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Agriculture Trade Reform and Sustainable and Inclusive Food Security

Abstract

The food system in the Asia-Pacific needs to be viewed as a whole, from production to plate, in order not only to achieve food security in the region but also to contribute to sustainable and inclusive growth. To that end, there is a strong case for Asia-Pacific economies to bring a renewed focus to structural reform in agriculture, including substantially reducing trade-distorting subsidies and liberalising market access barriers, alongside seeking to increase productivity, improve infrastructure and leverage digital technologies. The Covid-19 pandemic underscores the importance of open, undistorted markets, and will also stand economies in good stead in the longer term as adverse impacts from climate change add to production challenges and potential food insecurity.

Keywords trade, food security, tariffs, subsidies, protectionism, sustainability, environment, inclusion, agriculture, food

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Ensuring access for all to sufficient, safe, affordable and nutritious food has long been a challenge in the Asia–Pacific. Although APEC economies have made laudable improvements in recent decades, they have struggled to achieve durable, inclusive and region-wide food security, against the challenging backdrop of an expanding population and natural disasters and other shocks. APEC economies agreed in a 2014 'roadmap' that they would work towards creating an APEC food system which would free the region's people from hunger and malnutrition and would at the same time foster an agri-food sector that was 'economically efficient and profitable, socially acceptable, and environmentally sound', including through encouraging food production and trade (APEC, 2014).

The year after the APEC Food Security Roadmap was agreed, policymakers from around the world established the United Nations' Sustainable Development Goals, one of the signal aims of which was achieving 'zero hunger' for all by 2030,

including for the poorest and most vulnerable. As with the APEC Food Security Roadmap, correcting and preventing trade restrictions and distortions in world agricultural markets, along with increasing agricultural productivity and fostering sustainable production, were identified as important factors for success.

Achieving such a food system has become an increasingly urgent and complex task. The 2014 Roadmap – despite its subheading 'Towards 2020' – is still a work in progress: the pace of reductions in undernourishment has slowed in recent years, with the region still accounting for around a quarter of the world's hungry (APEC Policy Support Unit, 2012). In 2019 the Food and Agriculture Organization assessed that global progress towards achieving the necessary levels of investment in rural infrastructure and research, and stability in food prices, was off track. With the advent of Covid-19, however, the challenge has become even more formidable: the United Nations has estimated that the number of people suffering from acute hunger could double by the end of this year, to 270 million. In any case, thanks to projected population growth, the world will need to feed an additional 2.2 billion mouths by 2050; and climate change will make food production an increasing challenge.

In order to create durable food security by 2030 and beyond, improvements are clearly needed throughout the food value chain, taking account of the different demographic profiles, resource endowments and levels of development in the region (ibid.). This article does not attempt to address those multifaceted issues. Instead, it focuses on one piece of the puzzle: the potential for trade reform to enhance food security in a way that is both economically and environmentally sustainable.

Covid-19 and food security

The advent of Covid-19 has brought food security discussions to the fore – although the effects on food security appear to be generated as much from the pandemic's overall economic impacts as from disruption to the food system as such (Asian Development Bank, 2020). Certainly, food trade has fared significantly better than merchandise trade overall (WTO, 2020). Although some economies in the region, including Vietnam, Russia and Indonesia, initially responded by imposing export restrictions on rice and wheat, these have now been lifted, and the stability of prices, food inventories and stock-to-use ratios, although disrupted, remain relatively good, although not consistently so across the region (Asian Development Bank, 2020; APEC Policy Support Unit, 2020a, 2020b).

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At the same time, however, there has been increasing talk of the need for greater self-sufficiency in food production, as well as a ramping up of subsidies to agriculture by some economies. The pandemic's impacts on food processing, supply chains and infrastructure have served to highlight the need to strengthen the resilience of those parts of the system. Covid-19 has also shown the need for greater resilience in food-related services such as financing, distribution, transport, logistics and wholesaling (Asian Development Bank, 2020).

