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IMPACT OF AGRICULTURAL SUPPORT ON ENVIRONMENTAL AND CLIMATE OBJECTIVES

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1 INTRODUCTION

This note synthesises the available literature examining the impact of agricultural support on greenhouse gas (GHG) emissions as well as its impact on water, biodiversity, and land. In keeping with the Secretariat's impartiality, the note reports the findings as they appear in the literature. The primary source of analysis is the work conducted by Ash and Cox (2022), supplemented by additional insights from recent literature on this subject.

1.1 What is agricultural support?

The WTO's definition and relevant data on agricultural support are aligned with the definitions of domestic support commitments negotiated and agreed upon in the Uruguay Round Agreement on Agriculture. The Agreement sought to distinguish trade distorting support from the support that is minimally trade distorting via differentiated commitment categories or Boxes. The **Amber Box** includes domestic support measures that clearly distort production and trade, notably subsidies directly linked to input use and production quantities, measures that support domestic prices and direct payments dependent on a price gap.[2] The **Green Box** covers support that is minimally or non-trade distorting and available to all WTO members without limit. There is also a **Blue Box**, wherein direct payments to farmers under production limiting programmes are permissible without limits. The **Development Box** provides developing countries with policy space to encourage agricultural and rural development, including through input subsidies for resource-poor farmers, subsidies for new investments, and support for diversification away from illicit narcotic crops. Support under the Development Box is allowed without limit.

Another commonly used definition to measure and evaluate the impact of support to agriculture is from the Organisation for Economic Co-operation and Development (OECD). The methodological framework to measure agricultural support aligns with the economic principles underlying these support measures, and has served as an important reference for international negotiations and research. The OECD estimates for support to agriculture are updated annually for 38 OECD member countries, five non-OECD EU member states, and 11 emerging economies with which the OECD collaborates on agricultural policy. The OECD data group all policy support that affects agriculture into four main categories: the Producer Support Estimate (PSE), the General Services Support Estimate (GSSE), the Consumer Support Estimate (CSE), and the Total Support Estimate (TSE). The PSE reflects the value of all government transfers to agricultural producers. There are two main types of transfers: various forms of budgetary payments, funded by taxpayers, and market price support (MPS) which derives from policies that support domestic prices at levels higher than international prices and, as such, are funded by consumers. The PSE includes all agricultural policies, regardless of their nature, objective, and impact.

See Appendix for an overview of the amount of agricultural support under both WTO and OECD definitions and by category.

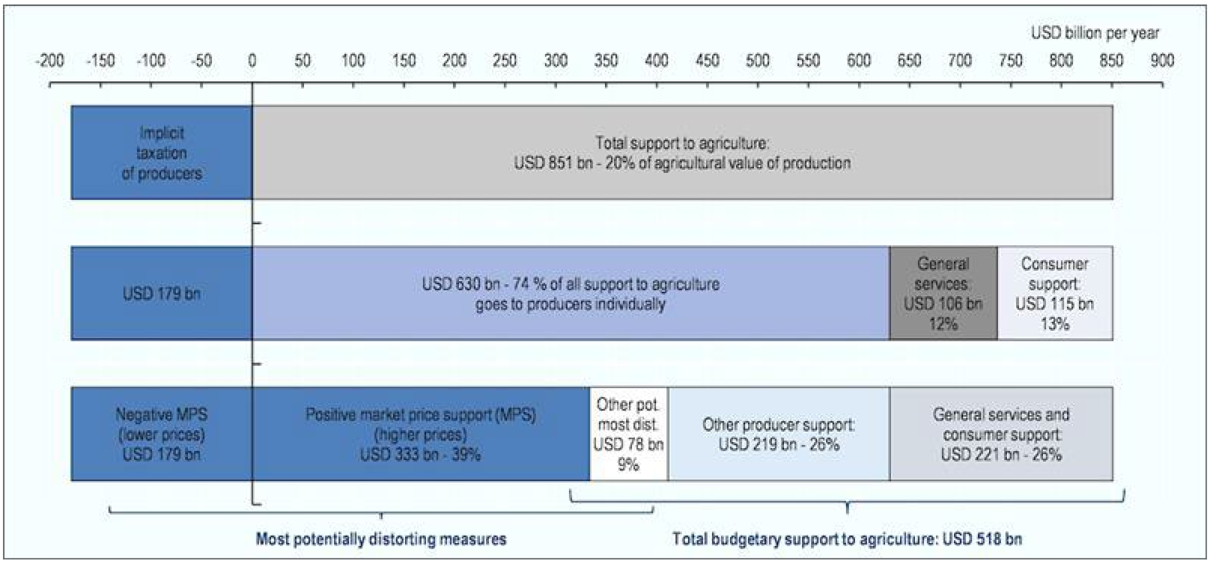
1.2 Scale of environment-related agricultural support

Globally, agricultural support is very substantial. OECD (2023) estimates that total support in 54 analysed countries amounted on average to USD 851 billion per year between 2020 and 2022. Of this amount, USD 630 billion (74% of total support) went to producers individually either directly from government budgets or implicitly through market price support (MPS). The remainder of support was split nearly equally between support for general services (USD 106 billion, 12.5%) and

[1] This note has been prepared in response to a request by the Group of Latin America and the Caribbean (GRULAC). Jonathan Hepburn and Ulla Kask provided invaluable contributions and comments on this work.

[2] The permissible limit to Amber Box support has two components: *"de minimis"* support, equivalent to 5% of the value of agricultural production for developed countries and 10% for developing countries (with some exceptions) and a final bound total aggregate measurement of support only available to those thirty-three WTO members that had higher support than *de minimis* levels at the time the Uruguay Round was concluded.

budgetary transfers to consumers of agricultural products (USD 115 billion, 13.5%). At the same time, some emerging economies implicitly taxed their producers through measures such as export taxes and other actions which suppress domestic market prices. This implicit taxation was valued at USD 179 billion per year on average between 2020-22 (see graph below).



