



TRADE AND ENVIRONMENTAL SUSTAINABILITY STRUCTURED DISCUSSIONS

INFORMAL WORKING GROUP ON SUBSIDIES

Compilation of experiences and considerations regarding subsidy design

Revision¹

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1 INTRODUCTION

1.1. In line with the 2021 TESSD Ministerial Statement ([WT/MIN\(21\)/6/Rev.2](#)) and the 2022 TESSD Work Plan ([INF/TE/SSD/W/17](#)), Members have carried out discussions on the environmental effects and trade impacts of relevant subsidies, related transparency issues and the role of the WTO in the Informal Working Group on Subsidies.

1.2. Following the TESSD High-level Stocktaking event in December 2022 and the related Statement by the TESSD Co-Convenors ([INF/TE/SSD/W/21](#)), Members have also shared experiences in subsidy design and considered how to enhance transparency and data availability. Members started these discussions focusing on agricultural subsidies and subsidies related to the transition to a low-carbon economy.

1.3. This document provides a compilation of Member experiences and considerations with subsidy design based on discussions in the meetings of the Informal TESSD Working Group on Subsidies on 16 March, 10 May, 19 September and 21 November 2023. The compilation's objective is to take stock of past discussions without being exhaustive of all types of subsidies that might be discussed in future meetings of this Working Group.

1.4. This document remains a 'living document' and will continue to be updated based on further discussions and input from Members.

¹ The current revision updates a few Members' experiences based on specific comments provided by those Members, and slightly amends the wording of paragraphs 2.5 and 3.4 to reflect what considerations Members "may" take into account regarding subsidy design.

2 AGRICULTURAL SUBSIDIES

2.1. Agricultural subsidies were discussed in the meetings on 16 March and 19 September 2023. As part of presentations contributing to the discussion on environmental effects of agricultural subsidies, the Food and Agriculture Organization (FAO) pointed to the importance of taking into account different dimensions such as country conditions, support instruments and agricultural products in the analysis of environmental effects and possible trade-offs between different policy objectives. The Organization for Economic Cooperation and Development (OECD) highlighted that analytical work had found that the most market-distortive producer support (market price support, output subsidies, and variable input subsidies without constraints) was also potentially the most harmful to the environment, while agri-environmental payments could have positive environmental impacts, especially if spatially targeted and based on environmental performance. The Secretariat of the Convention on Biological Diversity (CBD) elaborated on Target 18 of the Kunming-Montreal Global Biodiversity Framework (GBF), which aimed to identify, eliminate, phase out or reform incentives (including subsidies) harmful for biodiversity and scale up positive incentives for the conservation and sustainable use of biodiversity.

2.2. In discussing environmental effects, Members acknowledged the complexities of agricultural subsidies and their effects on the environment and encouraged a holistic approach taking into account environmental, social (such as food security) and economic indicators. The relevance of moving to less distorting and environmentally harmful forms of subsidies and using subsidies to improve the environmental performance of the agricultural sector was also highlighted.

2.3. Members also shared their experiences on subsidy design and discussed the following questions:

- How do you consider possible environmental effects and trade impacts in the design of agricultural subsidies? How do you balance environmental and trade considerations?
- What kind of agricultural subsidies can be beneficial to the environment?
- What criteria do Members consider when establishing subsidies in order to determine whether or not they are environmentally friendly?

2.4. Table 1 provides a compilation of experiences shared by Members in the form of presentations or as part of their interventions.

Table 1. Experiences with the design of agricultural subsidies

<p><i>Australia: Sustainable finance</i></p> <p>The Australian Sustainable Finance Institute is working closely with government to determine appropriate regulatory and policy settings to enable sustainable agricultural financing flow on the basis that investment in this sector sees opportunities for returns because of undistorted markets and high sustainability credentials of the sector. Australia has focused particularly on transition finance, as it is important that finance is available to support the transition to sustainable practices in addition to existing ones.</p>
<p><i>Brazil: Subsidies and environmental sustainability of Brazilian agriculture</i></p> <p>Brazilian agricultural policy aims to strengthen sustainability in its three dimensions – economic, social and environment, and its goals, <i>inter alia</i>, include increased productivity; reduction of GHG emissions; prevention of losses in agricultural production; rationalization of the use of natural resources and inputs; soil recovery and conservation; improving the quality and health of agricultural production; treatment of manure and agricultural residues; and reforestation. Agricultural production has expanded at a rate substantially superior to agricultural land use and was mainly driven by gains in productivity, including through the use of double cropping.</p> <p>Environmental sustainability has guided agricultural policy for decades, including the Agriculture Climate Risk Zoning policy and the Low Carbon Emission Agriculture Plan (ABC). The ABC Plan aims to spread environmentally friendly technologies, while the ABC program provides access for environmentally sustainable financing (among other options). The Brazilian Forest Code establishes minimum limits for environmental preservation in rural properties. As of 2021, areas used for farming only covered around 31% of Brazilian territory, compared to a forest area of close to 60%.</p>