Considerable policy focus has been devoted this year to solutions to Covid-induced food insecurity, including the need for temporary income support to help the most vulnerable consumers; short-term, targeted fiscal support to farmers; and greater use of digital technologies in all stages of the supply chain, underpinned by capacity building and investment in digital infrastructure (APEC Policy Support Unit, 2020a). In addition to those important measures, however, reducing trade distortions this article argues will contribute to a more stable and predictable trading environment for farmers and businesses, and at the economy level enable trade flows to become more diversified and reliable, as a countervailing force against the uncertainties and food insecurity created by Covid-19.

The role of agriculture in food security and rural livelihoods in the Asia–Pacific

APEC is a region of contrasts when it comes to food and agriculture. Home to 38% of the global population, it includes both a sizeable number of the world's poor and some of its wealthiest consumers; the share of agriculture in GDP ranges from less than 5% in some economies to over 30% in others. While the Asia-Pacific has less than one third of the world's arable land, many economies are significant producers and exporters of grains, proteins, fish and horticultural products. APEC accounts for over half the world production in cereals alone, and several economies are global giants in their own right: China will be the biggest agriculture producer by 2030, accounting for almost a quarter of global farm output, with the US ranked third, Indonesia sixth and Russia seventh (Glauber et al., 2020). At the same time, the pressures on the region's resource base are increasing, including not just natural limitations on land and water, but also challenges in some economies of low yields, environmental degradation, fragmented land holdings and inadequate infrastructure (OECD/FAO, 2020).

Food demand is forecast to increase significantly over the coming decade: consumption of wheat and maize will each increase by over 9%, rice by 5.4% and soybeans by 13.3% (calculated for a group of 16 APEC economies[1] in the FAO–OECD Agricultural Outlook database). In some

cases – soy, maize, beef, pig meat – demand will outpace supply; in others, exports will also increase, leaving a net deficit (ibid.). A number of factors are driving this demand. The population is growing; many economies are transitioning from rural subsistence to greater industrialisation and urbanisation, with Asia's urban population, including India as well as APEC countries, predicted to increase by 1.7 billion by 2050; and there is a large and expanding APEC middle class, which will drive dietary diversification into protein, fruits, vegetables and processed foods (APEC Policy Support Unit, 2012).

In short, many APEC economies, and the region overall, will remain net food importers, and the share of imports in consumption for key products is forecast to increase for that same group of economies. Wheat imports will rise from 15% of wheat consumption in 2010 to around 23% by 2029, rice imports from 3.1% in 2010 to 4.5% in 2019 to 5.1% by 2029; there will be increases as well for both maize and soybeans (OECD/FAO, n.d.).

Trade in food accounts for a relatively modest share of total merchandise trade in APEC (this is not surprising, reflecting the dominance of non-agriculture goods in global merchandise trade). The share of food imports in total goods imports is 8.8% on average. Food exports in overall APEC goods exports span a wider range, from close to zero (Japan, Korea) to New Zealand as an outlier at nearly 63%, but with most in a middle band of 10–30% of exports. That said, of the agri-food trade that does take place, intra-APEC trade is significant, accounting for over two thirds of total APEC agri-food trade with all markets in 2019 (International Trade Centre, n.d.).

Food security and the role of trade

APEC economies have deployed a wide range of policies to address food insecurity. Approaches have generally been biased towards increasing local food availability by increasing production, and cushioning populations from the impact of higher prices. Economies have also used trade policy levers to address the economic dimensions of the food security challenge. In particular, some economies have prioritised approaches designed to achieve food self-sufficiency (that is, where local production is able to fully satisfy domestic demand), an approach that often necessitates the use of import tariffs, subsidies and, in some cases, export restrictions, to maintain or increase domestic production while shielding farmers from external competition (APEC Policy Support Unit, 2012).