Source: OECD (2023), "Producer and Consumer Support Estimates", OECD Agriculture statistics database, https://doi.org/10.1787/agr-pcse-data-en.
Notes: The data cover all OECD countries, non-OECD EU Member States, and 11 emerging economies including Argentina, Brazil, China, India, Indonesia, Kazakhstan, the Philippines, Russian Federation, South Africa, Ukraine and Viet Nam. "Implicit taxation" of producers refers to negative market price support, "General services" refers to the General services support estimate, "Consumer support" is transfers to consumers from taxpayers, "Other pot. most dist." refers to the potentially most distorting producer support measures other than market price support (i.e., support based on output payments and on the unconstrained use of variable inputs).

Other studies provide different estimates of agricultural support, although they generally fall within a similar magnitude.

A study by the FAO, UNDP and UNEP (2021) found that between 2013 and 2018, support to agricultural producers accounted for almost USD 540 billion a year across 61 countries analysed, or 15 percent of total agricultural production value. Of this, about USD 294 billion was provided in the form of price incentives, and around USD 245 billion as fiscal subsidies to farmers, the majority (70 percent) being tied to the production of a specific commodity. The analysis found that support has been concentrated on products associated with potentially negative impacts on health (such as sugar) and on emission-intensive commodities (such as beef, milk and rice). Because high-income countries and upper-middle-income countries consume more dairy and meat products *per capita* than poorer ones, support in these countries may have particularly negative repercussions for the climate, the study found. The study also estimated that, under a continuation of current trends, support could reach almost USD 1.8 trillion in 2030.

Gautam et al. (2022) estimated that the average annual positive support (as transfers from the government or between consumers and producers through market price support) were $713 billion in 79 countries for which data are available for 2016–18. This was offset by implicit taxation of producers through negative market price support, which on average between 2016 and 2018 amounted to about $74.3 billion across 11 countries, leaving $638.3 billion in net support.

Damania et al. (2023) estimated that subsidies in the agriculture sector exceed US$635 billion per year, the equivalent of 0.9 percent of gross domestic product (GDP) and 18 percent of agricultural value added for the 84 countries studied. The authors found that most agricultural support—61 percent—is distortive and affects farmers' planting, harvesting, and input decisions. This support comes in the form of input subsidies, output payments, or market price support and has the biggest spillover effects by causing harmful environmental outcomes.

The types of agricultural support granted play an important role in determining the extent of the impact on the environment. The literature that studies the impact of agricultural support focuses on three broad policy channels: 1) market price support, 2) coupled support, and 3) decoupled support.[3] Market price support consists of barriers to trade such as tariffs, licences and quotas that raise or lower the domestic price relative to world prices.[4] Coupled support includes measures such as payments based on commodity output and payments based on unconstrained variable input use. Decoupled support refers to payments unrelated to the area and production levels of specific commodities, livestock numbers, and input use.

Several studies note that market price support and coupled subsidies are among the potentially most environmentally harmful support policies (Henderson and Lankoski, 2019; OECD, 2020; DeBoe, 2020). The authors argue that such policies are coupled with farmers' production decisions, thus providing incentives for the intensification of input use, the allocation of land for supported crops, and the entry of land into the agricultural sector.

1.3 What are environmental objectives and their linkage with agricultural support?

Despite the significant methodological differences in defining and calculating agricultural support, the literature has converged on the notion that agricultural support exerts discernible impacts on the environment, both positive and negative. Much of the literature looks in particular at the effects of agricultural support on GHG emissions, water, biodiversity and land.

The relationship between agricultural support and the environmental outcomes is shaped by various factors related to the prevailing market dynamics, regulatory frameworks, and the degree of adherence to policies and regulations. Agricultural support alters the economic incentives for actors in the agricultural sector, thereby affecting environmental outcomes through:

- The volume of agricultural goods produced, traded, and consumed;
- The mix of agricultural goods produced, traded, and consumed;
- Where the agricultural goods are produced, traded, and consumed in terms of local, regional and international spatial scales, since the same amount of agricultural goods produced in different regions may have different environmental impacts; and
- The extent to which sustainable techniques and technologies are employed when agricultural goods are produced, traded, and consumed (Mamun et al., 2021).

All other things being equal, production-linked support coupled with output of emission-intensive goods generally increases output in the region providing support and the associated emissions. Use of coupled subsidies will be particularly damaging for the environment if the GHG emission intensity (emissions per unit of output) is higher in the region providing support than in other regions, or if it encourages the use of emission-intensive practices or technologies. Similarly, subsidies coupled with specific inputs will encourage greater use of those inputs and may generate increased GHG emissions, particularly if the input is emission-intensive. Decoupled subsidies, by contrast, are expected to transfer revenues directly to recipients without altering market incentives, potentially reducing economic and environmental costs and providing greater net benefits to producers per dollar of support because they do not require costly increases in output (Mamun et al., 2021).

It is also worth noting that some agricultural support may have favourable impacts on environmental outcomes. These policies encompass a range of measures, including payments for ecosystem systems such as reforestation programmes, environmental subsidies, and publicly funded investments in research and development, among others (DeBoe, 2020). Agricultural activity can also produce valuable environmental goods such as carbon storage, preservation of rural landscapes, resilience to natural disasters (such as flooding, landslides, fire and snow damage), pollination, soil functionality, habitat provision and control of invasive species (DeBoe, 2020; OECD, 2021).

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[3] In some studies, coupled support is defined as these linked to price or production, and market price support is also counted as coupled support according to this definition.

[4] It is worth noting that the WTO and the OECD's definitions of market price support vary. The WTO definition excludes tariffs and other border measures.