Credit subsidies are the main input subsidy instrument, although they represent less than a third of resources raised by farmers and less than 1% of the value of agricultural production. Environmental sustainability is an essential requirement for accessing resources. Production has grown at an accelerated pace, contrasting with the reduction of subsidies, which demonstrates the economic sustainability of Brazilian agriculture. Instruments such as ecological economic zoning and agricultural climate risk zoning are fundamental for increasing environmental sustainability. There is a need to associate financing for sustainable production with financing for the recovery of ecosystems, i.e. payment for environmental services. There is also a need for a balanced approach between economic, social and environmental aspects, given that, if it is necessary to adopt subsidies to keep the economic aspects artificially viable, then the activity is not sustainable.

Costa Rica: NAMA Café and Programme for Payment for Environmental Services

The NAMA Café initiative seeks to promote low-emission and sustainable coffee production and processing in Costa Rica, through the adoption of low-emission technologies and the efficient use of water and energy. An incentive mechanism by the Costa Rican Coffee Institute (ICAFE) allows NAMA café beneficiaries to receive a monetary contribution for a maximum of three investment projects of up to 10% of the investment. Incentives might be obtained for technologies related to wet and dry milling, by-product treatment system, or use of renewable energy, among others.

The National Fund for Forest Financing finances forest management for the benefit of SMEs. The Fund also includes a Programme for Payment of Environmental Services (PPSA) drawing its funding from a single fuel tax, of which 3.5% is allocated to PPSA which guarantees the sustainability of the Programme. Other financial contributions can be received from the Government and international development financing. The development of these programs entails an exhaustive process of consultation at the domestic level with government sectors and entities, including the Ministry of Foreign Trade, which ensures that any state policy adheres to the rules of the multilateral trade system and international law.

European Union: Environmental dimension of the EU's Common Agricultural Policy (CAP)

Since 1980, the EU's CAP gradually shifted from price support to coupled producer support, and then to decoupled support. Around 85% of EU farm support currently falls into the WTO green box. EU agriculture has seen decreasing trends in GHG emissions (19% lower in 2017 vs. 1990), in antibiotic sales for animal production (40% lower in 2020 vs. 2011), and in chemical pesticides. Organic farming is increasing, accounting for 9% of utilised agricultural land in 2020. Challenges remain, in particular regarding biodiversity, water quality, soil erosion and ammonia emissions.

By placing requirements on farmers, the CAP provides a baseline protection for the environment on more than 89% of EU's agricultural land, while for example targeted voluntary commitments related to soil and going beyond this baseline protection cover 45% of European farmland. In addition to statutory management requirements, all farmers receiving CAP support have to adhere to EU standards on good agricultural and environmental condition of lands such as crop rotation, allocation of at least 4% of land to non-productive areas of ecological importance, maintenance of permanent grassland, and water management and protection from pollution.

The CAP aims to achieve the right balance between economic, social and environmental objectives. The new CAP (2023-2027) includes enhanced conditionality regarding climate and environmental requirements which are mandatory for farmers. Eco-schemes and environmentally friendly rural development interventions provide additional incentives for voluntary practices beyond conditionality. The new CAP includes a needs-based, targeted approach to addressing environmental and climate objectives, includes a no backsliding clause in terms of environmental ambitions, and provides for different mechanisms to ensure alignment with the EU Green Deal.

Israel: Supporting agricultural practices for positive environmental outcomes

Israel's experience shows that subsidising agricultural practices like service crops has a positive effect on the environment, where it is accompanied by research and extension, and parallel commitments from farmers, for instance, provision of partial subsidies that require matching by farmers. Similarly, subsidies for integrated pest management drastically reduce chemical pesticide use while maintaining the same level of production; and subsidies for soil conservation

lower nitrous oxide emissions, reduce water evaporation and decrease soil erosion, while increasing organic matter, biota, and wildlife presence, when used under the same comprehensive approach.