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However, focusing primarily on self-sufficiency policies to achieve food security raises a number of structural challenges that may ultimately work against achieving the goal. First, the trade measures that are needed can mean that markets become more volatile and less efficient, and so less able to satisfy need: witness, for example, the price spikes that followed the tit-for-tat adoption of export restrictions in 2007–08, and the impact of domestic support, export subsidies and tariffs on production in other markets (Asian Development Bank, 2020; Hepburn, 2019). This market volatility may ultimately work against domestic production by reducing incentives for investment, production and innovation. Equally, trade measures such as import tariffs, designed to protect local farmers, may have an impact on the affordability of nutritious foods for local consumers (FAO, 2020).

In addition, approaches that focus solely on increasing the production of staple commodities may not be economically viable without continued support, and may funnel resources away from other uses that might overall be more welfare enhancing, such as spending on social safety nets or healthcare. In the alternative, creating an enabling environment for the production and/or export of higher-value foods in response to market signals is likely to be more durable; and, for producers, improved certainty in the trade environment creates new opportunities and encourages innovation.

Finally, self-sufficiency approaches may leave economies more vulnerable to external shocks, such as disruptions to supplies of essential inputs such as seed or fertiliser, as has been seen during the Covid-19 pandemic (Asian Development Bank, 2020). Equally, economies determined to be self-sufficient may feel the impact more strongly of biosecurity issues: witness the recent outbreak of African swine fever, which has had significant impacts on pork production and feed markets in a number of economies in the region (FAO, 2020). Covid-19 has similarly revealed the vulnerability of production and supply chains within individual economies, including through impacts on workers in labour-intensive sectors such as horticulture or meat processing (APEC Policy Support Unit, 2020a, 2020b).

These issues of vulnerability and resilience will likely become more pressing as climate change gathers pace. Acute climate events, such as floods or droughts, as well as longer-term sea level rise and melting glaciers, can damage both production and infrastructure and increase potential biosecurity threats as climate patterns change. The Asia-Pacific is particularly vulnerable to such impacts thanks to its dense population, exposed physical geography and large number of smallholder producers. According to the World Food Programme, global hunger and malnutrition will increase by 20% by 2050 if a more climate-resilient and adaptable food system is not established (APEC Policy Support Unit, 2019). Other research suggests that Asia's production of irrigated wheat and rice will be 14% and 11% lower respectively in 2050 than in 2000 due to climate change; in East Asia and the Pacific, yields for crops including rice, soybeans and wheat will have declined by 2050 by between 13% and 20% (APEC Policy Support Unit, 2012).

Economies that have recourse to the wider regional (or global) production base and markets may be able to smooth out any local disruptions to prices or production levels caused by climate events or other shocks. That said, for international

markets to play that backstop role effectively, they need to be reliable; the experiences of export restrictions in the face of the food price spikes in 2007–08 have prompted some APEC economies to be rightly cautious about relying on international markets too heavily (Martin and Glauber, 2020; Asian Development Bank, 2020).

All of this points to the need for further trade policy reform, to ensure that markets are less volatile, food supplies are more reliably available and food is more affordable. Indeed, it has been estimated that around 2,500 new trade-restrictive interventions, encompassing tariffs, subsidies and other measures, were introduced on food and agriculture in the period from the global financial crisis through to 2019 (Global Trade Alert, 2020). Growing demand has effectively masked the full impact of this rising protectionism, but it must nevertheless be addressed.

At the same time, agriculture trade policy reform would also enable the many economies in the region that enjoy a comparative advantage in agriculture to exploit that endowment by exporting to world markets, enabling them to earn export returns, increase jobs and achieve greater economic growth, including for smallholder producers and small food businesses. The relatively low share of food exports in overall merchandise exports among APEC economies, compared to the agriculture capacity of the region, suggests that there is unrealised potential there.

The process of agriculture trade reform

The World Trade Organization (WTO) Uruguay Round (1986–94) brought agriculture into the global rules-based system for the first time and established new disciplines on the use of subsidies and market access barriers. Those rules resulted in a substantial reduction in trade-distorting domestic support and a modest opening up of agriculture markets in the APEC region, a process that was subsequently accelerated by a swathe of new trade agreements (although these deals often still excluded the most 'sensitive' agriculture products, and did not, of course, address agriculture subsidies). These reforms have helped to deepen regional economic integration and enhance the efficient operation of food and agriculture markets.