2 THE ENVIRONMENTAL IMPACTS OF AGRICULTURAL SUPPORT

This section reviews quantitative studies assessing the impact of agricultural support on GHG emissions and other environmental indicators, including studies focusing on agricultural support reform.

2.1 The potential environmental impacts of agricultural support

The environmental and GHG emissions impact of agricultural support hinges on two critical factors: the extent to which support encourages increased production and the emission intensity (emissions per unit of output) associated with the supported production. Additionally, land use and land use change play a substantial role in global emissions, particularly through deforestation, often driven by the expansion of emission-intensive commodity production (Mamun et al., 2021).

The channels through which agricultural support can affect environmental outcomes can be extensive and are well documented. For example, especially in the absence of adequate environmental regulation, the following detrimental environmental effects can be found (Ash and Cox, 2022):

- Increased input use intensity, particularly synthetic pesticides, herbicides and fertilisers, can lead to increased levels of toxic chemical, nutrient and GHG emissions per unit of output.
- Increasing livestock numbers or stocking rates can increase environmental degradation associated with livestock, including ruminant GHG emissions, soil erosion and compaction, the spread of invasive species in grazing lands, nutrient emissions from manure and urine patches, among others.
- Increased water use, especially for irrigated agriculture, can result in various environmental impacts, including salinity, surface and groundwater depletion, and biodiversity loss due to the loss of freshwater habitats.
- The conversion of land from fallow or low-intensity agricultural uses towards more intensive agricultural uses or bringing more agricultural land into the sector can cause severe environmental harm by destroying habitats and causing significant biodiversity loss, decreasing carbon sinks, increasing erosion, etc.
- The abandonment of agricultural land due to changes in agricultural support has also been identified as having negative environmental impacts, including negative impacts of invasive species, increased risk of wildfire, and erosion (if abandoned land lacks adequate soil cover).

At the same time, support measures such as environmental subsidies and publicly funded investments in research and development, could have positive impacts on the environment.

2.2 Quantitative studies on GHG emissions from agricultural support

The environmental costs of agricultural production have been the theme of several international publications. For instance, the FAO's 2023 flagship report found that the agri-food system could generate "hidden costs" and identified subsidy reform as one potential policy tool that governments could pursue to address these costs (FAO, 2023). Although the report did not attribute environmental costs to agricultural support, it found that environmental costs associated with the agri-food system represent one-fifth of the USD 10 trillion quantified hidden costs, mostly associated with GHG and nitrogen emissions.[5]

Laborde et al. (2021) undertook a quantitative analysis of the impacts of agricultural producer support on agricultural outputs and emissions. The analysis addressed impacts on overall output, differences in incentives across countries, differences in incentives across commodities, and

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[5] The FAO report does not consider GHG emissions arising from land-use change of agricultural production, and thus has likely underestimated the environmental costs of the agrifood system. It is also worth noting that the FAO plans to dedicate its 2024 report in the same series to this topic, with a view to deepening the analysis and building on the work in the 2023 report.

differences in the technology used for production.[6] The findings suggested that the types of support most directly influencing output decisions are subsidies linked to output and market price support facilitated by trade measures. To estimate the impact of current agricultural support on GHG emissions, the authors conducted simulations using the International Food Policy Research Institute (IFPRI)'s global computable general equilibrium (CGE) model, MIRAGRODEP, complemented by models accounting for the effects of changes in inputs and outputs on emissions. The authors relied on data on agricultural support from OECD (2020) that covered farm sectors in 54 major economies over the period 2017 to 2019. Emission data from agricultural production were developed based on FAOSTAT.

The results in Laborde et al. (2021) indicated that coupled subsidies boosted agricultural output and, consequently, GHG emissions. Specifically, coupled subsidies led to a 0.9% increase in global farm output volume, resulting in a 0.6% increase in GHG emissions from agriculture compared with a scenario without these coupled subsidies. The emissions impact is less pronounced than the output effect due to the relatively smaller stimulus provided to the production of the most emission-intensive products, such as beef and dairy, and because the expansion of output resulting from subsidies is more significant in wealthier countries with lower emission intensities. In contrast, the implemented border measures were found to exert a negligible influence on global output, causing only a marginal 0.1% increase in global output, and a reduction in emissions amounting to 128 million tons of CO2 equivalent or 2.1% of emissions globally. This is because border measures increased output in some high-income countries with relatively low-emission intensities while negative protection reduces output of high-emission-intensity products, such as livestock.

It is important to note that the analysis in Laborde et al. (2021) did not encompass the effects of land-use changes on GHG emissions. The omission of land-use changes can substantially alter the magnitude and direction of the projected impacts of GHG emissions resulting from agricultural support reform. This is particularly significant as land use and land-use changes were responsible for approximately 43% of global GHG emissions stemming from agriculture in 2018 (FAO, 2020). Moreover, the impact could potentially be even more pronounced if indirect land-use changes (ILUC) resulting from policy changes lead to deforestation or the conversion of pastureland into cropland (Searchinger et al., 2020).

Two significant reports, released in 2021 and 2022, centred around the theme of reorienting agricultural policies. The first report is titled "A Multi-Billion-Dollar Opportunity: Repurposing agricultural support to transform food systems" (FAO, UNDP and UNEP, 2021), and the second report titled "Repurposing Agricultural Policies and Support: Options to Transform Agriculture and Food Systems to Better Serve the Health of People, Economies, and the Planet" by the World Bank and IFPRI (Gautam et al., 2022). Both relied on simulations conducted using IFPRI's global computable general equilibrium model.