Japan: Approach to incentivize sustainable agriculture

Japan has continually reformed its agricultural support policy, with government spending on agriculture being on a downward trend since 2000. Japan pursues a two-dimensional approach to incentivize sustainable agriculture by: (i) using environmental conditionality to constrain/mitigate the negative environmental effects of subsidies; and (ii) repurposing subsidies for green innovation to enhance positive environmental effects. In terms of environmental conditionality, Japan's agri-environmental policy establishes periodically reviewed reference levels, including in the form of standards, for almost all agricultural support taking into account environmental cross compliance. Japan also promotes Good Agricultural Practices (JGAP, ASIAGAP, Global G.A.P.) and has noted an increase in GAP-certified farms by more than 1.7 times within 5 years.

In terms of enhancing positive effects or repurposing of green innovation, support policies include direct payments for on-farm environmentally friendly practices (such as soil testing and analysis, cover cropping, living mulching), support for community-based activities in rural areas (including maintenance of essential agricultural infrastructure and eradication of invasive species). and support for R&D activities to develop crop varieties that mitigate or adapt to environmental impacts.

Japan assesses the actual impacts of policies by considering its particular natural, social and economic conditions and ensures policy coherence by enacting cross-sectoral standards against pollution to achieve national goals.

Paraguay: Good agricultural practices

In Paraguay, about 65% of farms carry out some soil management and conservation practices, of which 64% apply crop rotation and 16% direct sowing, which are the most frequent good agricultural practices. Organic production is not automatically considered a good agricultural practice as it involves trade-offs (e.g. mechanical processes that harm soil) that may not lead to a net-positive impact on the environment. Other good agricultural practices, *inter alia*, include the use of biotechnology which enhances productivity and lowers the use of resources, while precision agriculture provides for a more efficient use of equipment and plots, lowering environmental impact. In terms of farming practices, the adjustment of animal load according to the intrinsic capacity of available fields will enhance productivity and can bring the greatest benefits for climate change mitigation.

United Kingdom: Reform of agricultural policy

Estimating the environmental impacts of environmental stewardship schemes to date have revealed that between £3.20 and £5.60 of public goods being returned for every £1 put in, with benefits to habitats and species, landscapes and water quality.

Significant reforms of agricultural policy and spending are being undertaken in the UK to help align the agricultural sector with national objectives for improving the natural environment and meeting the national target of net zero greenhouse gas emissions by 2050.

Under the 25 Year Environment Plan, new Environmental Land Management Schemes will contribute to the delivery of six environmental public goods: (i) clean and plentiful water; (ii) thriving plants and wildlife, (iii) protection from and mitigation of hazards; (iv) clean air; (v) beauty, heritage and engagement; and (vi) mitigation and adaptation to climate change. Some of these include the sustainable farming incentive (SFI) programme, which introduces six new sustainable farming standards and provides payments to farmers to adopt and maintain sustainable farming practices that can protect and enhance the natural environment alongside food production, and support farm productivity; countryside stewardship (CS) payments towards more targeted actions relating to specific locations, features and habitats; as well as landscape recovery payments for longer term, larger scale projects to enhance the natural environment.

The UK's Farming Equipment and Technology Fund provides grants ranging from £2,000-£25,000 based on a prescribed list of items. This too supports the purchase of specific equipment, technology and small infrastructure investments aimed at making an immediate

difference to farm performance, including investments that will help farmers use less inputs, reduce emissions and cut waste.

Uruguay: Economic incentives in the agricultural sector with environmental objectives

Uruguay has two support programmes that, in principle, had beneficial effects on the environment, namely, the Forestry Law 15.938 (1987) and the Native Forest Decree 247 (1989). These regulations provide for tax exemptions and are still in force with some modifications.

The Forestry Law of 1987 had two objectives: first, the conservation of forests through sustainable management and, second, the expansion of forest area to lands of lower productivity. These objectives were pursued through a support programme providing a tax exemption of up to 75% of the cost of planting a new forest, waivers from tariffs on imports of machinery and materials, and technical assistance. The enactment of this law resulted in an increase in planted forest cover from 15,000 hectares in 1985 to over 1 million hectares. The Native Forest Decree 247 of 1989 targeted farms with areas occupied by native forests and established tax reductions for increasing the area of native forest relative to the National Forest Registry. This measure led to an increase in surface area of native forest by 25%. Together, these two support programmes have resulted in the creation of a carbon sink in Uruguay.