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Support for the agriculture sector

Virtually all APEC economies continue to provide at least some support to their farm sectors. In many cases, this support is minimally distorting and focuses on the delivery of public goods such as research and development, disaster relief or environmental programmes, as well as income support that is decoupled from production. This support is known in WTO terms as 'Green Box' support. APEC economies' expenditure in the Green Box spans from the very modest (1–3% of the value of agriculture production; New Zealand is in this group) up to 13–15% of the value of production, with a significant outlier in the United States at over 30% (WTO, 2020).

In some cases, however, APEC economies are also entitled to use 'Amber Box' support, which has a substantial impact on production and trade. This category includes 'market price support' (where prices are kept artificially high or low), or payments to producers that are linked to production or inputs. Typically such subsidy systems also require market access restrictions to maintain producer incomes by shielding them from more competitive imports. Globally, a small handful of APEC economies are responsible for a large overall share of this type of support (Bellman, 2019). By insulating farmers from market signals, Amber Box policies tend to generate surpluses that suppress world prices and disrupt global markets, harming producers in other economies, and thereby in turn potentially jeopardising those economies' ability to produce food for their populations.

At the same time, the overproduction and overuse of inputs that these policies incentivise can have a negative environmental impact, on water quality, biodiversity and greenhouse gas emissions (OECD, 2019). Broadly speaking, the use of the most environmentally harmful categories of agriculture support has certainly been decreasing over the last 15 years. However, the OECD has estimated that from 2017 to 2019, around US$270 billion was spent on the most environmentally-harmful types of subsidy by OECD countries (of which eight are in APEC) and 12 key emerging economies, including a further five APEC economies(OECD, 2020).

Although the Uruguay Round introduced new disciplines on agriculture support, and generated some significant reductions and retooling of subsidy programmes, since the global financial crisis, reform efforts have stalled in some economies, and support has in fact increased in others. This can be illustrated by looking at the OECD 'producer support estimate' (PSE), which measures the annual value of gross transfers from consumers and taxpayers to producers arising from policy measures. At the start of the Uruguay Round, for example, the United States had a PSE of nearly 23% of gross farm receipts; by 2008 this had fallen to 8.3%, but since then it has hovered at around the same level, rising to just over 12% in 2019. (Note that these figures do not take into account large recent additional domestic support payments made by the US.) Similarly, Japan had a PSE of just over 59% in 1986; by 2008 this had fallen to 43.9%, but it fell only slightly further to 41.3% in 2019. Much of this support continues to be provided in trade-distorting form, as market price support and/or payments based on outputs or inputs (ibid.).

The level of support in some emerging economies has risen over the same period, particularly when looked at in terms of dollar value, as can be seen in the case of China and Indonesia in Figure 1. A number of other APEC economies, including the

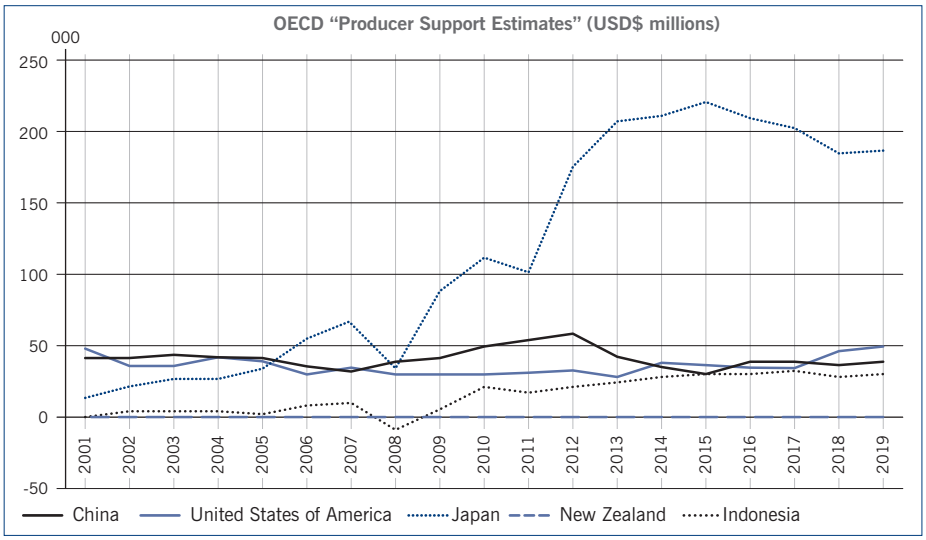
Philippines and Russia, have also increased agriculture support over the same period (ibid.). As a point of reference, New Zealand's PSE was 0.7% in 2019.