FAO, UNDP and UNEP (2021) presented a quantitative analysis of the economic, environmental, and health implications associated with the removal of border measures and fiscal subsidies within the agricultural sector. Specifically, it dedicated a section to assessing the climate-related impacts, providing projections for changes in GHG emissions in 2030 resulting from the elimination of various agricultural support measures (FAO, UNDP and UNEP, 2021, pp. 61-64). This assessment primarily focused on alterations in GHG emissions linked to shifts in crop and livestock production, notably affecting nitrous oxide and methane emissions. It also considered changes in energy usage associated with crop and livestock production, as well as land use change effects such as deforestation and the conversion of pastureland to cropland. GHG emissions are categorized into emissions stemming from agricultural production, emissions originating from energy usage in agriculture, and emissions resulting from land-use changes.

FAO, UNDP and UNEP (2021) estimated that the removal of domestic fiscal support and border measures could lead to a reduction in global GHG emissions. At the same time, the report noted that simply removing agricultural support may have important trade-offs. Under a scenario in which all agricultural support was removed by 2030 without being repurposed, GHG emissions were projected to fall by 78.4 million tonnes of CO2 equivalent, but crop production, livestock farming production

[6] Laborde et al. (2021) used the OECD definition of agricultural support, comprising market price support, mainly consisting of border measures; subsidies coupled to input use or level of agricultural output ("coupled subsidies"); direct transfers to producers ("uncoupled subsidies"); and general service support expenditures, which include other forms of support such as agricultural innovation systems, sanitary and phytosanitary standards, and rural infrastructure.

and farm employment are also projected to decrease. The report concluded that it would be essential for governments to phase out the most distorting and environmentally and socially harmful producer support (i.e. price incentives and fiscal subsidies tied to the production of a specific commodity), but this would only bear fruit if resources are redirected towards investments for the provision of public goods and services for agriculture such as research and development and infrastructure, and to decoupled fiscal subsidies.

Similarly, Gautam et al. (2022) found that current governmental support for agriculture provided incentives for unsustainable patterns of production and consumption. The study confirmed the positive environmental impact of removing domestic support on GHG emissions, albeit with slightly smaller magnitudes, and noted that simple reductions in the current support would not yield game-changing reductions in global emissions. Policies that tie support to the adoption of environment-friendly but lower yielding farm practices could potentially reduce emissions, but would also lead to lower agricultural production, higher poverty, higher agricultural land use and an increase in the cost of healthy diets.

Notably, Gautam et al. (2022) introduced a distinctive element in the form of repurposing scenarios exploring potential outcomes of various fiscal strategies for reallocating the funds currently allocated to domestic agricultural support. Of particular note is that the scenarios in which support is redirected towards green innovation yield remarkably significant GHG emission reductions, with potential reductions of up to 40% in GHG emissions projected by 2040. This outcome stems from the efficiency gains achieved, leading to substantial reductions in input utilization and a transition of agricultural land back to its natural uses. It is important to note that these results are to a considerable extent contingent on the assumptions of a predefined 30% reduction in emission intensity and a 30% increase in productivity. Nevertheless, the report underscored the potential for substantial dividends from investing in research and development to enhance productivity and decrease emission intensity.

2.3 Quantitative studies on water, biodiversity, and land degradation impacts from agricultural support

The literature on quantitative assessments of the linkages between agricultural support and non-climate environmental outcomes falls into two distinct categories. Studies at the global level generally focus on bolstering the economic and business case for reform of environmentally harmful subsidies, while those at the national level largely address the specific policy reform challenges. The subsequent review summarises quantitative studies focussing on the global impacts of agricultural support.

At the global level, the literature has centred on defining, identifying and quantifying agricultural support that may be harmful to the environment. FAO, UNDP and UNEP (2021) estimated that two-thirds of the USD 540 billion annual agricultural support are considered "price-distorting and largely harmful to the environment". More recently, Koplow and Steenblik (2022) estimated the value of environmentally harmful subsidies in agriculture to be USD 520 billion a year. Regarding water-related support in agriculture, OECD data revealed that total public agriculture-related support for water in 54 countries saw an increase from USD 25.9 billion in 2000 to USD 54.2 billion in 2011, followed by a decline to USD 41.6 billion in 2019 (Ashley and Gruere, 2021). The majority of this support (70%) was directed towards irrigation, encompassing both irrigation development and support for water in irrigation. Approximately 18% was allocated to agriculture-related hydrological infrastructure, covering basin and sub-basin infrastructure projects associated with agricultural water management. The remaining portion was divided between conservation-related and water risk-related management expenditures.

Studies have indicated that water-related support in agriculture could have adverse environmental effects, including deteriorating water quality, contributing to direct GHG emissions and potentially diminishing biodiversity by promoting less diverse agricultural systems (DeBoe, 2020; Lankoski and Thiem, 2020). Damania et al. (2023) found that coupled producer support subsidies are also drawing down global supplies of groundwater. The report found that, at the mean level of subsidy exposure, agricultural areas around the world risk losing up to 13.2 cubic kilometres of water per year, roughly equivalent to the total amount of water lost in California between 2011 and 2014 at the height of the drought.

Although quantitative studies on the impact of agricultural support on other environmental indicators are limited, a few recent studies have taken initial steps to incorporate biodiversity and land use impacts into global assessments of agricultural subsidy reform. For instance, FAO, UNDP and UNEP (2021) introduced "impacts on nature" into their multi-objective analysis of agricultural support. The report specifically assessed changes in land use, chemical usage, and a biodiversity index following the removal of agricultural subsidies and border measures (FAO, UNDP and UNEP 2021, pp. 56-61). The report found that the complete removal of agricultural support, including border measures and fiscal subsidies, was projected to result in a 0.15% decline in agricultural land in 2030 compared to the baseline, distributed as a 0.05% decrease in cropland, a 0.20% decrease in pastureland, and respective increases of 0.08% and 0.17% in forest and other land habitats. The study also projected a reduction in chemical input usage (pesticides and fertilizers) by 0.22% in 2030 relative to the baseline and a global increase of 0.10% in the biodiversity index, in the scenario of a complete removal of agricultural support, including border measures and fiscal subsidies.