While the original objectives of both regulations were forest conservation and providing an economic incentive to a specific sector, the policies also resulted in beneficial effects on the environment due to net carbon capture and the consequent creation of a carbon sink. Considering that these positive environmental impacts were unintended from a policy design perspective indicates the complexity of effectively assessing the long-term environmental impacts of subsidies, whether positive or negative.

2.5. Members also shared their considerations related to the design of agricultural subsidies. Consolidating the elements raised in the discussions², Members may take into account the following considerations when designing agricultural subsidies:

- defining a set of goals related to sustainable development such as generating income and jobs, raising living standards, improving food security and ensuring environmental sustainability;
- ensuring policy coherence across sectors in achieving environmental objectives;
- considering in an integrated manner the impact on production, trade and environment and steering agricultural production towards high-efficiency and sustainability;
- subsidies should not be granted in areas with a greater degree of environmental damage such as heavy metal pollution to avoid "environmental depressions" in agricultural production;
- subsidies should be directed towards good agricultural practices as they can limit negative effects on the environment while helping developing countries increase productivity;
- a comprehensive consideration of different environmental effects, including carbon emissions, biodiversity, healthy soils and responsible water management;
- the environmental effects of agricultural subsidies, including long term, with due consideration to each country's specific situation;
- consideration of subsidies that can be beneficial to the environment, including support for the provision of public goods or compensation of income loss due to the use of environmentally friendly methods of production;
- evaluating the environmental impacts of agricultural policy using quantitative models;
- the economic and social externalities on third countries, including the impact on farmers in developing countries;
- the disciplines in the WTO Agreement on Agriculture and its Green Box, which can serve as a policy tool for the repurposing of agricultural subsidies towards sustainable agriculture and "green green box" measures;
- creation of incentives for private sector investment towards sustainable activities and innovative approaches to meet climate goals;
- measures that support access to and the adoption of innovation, knowledge and technologies, which can support sustainability and food security objectives while also minimizing trade and production distortions; and

² An unconsolidated, anonymized list of design considerations for agricultural subsidies raised in discussions is provided in Table 3 in document [INF/TE/SSD/W/29/Rev.1](#).

- avoidance of price incentives and subsidies tied to production of a specific commodity or input, as evidence indicates that these are not only trade distortive, but also the most potentially damaging to the environment.

3 SUBSIDIES RELATED TO THE TRANSITION TO A LOW-CARBON ECONOMY

3.1. Subsidies related to a low-carbon transition were discussed in the meetings on 10 May and 21 November. According to the presentation by the International Institute for Sustainable Development (IISD) on the Energy Policy Tracker, at least USD 474.43 billion in support went towards clean energy compared to USD 512 billion for support towards fossil fuel energy during 2020-2021. IISD underscored the need to prioritize clean energy investments and reforms in recovery plans, and to balance immediate crisis responses with longer term sustainability objectives.

3.2. In the Working Group, Members shared their experiences on subsidy design and discussed the following questions, among others:

- How do you balance environmental and trade considerations when designing subsidies related to the low-carbon transition?
- How do you consider possible trade impacts in the design of subsidies related to the low-carbon transition?
- How can the environmental effects and trade impacts of such subsidies be identified?
- What are information gaps to better understand these impacts, and how could transparency and data availability be enhanced?

3.3. Table 2 provides a compilation of experiences shared by Members in the form of presentations or as part of their interventions.