While WTO disciplines go some way to constraining spending, half of APEC economies are entitled to use the Amber Box category, and could increase current expenditures significantly while still remaining within their commitment levels. (In most cases, actual spending among those economies ranges from close to zero up to around one quarter of potential entitlements, although in the last two years the United States may have exceeded its ceiling (Congressional Research Service, 2020).

Equally concerning is the potential for significantly higher spending as a result of other flexibilities in the current WTO rules. These flexibilities fall into several categories. Most significantly, however, all economies have recourse to the so-called de minimis category, which permits 'minimal' levels of support as a percentage of the value of agriculture production. While the entitlements appear small in percentage terms, spending can be large in terms of dollars, and, over time, the value of production – and hence entitlements – is predicted to rise (OECD, 2020).

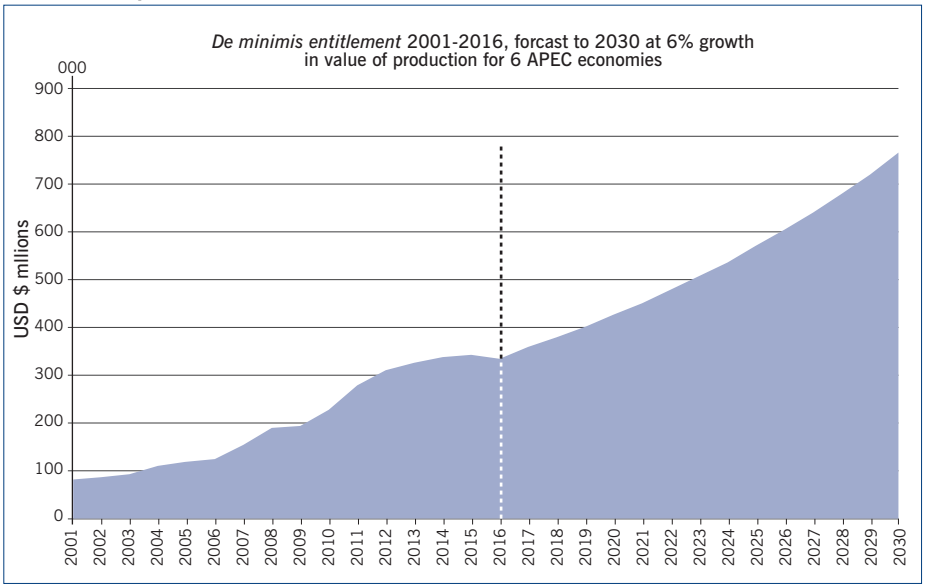
By way of illustration, looking at a group of six APEC economies (Australia, Canada, China, Indonesia, Japan and the United States), these de minimis entitlements grew by an estimated US$250 billion from 2001 to 2016 (the last year for which support has been notified to the WTO by many economies). Figure 2 extrapolates this trajectory at a conservative estimate of 6% growth in the value of production per annum, although in some economies production will probably grow more strongly than this. For those six economies alone, entitlements are projected to grow to nearly US$800 billion by 2030.