Gautam et al. (2022) employed a similar multi-objective methodology to evaluate the consequences of removing agricultural support and repurposing it across various indicators, including "nature," which encompasses alterations in agricultural land resulting from shifts in agricultural incentives. The findings indicated that the elimination of domestic support and trade barriers would have minimal effects on agricultural land, with a projected decrease of only -0.02% in 2040 relative to the baseline (Gautam et al. 2022, Table D.1). Conversely, the repurposing scenarios yielded diverse outcomes concerning changes in agricultural land. Specifically, the uniform support and increased conditionality scenarios showed marginal increases of 0.02% and 0.62%, respectively, while the green investment scenario exhibited a significant decline of -2.15%.

Damania et al. (2023) found that agricultural price supports are responsible for the loss of 2.2 million hectares of forest cover per year, which is equal to approximately 14 percent of annual deforestation. The report noted that subsidies could incentivize farmers to expand the area devoted to agriculture into forests and other natural habitats, and through deforestation, agricultural subsidies could also increase the spread of emerging infectious diseases.

3 CONCLUSION

The literature reviewed in this note highlights the complex and multifaceted relationship between agricultural support measures and their environmental impacts. Agricultural support can influence the environment in various ways, from the utilization of land, fertilizers and water resources to the potential erosion of natural habitats. At the same time, some agricultural support measures may yield positive environmental outcomes.

Moreover, the type of agricultural support provided plays a crucial role in determining its environmental consequences. Production-enhancing support measures have often been found to have adverse effects on the environment, while certain border measures, in some contexts, can induce reductions in the global production level, thereby reducing the GHG emissions associated with the agricultural production. However, one key takeaway from the literature is the delicate balance that needs to be struck when considering agricultural support reform. While it is true that removing certain forms of agricultural support could lead to environmental improvements, it may result in social and economic repercussions through a reduction in overall food production and a decline in farmer incomes, bearing far-reaching implications for food security and the livelihoods of those dependent on agriculture.

Given these findings, there is a notable emphasis on the necessity of a holistic and balanced approach to reforming agricultural support measures. This highlights the significance of informed policymaking that considers not only the environmental impacts but also the broader socio-economic context. Such an approach is crucial for fostering a sustainable and resilient agricultural sector capable of meeting the needs of both current and future generations.

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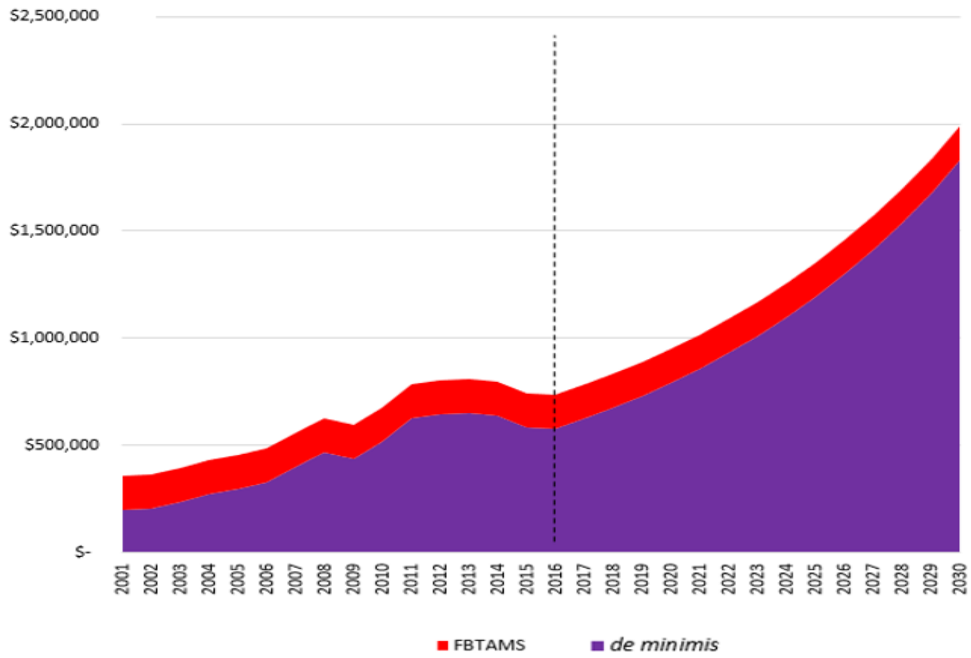
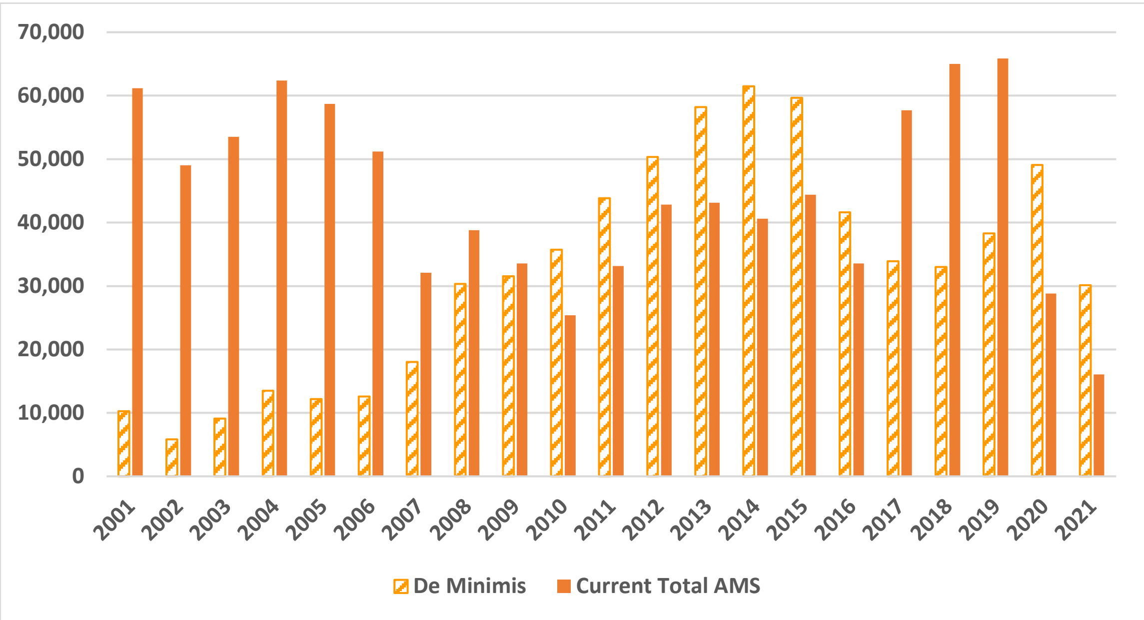
APPENDIX: FIGURES ON THE AMOUNT OF AGRICULTURAL SUPPORT