Table 2. Experiences with the design of subsidies related to the transition to a low-carbon economy

<p><i>Australia: Clean hydrogen initiatives</i></p> <p>Australia's national hydrogen strategy of 2019 provides a framework for government and industry to work together to build a clean hydrogen industry. Over 100 announced clean hydrogen and hydrogen derivative projects provide for an investment pipeline of around AUD 200-300 billion.</p> <p>Australia has allocated AUD 2 billion for the Hydrogen Headstart Programme, which seeks to bridge the commercial gap between production costs and market price for renewable hydrogen thereby accelerating the development of Australia's hydrogen industry. The programme will build on the Hydrogen Hubs Initiative under which AUD 500 million is allocated for hubs across Australia that bring together hydrogen users, producers and potential exporters to accelerate industry growth.</p> <p>Australia has committed more than AUD 38 million to develop a guarantee of origin scheme to certify clean hydrogen products. This product-based emissions accounting framework will initially cover renewable electricity, hydrogen and its derivatives, and will expand to include other products such as green metals and biofuels. The proposed scheme is designed to be voluntary and aligned with international standards, and has been developed in collaboration with Australia's energy partners and the International Partnership for Hydrogen and Fuel Cells in the Economy (IPHE).</p>
<p><i>Brazil: Subsidies in support of green transition in agriculture</i></p> <p>Brazil provides non-distortive agriculture subsidies on a modest level to support the green transition in agriculture. Its low-carbon agriculture programme (ABC plan) has succeeded in mitigating more than 170 million tons of carbon emissions by 2018 and is a core part of the strategy encapsulated in Brazil's ambitious Nationally Determined Objective.</p>
<p><i>Canada: Federal Budget 2023: Affordable energy, good jobs, and a growing clean economy</i></p> <p>Canada's plan for affordable energy, good jobs, and a growing clean economy proposes investments in clean growth of almost USD 21 billion over the next five years and focuses on securing global investment in the clean economy, with significant funding allocated for clean electricity, clean economy growth, resilient infrastructure, and technological innovation.</p> <p>To accelerate private investment, three tiers of federal financial incentives are employed: targeted programming to support clean energy and decarbonization projects; strategic financing to attract</p>

private capital and accelerate deployment of key technologies; and investment tax credits for investments in clean energy, clean hydrogen, clean technology manufacturing and deployment, and carbon capture use and storage. These financial incentives are underpinned by carbon pollution pricing and regulatory frameworks providing a price incentive to reduce emissions and innovate.

Green Subsidy Policy of China

China's green subsidy policy aims to contribute to its goals of carbon peaking and carbon neutrality, playing an important role for the green transformation of its economy. Examples of policies include special funds for the development of clean energy and air pollution and control, a subsidy fund for energy conservation and emission reduction, preferential tax treatments for new energy vehicles and enterprises with comprehensive utilization of resources, and conservation and restoration of nature.

In addition, the practice of competitive allocation of fiscal funds reformed the previous model of average allocation, providing incentives for participants and improving the effectiveness of the use of fiscal funds. Procedures of the competitive allocation include the issuing of funding opportunities by the Ministry of Finance, submission of proposals by candidate cities, expert review and competitive mechanism, public notification of assessment results, funds allocation and performance evaluation. The typical case is Sponge City pilot projects.

European Union: EU policy support for the transition to a low-carbon economy

The EU Green Deal Industrial Plan aims to scale up manufacturing capacity for net-zero technologies and includes the four pillars of: predictable regulations; increased investment for clean tech production; skills enhancement; and fair and open trade.

The EU's state aid framework includes a balancing principle, where positive contributions to achieving the policy objective are to outweigh any negative effects on trade. The guidelines on state aid for climate, environmental protection and energy provide for: safeguards (ensure effectiveness, do not unduly distort competition); coherence with environmental legislation; and WTO-compatibility. The WTO has a role in supporting climate neutrality through its disciplines on subsidies, promoting green transition in a manner that minimizes trade distortions, and as a forum for deliberations on trade aspects of the green transition.

European Union: Hydrogen strategy and initiatives

The EU strategy on hydrogen was adopted in 2020 and suggested policy action points to five areas: investment support; support production and demand; creating a hydrogen market and infrastructure; research and cooperation; and international cooperation. The EU provides support for renewable hydrogen through various channels, including:

- The NextGenerationEU programme, which has been made available to EU Member States to invest in hydrogen projects across the value chain.
- Investment support has been provided through State aid, in particular under the Important Projects of Common European Interest (IPCEIs), to develop innovative technologies for the hydrogen value chain to decarbonize industrial processes and the mobility sector with a focus on end-users. A follow-up scheme aims to support the construction of hydrogen-related infrastructure and technologies for the integration of hydrogen into the industrial sector.
- The European Hydrogen Bank, a European financing facility, aims to unlock private investments in hydrogen value chains, both domestically and in third countries, by connecting renewable energy supply to EU demand and addressing initial investment challenges.
- Green hydrogen partnerships will facilitate the promotion of the import of renewable hydrogen from third countries and contribute to incentivizing decarbonization.