Figure 1: Support for agriculture producers in selected APEC economies, 2001–19



Source: OECD Producer and Consumer Support Estimates database

Figure 2: *De minimis* entitlements for Australia, Canada, China, Indonesia, Japan and the US



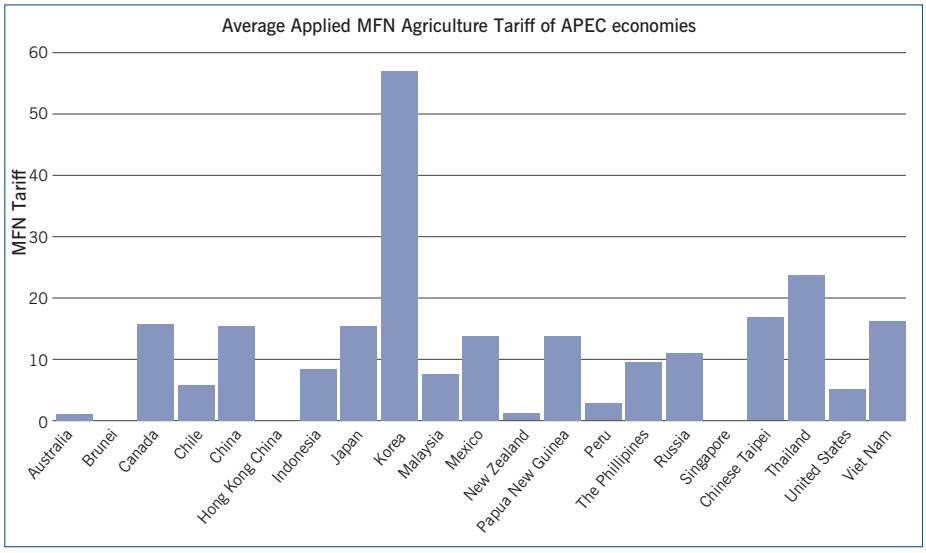
Source: WTO agriculture notifications of value of production, based on a concept developed in Australia and New Zealand, 2019

Market access

Market access barriers also have an impact on food availability in the region. Despite WTO reforms and subsequent free trade agreement liberalisation, tariffs and other measures at the border still act to restrict food and agriculture imports in many economies. The simple average MFN (most favoured nation) applied tariff on agriculture products in the APEC region is around 11.6%, with a range of between zero and 57%, as illustrated in Figure 3, but these averages may conceal significant tariff peaks, in some instances well over 100%. (It is also worth recalling that the average applied MFN tariff on non-agricultural products is only 4.3%.) While in many cases free trade agreements have reduced applied tariff levels to well below WTO bindings, the most sensitive products, such as meat and dairy, sugar, rice and some vegetable oils, are often treated less ambitiously or excluded from liberalisation altogether.

At the same time, non-tariff barriers have risen markedly and disproportionately relative to those affecting non-agricultural imports, especially for animals and animal products, vegetable products and processed food (UNCTAD/World Bank, 2018). Research into the experiences of agri-food businesses in the region confirms that non-tariff barriers are a growing concern for producers, and fall disproportionately heavily on smallholders and small businesses (APEC Business Advisory Council and Marshall School of Business, 2016). In some cases, non-tariff barriers are the result of poor design rather than deliberate policy intent, meaning that a more robust application of good regulatory practices to agriculture and food regulation would deliver more food security-friendly approaches. APEC ministers agreed on a set of 'cross-cutting principles on non-

Figure 3: Average applied MFN tariffs on agriculture products in APEC economies



Source: StatsAPEC

tariff measures' in 2018 which would form a good basis for tackling these kinds of barriers in the food and agriculture sector (APEC, 2018).

Services

Services are also a critical part of the food system, from those that support production processes through to those involved in storage, transport, trade, distribution and sales. In fact, it could be argued that in many ways the food system is being 'servicified', just as non-agriculture manufacturing has been over recent decades. The costs of financing, transport, logistics, distribution and wholesale/retail can add significantly to overall trade costs in the agri-food sector, and these are areas where in many cases APEC economies maintain trade-restrictive approaches (APEC Policy Support Unit, 2019). Clearly, reform in these services sectors could also enhance food trade.