Figure A.1: Amber Box support entitlements, all WTO Members (USD million)



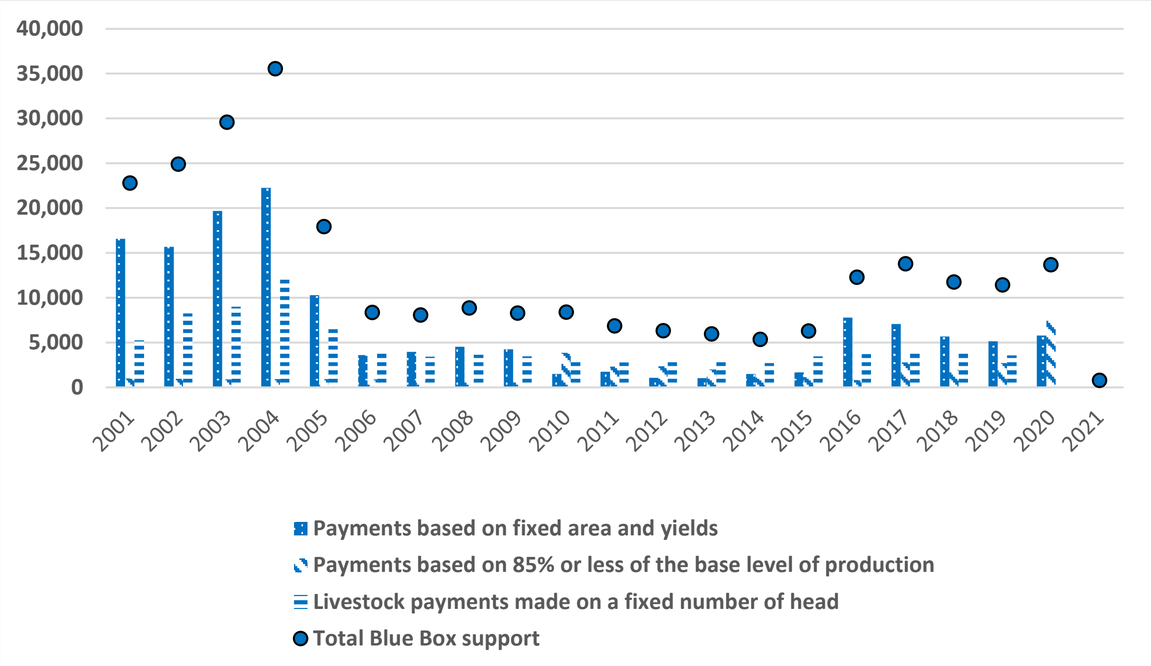
Source: WTO document, submission from Australia and New Zealand, JOB/AG/171.

Figure A2: Notified Amber Box support, largest subsidisers (USD million)



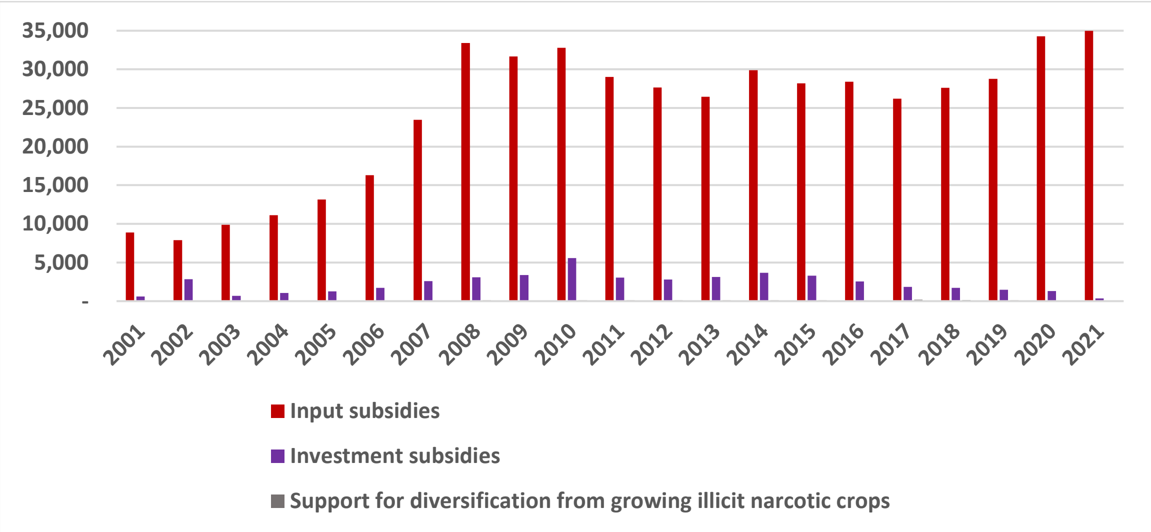
Notes: This figure represents notified data from the 13 largest subsidisers, which together account for around 95% of the amber support provided. Some notifications for 2020 and 2021 are still outstanding, therefore the figures underestimate the notified support.
Source: WTO Secretariat, based on notifications