The Hydrogen Public Funding Compass provides an online guide to identify public funding sources for hydrogen projects and relevant EU programmes. The EU has also adopted legislation to define what can be considered renewable hydrogen, including methodologies to assess the actual reduction of GHG emissions and on additionality. In addition, any public financial support should take into consideration the environmental impacts of renewable hydrogen production, in particular, in terms of water use.

Japan: Green Innovation Fund

As part of its effort to achieve carbon neutrality by 2050, Japan has been utilizing the Green Innovation Fund, which will provide continuous support from R&D through to social implementation for up to 10 years. Japan is also preparing a framework to support green transformation by utilizing financial resources to be generated by growth-oriented carbon pricing, which will be introduced in a step-by-step manner.

Such support aims to achieve green growth through the creation of new industries and trade flows, rather than closing off domestic markets. For this purpose, Japan will utilize subsidies, such as targeted support to high-risk R&D activities that are expected to bring large potential benefits as an incentive, in combination with regulatory measures, to promote bold private investments in sectors that contribute to the global green transformation.

Norway: Incentives provided for purchase and usage of electric vehicles

Norway has been supporting the introduction of electric vehicles (EV) for some time. Policies do not discriminate between countries of origin or producers but between cars with combustion engines and EVs. Incentives included the exemption of certain taxes at the moment of purchase of new EVs, most notably the special 'one-off registration tax' on vehicles and the 25% value-added tax (VAT). Support measures for usage have also been granted, such as exempted or lower fees for road toll and ferries, subsidized public charging facilities, as well as privileged access to road lanes generally reserved for buses and taxis. These incentives are considered to have contributed substantially to the steady increase in the number of EVs sold in the Norwegian market, as a proportion of total car sales, over the last decade.

Over time, the government has modified some of the policies. The strong tax incentives combined with increased share of EVs has led to a substantial decline in tax revenues. To slow down this revenue decline, Norway has introduced VAT for the more expensive EVs (cars that cost more than NOK 500,000) and a low one-off registration tax for EVs. This also reduces the share of subsidies given to customers who buy cars in the premium segment. In addition, the road toll and ferry fees are being gradually increased to keep public transport competitive. These modifications illustrate that subsidies should be scaled down when the new technology matures and becomes more competitive.

Switzerland: Energy Strategy 2050 – Promotion of energy efficiency and renewable energy

Switzerland's Energy Strategy 2050 has three key objectives: (i) increasing energy efficiency; (ii) increasing the use of renewable energy; and (iii) withdrawing use of nuclear energy.

Building programmes at the cantonal level aim at increasing energy efficiency through refurbishments, replacement of fossil heating, district heating, and e-vehicle charging. These measures for buildings are financed through earmarking of the CO₂-tax proceeds, a third of which is distributed to cantons as subsidies. Measures for appliances and industry target industry, small enterprises and households and include financial support for energy efficiency measures awarded through auctions to the lowest subsidy-savings ratio, and are financed through the electricity grid surcharge.

Promotion systems to increase the use of renewable energy amount to CHF 1.3 billion per year, financed through surcharges on network costs, and cover measures such as one-time investment aids (between 20% to 60%), feed-in premiums and auctions for large photovoltaic (PV) plants. These support measures are to be phased out by around 2030-2035 and are currently available for eligible technologies such as solar PV, including rooftop and alpine installations; biogas, wood and waste incineration plants; and plants for wind, hydro and geothermal energy. In terms of withdrawing from the use of nuclear energy, the Energy Strategy 2050 envisions a step-by-step approach prioritizing safety and restricting issuance of new licences.

United States: Overview of the US clean hydrogen landscape

The United States currently produces 10 million metric tonnes (MMT) of hydrogen, which is primarily used by the petroleum refining and ammonia production sectors. The United States aims to increase production capacity to 20 MMT/year by 2040 and 50 MMT/year by 2050 and tap into emerging hydrogen markets such as data centres, ports, steel manufacturing and heavy duty trucks.

The US National Clean Hydrogen Strategy and Roadmap has three main strategies: (i) to target strategic, high-impact end uses like industrial applications, transportation and power sector applications; (ii) to reduce the cost of clean hydrogen including hydrogen production, onboard storage, delivery and dispensation; and (iii) to focus on regional networks by deploying clean hydrogen hubs, developing infrastructure and ramping up scale to access economic benefits.