The political economy of trade reform

The political, economic and social challenges of agriculture reform should not be underestimated. Different economies may have different policy drivers which may affect their attitude to reform: wealthier economies with largely urban populations, for example, may have more policy space for reform than emerging economies with large rural subsistence or smallholder populations. Equally, policy choices may be motivated by a complex mix of past experiences of food insecurity, social stability concerns, economic development levels and vested producer interests, which can mean the reform process is more heavily contested.

Budgetary considerations have not traditionally played a decisive role in agriculture trade policy choices: the contribution of agriculture to GDP is generally small, particularly in more advanced economies, and the cost of distorting subsidies relative to GDP is also comparatively low. This has to date meant that fiscal imperatives to reform agriculture have not been a significant driver, even for big spenders; but this may change with the impact of the Covid-19 pandemic and the budgetary pressures it generates, as well as the opportunity it in effect creates to retool support to forms that help to make the agriculture sector more sustainable and resilient (for example, by increasing research and development spending or reallocating funds to policies that enhance environmental outcomes).

Greater food security through structural reform

APEC economies have devoted considerable energy in recent years, guided by the APEC Food Security Roadmap, to increase production and efficiency through the food chain: for example, through knowledge sharing, capacity building, research and development, and greater adoption of digital technology, such as 'smart' farming. Equally important have been discussions around reducing food loss and waste. Not surprisingly, all of these elements feature in the 2020 APEC food ministers' statement (APEC, 2020). Clearly, this work is important and should continue.

Tackling trade distortions, however, will be fundamental to achieving a sustainable and inclusive food system for the longer term. In essence, trade reform is about enabling and empowering domestic reform: giving economies the confidence to create good domestic structures that are more efficient, inclusive and sustainable and create better economic opportunities for their communities. Trade barriers work against these goals, and potentially trap economies in less sustainable models. In short, a well-functioning APEC food system will require an approach that considers the food system as a whole, including where trade policy settings have an impact. The challenge faced by APEC economies is how to achieve these reforms against a backdrop of significant demographic, technological and climate change.

In developing a refreshed approach to food and agriculture, APEC economies should, accordingly:

- reaffirm the goal of creating a robust, well-functioning food system (not just 'food security' per se), recognising that achieving food security requires the right settings throughout the food value chain, including for trade, and acknowledging, too, the contribution of agri-food trade to incomes and economic growth in many economies;
- to enhance predictability for production and trade, commit to enhanced transparency in the agri-food system – for example, through a timely APEC-specific reporting process to track production, consumption and trade measures;
- actively seek to implement the 2018 'cross-cutting principles on non-tariff measures' in relation to agri-food trade; this could include, as a starting point, the development of an APEC non-tariff barrier 'clearing house', in which economies and/or the private sector could identify significant problems and discuss possible solutions;
- commit to a standstill on trade-distorting support for agriculture and work towards phasing these subsidies out; a good start would be to champion

an ambitious outcome in the WTO negotiations;

- set up a dialogue on structural reform in agriculture, to share ideas on how to retool support to 'build back better' – for example, through shifting support towards public investment in agriculture and food systems, including research, pest and disease control, and climate change mitigation measures;
- commit to liberalisation of agri-food-related services (including transport, logistics, distribution and wholesale/retail services), to enhance connectivity and reduce trade costs;
- agree to a pathfinder on digital trade facilitation for agriculture and food to lower trade costs – including, for example, agreeing on a region-wide system for electronic certification or digital supply-chain management through global data standards or blockchain, or achieving region-wide adoption of digital single windows.

In short, economies should prioritise structural reforms in food and agriculture that make the biggest contribution to the combined goals of food security, environmental sustainability/climate change mitigation and inclusive growth – recognising that, in the end, the policy responses to achieving each of these goals are, in fact, mutually reinforcing.

1 Australia, Canada, Chile, China, Indonesia, Japan, Korea, Malaysia, Mexico, New Zealand, the Philippines, Russia, Thailand, the United States and Vietnam.

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