Figure A.3: Notified Blue Box support, all WTO Members (USD million)



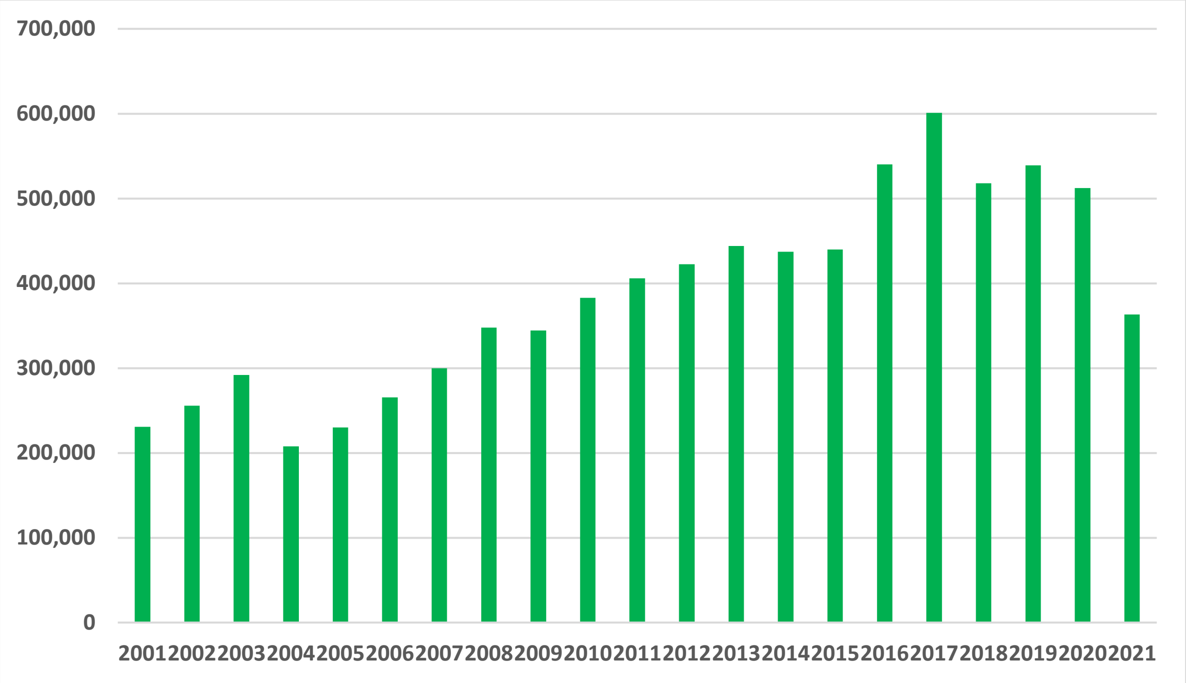
Note: Some notifications for 2020 and 2021 are still outstanding, therefore the figures underestimate the notified support.
Source: WTO Secretariat, based on notifications

Figure A.4: Notified Article 6.2 support (Development Programmes), developing Members (USD million)



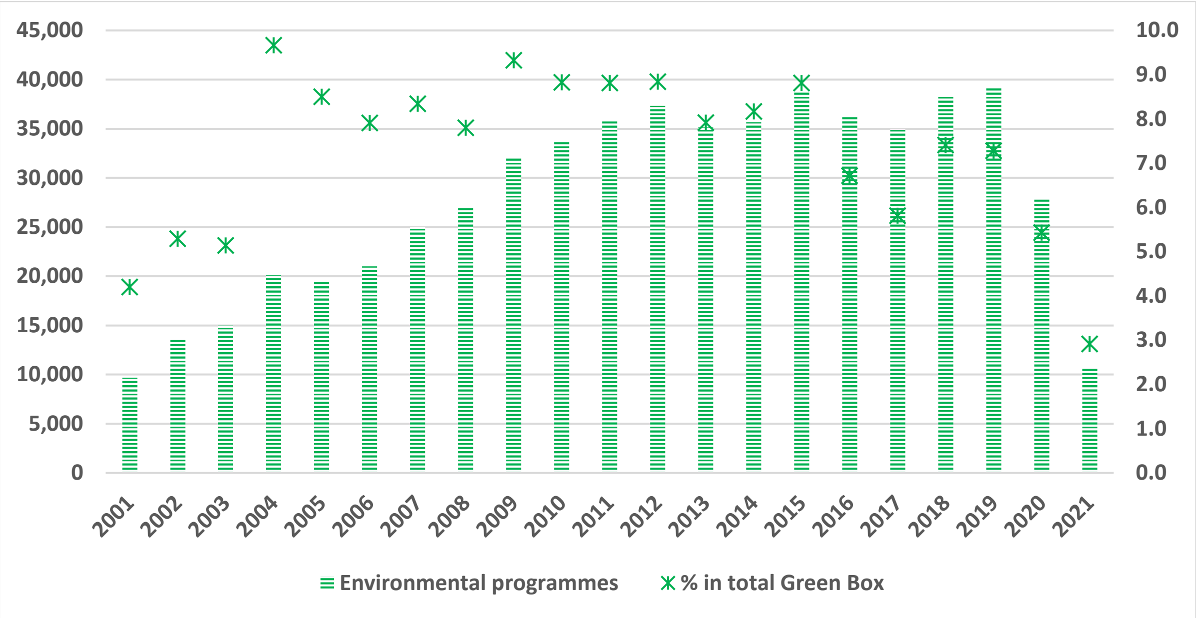
Notes: Article 6.2 of the Agreement on Agriculture recognizes three types of subsidies: (i) investment subsidies generally available to agriculture in developing country Members, (ii) agricultural input subsidies generally available to low-income or resource-poor producers in developing country Members, and (iii) domestic support to producers in developing country Members to encourage diversification from growing illicit narcotic crops. Some notifications for 2020 and 2021 are still outstanding, therefore the figures underestimate the notified support.
Source: WTO Secretariat, based on notifications