The US Inflation Reduction Act (IRA) 2022 provides clean energy tax credits and other provisions, which aim to increase domestic renewable energy production, including for clean hydrogen. The Clean Hydrogen Production Tax Credit creates a 10-year incentive for clean hydrogen production, while the Investment Tax Credit enables projects to claim up to 30% tax credit based on the carbon intensity of the project. Alternatively, in lieu of the production tax credit, projects can claim an Investment Tax Credit of up to 30% for clean hydrogen production facilities. Additionally, several States in the US offer incentives for the installation of fuel cells and hydrogen energy systems.

The Regional Clean Hydrogen Hubs Program (H2Hubs) includes a USD 7 billion investment to establish seven clean hydrogen hubs across the country aimed at accelerating commercial scale deployment of low-cost clean hydrogen by building a network of hydrogen producers, consumers and connected infrastructure to support the production, storage, delivery and end use of clean hydrogen. Key areas for H2Hubs have been evaluated on the basis of technical merit and impact, financial and market viability, workplan, management team and project partners, and community benefits plan.

As part of the Governments Energy Earthshots Initiative, the Hydrogen Shot aims to reduce the cost of clean hydrogen by 80% to USD 1 per 1 kg in 1 decade ("111"). The Government is working closely with industry, including through grants, loans and other tools and incentives, to stimulate competition, innovation and investment to catalyse cost declines across the value chain.

3.4. As part of the experience sharing, Members exchanged on their considerations in the design of subsidies pertaining to the transition to a low-carbon economy, highlighting a number of common elements, including compliance with WTO rules. Consolidating the elements raised in the discussions³, Members may take into account the following considerations when designing subsidies related to a low-carbon transition:

- minimizing trade-distorting impacts when designing subsidies;
- providing subsidies on a non-discriminatory basis;
- avoiding local content requirements;
- time limitations for the subsidy programme;
- the balance between the positive effects for the transition to a low-carbon economy and the distorting effects on trade;
- consideration of whether the programme directly links to the reduction of greenhouse gas emissions;
- avoiding unilateral measures that may disrupt global trade;
- taking into account how market distortions might disproportionately affect developing and least developed countries as well as different development levels of countries; and
- quantifying environmental effects of climate-smart agricultural practices using science-based, transparent measurement tools to leverage investment.

4 TRANSPARENCY

4.1. Since its first meeting in March 2022, the Working Group has been discussing what information exists to better understand environmental and trade impacts of different subsidies, including agricultural, fossil fuel, industrial and green subsidies. Members pointed to the challenge of assessing potential environmental impacts of subsidies due to data shortcomings, and the need for collecting quality data and improving transparency on subsidies.⁴ In 2023, sector-specific discussions on agricultural subsidies and subsidies related to the low-carbon transition included a focus on how transparency and data availability could be enhanced.

³ An unconsolidated, anonymized list of design considerations for subsidies related to the low-carbon transition raised in discussions is provided in Table 4 in document [INF/TE/SSD/W/29/Rev.1](#).

⁴ TEESD Summary Report 2022 – [INF/TE/SSD/R/14](#).

4.1 Agricultural subsidies

4.2. Regarding subsidies on agriculture, Members underlined the importance of transparency and monitoring for assessing environmental impacts, both negative and positive. In this regard, the availability of data on agricultural subsidies, including through domestic support notifications at the WTO and support estimates by the OECD, as well as the usefulness of existing analytical work by other international organizations and stakeholders was acknowledged.

4.3. In presentations at the meeting on 19 September, the OECD noted that agricultural support in 54 countries had been increasing in recent years, and amounted to USD 817 billion per year during 2019-2021. The WTO Secretariat presented on improvements in the Agriculture Information Management System (AG-IMS) and informed that environmental payments notified under paragraph 12 of the Green Box amounted to an annual average of around USD 35 billion over recent years, with the top eight Members accounting for 99% of payments provided in 2018.

4.4. Members highlighted the need to fulfil existing notification requirements under the WTO Agreement on Agriculture as those provided the basis for transparency in the area of agricultural subsidies. Collaboration with environmental stakeholders for data collection and impact assessments using science-based, transparent measurement tools was considered important for assessing environmental impacts accurately.

