, and efficiently at the global level. While support for the delivery of public goods is essential—and in many countries needs to be increased—support that distorts trade and markets can undermine the achievement of public policy goals if they harm other countries' producers—including those in low-income countries—or exacerbate negative environmental impacts, such as increasing greenhouse gas emissions, unsustainably using natural resources such as water, or depleting biodiversity.

Against this yardstick, the agricultural domestic support disciplines set out in the WTO Agreement on Agriculture have fallen short of their goals. There are several reasons why:

- The rules only required modest cuts in total AMS with minimal discipline on commodity-specific AMS levels, which remain very high for a few products in some WTO members.
- Decoupled direct payments can allow recipients to compete unfairly with producers elsewhere, including those in low-income countries.
- Permitted levels of overall trade-distorting support (defined as the sum of a member's AMS, plus de minimis support, plus blue box support, plus support under article 6.2) remain high, allowing producers in countries providing support to compete unfairly with those elsewhere and undermining efforts to allocate global resources more sustainably, equitably, and efficiently. Actual support levels in some large developing countries have also grown significantly over the past 25 years.
- The rules discipline AMS levels from a historical base period, which means that those members that started with relatively high levels of support (mostly high-income countries) continue with relatively large support ceilings, while those that historically provided little or no support above de minimis (i.e., low- and middle-income countries) were granted no additional allowance.

There are many proposals for reforming disciplines on agricultural domestic support before the negotiating committee. In the past, members have proposed limits on blue box support, deep cuts to the bound AMS levels, cuts to de minimis thresholds, caps on individual commodity support, and an overall constraint on levels of overall trade-distorting support. The proposed disciplines quickly become complex, with carve-outs and exemptions based on a variety of criteria. There have not been many proposals that would attempt more harmonization.

This report proposes a simple approach whereby countries can provide a certain minimal level of trade-distorting support to agriculture, based on a percentage of the VoP, with a strong emphasis on transparency through timely and comprehensive member notifications and

trade policy reviews.[24] To ensure this principle is fairly put into practice, certain additional benchmarks or measures are required, including:

1. Using a rolling average (3–5 years) to measure the level of trade-distorting support as a percentage of a country's VoP: this would be capped and reduced in successive installments toward an agreed negotiated threshold, with a view to redressing the historical inequalities that currently exist and to harmonizing support levels in the future.
2. By providing special and differential treatment to developing countries that require it, negotiators would provide these WTO members with a longer phase-in period, a higher initial cap, or both.
3. Limits on how much support can be focused on any one commodity, including agreement on product categories and the level of detail that would be used to identify supported products, for example, by determining that support would be assessed at the 6-digit level of the Harmonized System developed by the World Customs Organization.[25]
4. Exempting procurements made at administered prices under public stockholding programs for food security purposes from the calculation of AMS when administered prices are set below the level of international market prices.

At the same time, it is important to maintain a safe haven under WTO rules for countries to support agriculture and food systems through public investment that does not harm producers in other countries, including support for research, pest and disease control, extension and advisory services, rural infrastructure and other categories currently included in the WTO's green box. In many low- and middle-income countries, support in these areas needs to increase rather than decrease if governments are to have any chance of achieving the SDGs. However, WTO members should also review the criteria of the green box to ensure it does not allow countries to shelter support, which actually causes more than minimal distortions to global markets, while updating these rules to address new challenges such as climate change.

Governments could link progress on agricultural domestic support to financing of support for the provision of public goods in low-income countries (extension and advisory services, infrastructure, research, etc.) and for measures to boost domestic food aid provision where this is needed (e.g., through a global food stamps scheme of the sort proposed by Josling, 2011).

[24] These recommendations are limited to domestic support disciplines. The political economy of multilateral negotiations may make it unlikely that negotiations in one pillar will be feasible without tradeoffs in other pillars, such as market access.

[25] This specifies the level of detail at which a product is described, using an internationally agreed system. For example, while meat and edible meat offal are given the HS-2 digit code 02, the meat of bovine animals (fresh or chilled) is given the HS-4 digit code 0201, and bovine cuts (boneless, fresh or chilled) are given the HS-6 digit code 020130.

5.0 Conclusion

The existing WTO rules on agricultural domestic support have contributed to providing some predictability and stability to global markets. They have also helped to incentivize some countries to move toward more support for public goods and away from measures that harm other countries' producers. However, 25 years after these rules were initially agreed, there is an urgent need to update them, not just to ensure that they adequately address the needs of today's world but also in order to contribute to a more equitable, sustainable, and efficient global food system in the years ahead. Climate-related volatility, and incidents such as the coronavirus pandemic, continue to illustrate the importance of taking further steps to improve the predictability of the governance frameworks for trade in food and agricultural goods.

Across the WTO membership, countries vary considerably in the type of support they provide and the instruments they use to deliver it. Similarly, existing ceilings on trade-distorting support at the WTO are very unequal, with some countries benefiting from significant leeway to provide support that harms producers in other countries, and with others being much more severely constrained. The "hybrid" nature of existing rules, which effectively constrain some countries by a fixed dollar ceiling and others by a floating ceiling expressed as a share of the VoP, has contributed to the difficulties countries face in updating existing rules.

This report proposes a way forward for agricultural domestic support rules that allows countries to provide a certain minimal level of trade-distorting support based on a percentage of the VoP with a strong emphasis on transparency through member notifications and trade policy reviews. This will help move toward a fairer system of global rules that contributes to more sustainable production, consumption, and trade patterns for food and agriculture.

Countries will need to agree to new ceilings and cuts to those ceilings over time in order to move away from a world in which farmers in many of the poorest countries are obliged to compete with the treasuries of their wealthier neighbours. Limits on the extent to which support can be concentrated on particular products will help dismantle some of the more perverse incentives that governments provide to their producers and also help move toward a more sustainable production and consumption system for food and farm goods.

It will be important to maintain a safe haven under WTO rules for countries to support investment in food and agriculture that does not harm producers in other countries, including support in areas such as research, extension and advisory services, rural infrastructure, and other categories currently included in the WTO's green box. In many countries, support in these areas needs to increase rather than decrease if governments are to have any chance of achieving the SDGs. However, WTO members can and should usefully revisit green box support criteria to ensure that this category does not inadvertently shelter support that causes more than minimal trade distortion, for example, in areas such as decoupled income support and investment aids.

Reforming global trade rules is difficult, not least in the area of agriculture. However, the urgency of addressing the challenges facing today's global food system means that governments cannot and must not shy away from doing so. The WTO's Twelfth Ministerial Conference will be a key opportunity for negotiators to take concrete decisions in this area, as well as to map out a roadmap for future talks.

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