Figure A.5: Notified Green Box support, all Members (USD million)



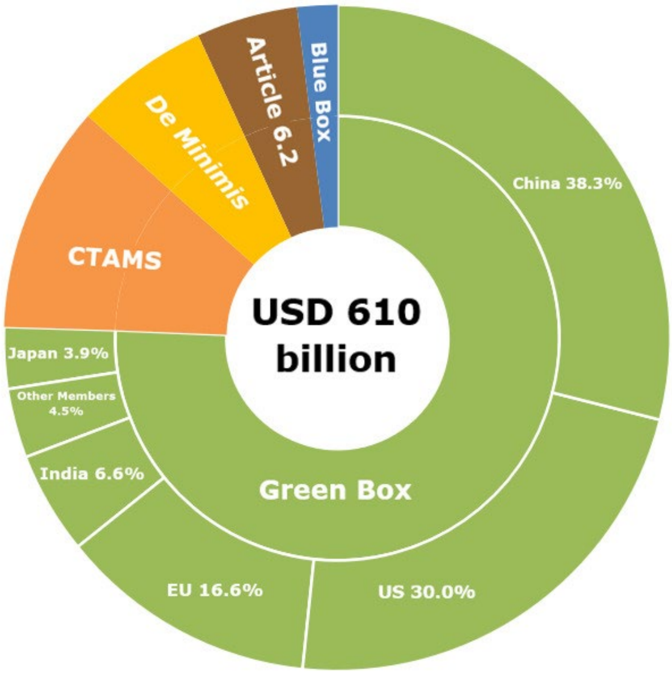
Note: Some notifications for 2020 and 2021 are still outstanding, therefore the figures underestimate the notified support.
Source: WTO Secretariat, based on notifications

Figure A.6: Notified Green Box support under Environmental programmes, all Members (USD million and % in Total Green Box support)



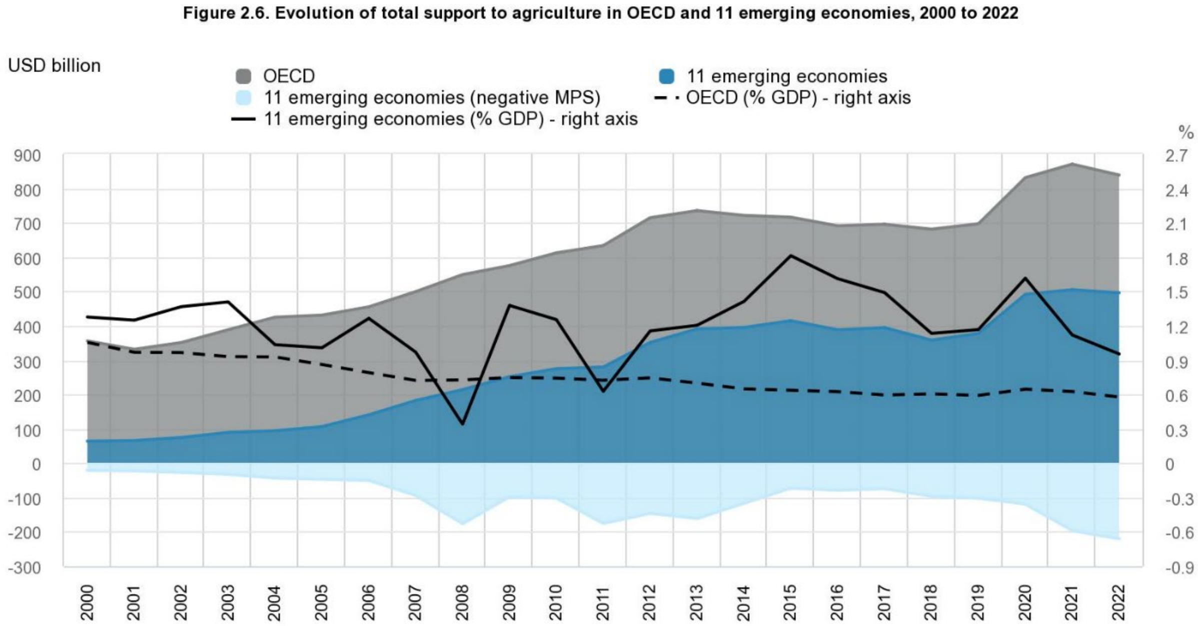
Note: Some notifications for 2020 and 2021 are still outstanding, therefore the figures underestimate the notified support.
Source: WTO Secretariat, based on notifications

Figure A7: The use of different categories of domestic support, 2019, all members (%)



Source: WTO document, submission by the Cairns Group, Job/AG/253

Figure A.8: Evolution of total support to agriculture in OECD and 11 emerging economies, 2000-2022



Note: Negative MPS for OECD countries, mostly reflecting adjustments for higher feed costs due to positive MPS for feed commodities, averaged USD 423 million per year between 2000 and 2022, and is therefore too small to be visible on the graph.
The OECD total does not include the non-OECD EU Member States. Latvia and Lithuania are included only from 2004.
The 11 emerging economies include Argentina, Brazil, China, India, Indonesia, Kazakhstan, the Philippines, Russian Federation, South Africa, Ukraine and Viet Nam.
Source: OECD (2023), "Producer and Consumer Support Estimates", OECD Agriculture statistics (database), https://doi.org/10.1787/agr-pcse-data-en.