4.5. Regarding opportunities to enhance transparency and possible future work more broadly, suggestions included to carry out technical exercises that could focus on identifying: (i) the types of agricultural subsidies that are trade and production distorting and also particularly harmful to the environment, as well as those types that can be beneficial for the environment; and (ii) good and particularly harmful practices in various sectors, including agriculture, such as the use of hazardous chemicals. Further suggestions included to: (iii) share experiences and discuss what environmental impact indicators might be used in the monitoring and evaluation of agricultural support programmes; (iv) carry out a questionnaire on the design of environmental programmes, including on environmental objectives, trade-offs between environmental objectives and results of measures; and (v) share experiences and practices in environmental programmes under the Green Box support measures under the Agreement on Agriculture for enhancing mutual understanding and learning.

4.2 Subsidies related to the low-carbon transition

4.6. Regarding subsidies related to the transition to a low-carbon economy, the low level of compliance with notification requirements under the WTO Agreement on Subsidies and Countervailing Measures (SCM Agreement) was underlined, as was the need to increase efforts to fulfil existing notification obligations. Proposals on improving transparency in the SCM Committee were pointed out as well as the need to support Members with genuine capacity concerns to engage in work to improve the timeliness and quality of information provided. Further opportunities to enhance transparency on subsidies in the WTO were considered to be found in Members' Trade Policy Reviews and regular Trade Monitoring Reports, as well as through experience and information sharing on domestic initiatives, including in TESSD.

4.7. Members also shared national experiences and measures on transparency on energy subsidies and other subsidies related to the low-carbon transition. Transparency on the development and implementation of subsidies policies could be ensured through national legislation, opportunities for public comments on policies, public offering of specific projects, and regular reports on energy subsidies, including information on progress towards meeting national objectives on climate and energy. These improvements should start by addressing the notification process within the WTO framework, in terms of both the quantity of notifications as well as the quality of the information notified.

4.3 International cooperation and initiatives

4.8. Transparency could also be enhanced through international cooperation. The initiative for a joint Subsidy Platform by the WTO and other international organizations (IMF, OECD, WB) was welcomed and encouraged to be further developed in consultation with Members.⁵ Other initiatives

⁵ Subsidy Platform: <https://www.subsidydata.org/>.

to enhance transparency and data availability on different types of subsidies that were presented or referred to in the Working Group, *inter alia*, included:

- i. OECD Agricultural Policy Monitoring and Evaluation: an annual report that monitors support policies in 54 countries (policy changes and measurement of support – producer and consumer support estimates)⁶;
- ii. OECD Policy Instruments for the Environment (PINE) database: provides detailed information on policy instruments relevant for environmental protection and natural resource management, and will be utilized to measure environmentally positive subsidies under the Kunming-Montreal Global Biodiversity Framework⁷;
- iii. work by the OECD on a Manufacturing Groups and Industrial Corporations (MAGIC) database aimed at tracking and monitoring of government support over time and across industrial sectors, geographical regions and policy instruments⁸;
- iv. Energy Policy Tracker: an initiative of 29 expert organizations which tracks public financial flows from fossil fuels to clean energy, covering policies affecting energy production and consumption for 38 economies⁹;
- v. OECD Inventory of Support Measures for Fossil Fuels: documents and estimates government measures that encourage fossil fuel production or consumption relative to renewable alternatives¹⁰; and
- vi. IISD-OECD Fossil Fuel Subsidy Tracker: brings together existing international estimates of support for fossil fuels to help bridge the reporting gap and track progress against government commitments to phase out "inefficient fossil-fuel subsidies" in the context of the G20, G7 and APEC forums.¹¹

⁶ Agricultural policy monitoring and evaluation: <http://oe.cd/monitoring>.

⁷ PINE Database: <http://oe.cd/pine>.

⁸ OECD (2023), "Government support in industrial sectors: A synthesis report", OECD Trade Policy Papers, No. 270: <https://doi.org/10.1787/1d28d299-en>.

⁹ Energy Policy Tracker: <https://www.energypolicytracker.org/>.

¹⁰ Inventory of Support Measures for Fossil Fuels: <http://oe.cd/fossil-fuels/>.

¹¹ Fossil Fuel Subsidy Tracker: <https://fossilfuelsubsidytracker.org/>.