SUMMARY REPORT
NATURAL DISASTERS AND TRADE SYMPOSIUM[i]

14 DECEMBER 2018 - ROOM W

Session 1: Surveying losses, hazard and risk from natural disasters

Moderator: **Shishir Priyadarshi,** Director, Development Division

- Introductory Remarks: **Simon Farbenbloom**, Minister, Deputy Permanent Representative to the WTO, Australia

Speakers:

- "The impact of disasters on agriculture and food security" – **Wirya Khim**, Natural Resources Officer, Climate Change Adaptation and Disaster Risk Reduction, United Nations Food and Agriculture Organization

- "Overview of Economic Losses, Poverty & Disasters 1998-2017" - **Denis McLean**, Head of Communications, United Nations Office for Disaster Risk Reduction

- "Current and future disaster risk – a scientific perspective" **Tom de Groeve**, Deputy Head of Unit, Joint Research Centre, European Commission (by video link)

Question and answer session

Session 2: The economic and trade case for investing in resilience

Moderator**: Michael Roberts**, Head, Aid for Trade Unit, Development Division

Speakers:

- "Using catastrophe risk models to optimize supply chains" – **Robert Muir-Wood**, Chief Research Officer, RMS

- "Making the economic case for investing in risk reduction and resilience" – **Michael Szoenyi**, Programme Lead, Flood Resilience Program, Zurich Insurance Company

- "The Global Weather Enterprise Supporting Sustainable Development", **Dr David Rogers**, Meteorological Consultant, Global Facility for Disaster Reduction and Recovery

Question and answer session

Session 3: Preliminary scoping of issues arising from WTO research

Speaker:

- "Preliminary overview of issues arising" – **Michael Roberts**, Head, Aid-for-Trade Unit, Development Division, WTO

Session 1: Surveying losses, hazard and risk from natural disasters

1. **Shishir Priyadarshi, Director, Development Division** welcomed participants by highlighting that the event was an intermediate mid-term step in the work on natural disasters and trade. A wrap-up event would be held in April 2019 to share the results of the work. A first symposium had been held in April 2018, at which Dominica and Nepal, both of which had suffered natural disasters, had given illuminating presentations. Those presentations highlighted two aspects of the WTO research work: what needed to be done on the domestic front in terms of facilitating the entry of relief materials and workers. The second aspect looked at what needed to be done multilaterally. At the first symposium, the Secretary General of the International Federation of the Red Cross and the Red Crescent (IFRC) had stated that there was need to re-establish market opportunities as soon as possible after a disaster. The United Nations Office for Disaster Risk Reduction (UNISDR) was also contributing to the WTO research in the context of the Sendai Framework for Disaster Reduction - part of the United Nations' (UN) 2030 compact. A working relationship had also been established between the WTO and the World Customs Organization (WCO), particularly on the WTO's Trade Facilitation Agreement which was playing a crucial role in facilitating and expediting goods post-disaster and in the preparedness of it. Mr Priyadarshi thanked the Government of Australia for their support for the research work.

2. **Simon Farbenbloom, Minister, Deputy Permanent Representative of Australia** reaffirmed Australia's support towards this WTO research project. He recalled working as a permanent representative to UNESCAP in Bangkok where he had worked on disaster risk reduction issues. Coming back to Geneva, he noted that there were few forums for officials and members of international organizations to brainstorm on such issues and commended the WTO for taking this initiative. The Government of Australia was pleased to support work on an issue that would be of great relevance to the WTO and all its Members.

3. Natural disasters and trade were a topic of interest to Australia for many reasons. Like many Members, Australia was highly exposed to natural disasters. In a ten-year period ending 2016, the economic cost of natural disasters had averaged approximately US$18 billion per year, representing about 1.2% of its GDP. With climate change, population growth, and urbanization, losses were expected to increase. He explained that the Pacific was the most disaster-prone region, a reality which gave Australia a unique perspective on the importance of building resilience. Working with countries to increase resilience to natural disasters was a key component to the Government's official development assistance (ODA). Australia was working with international partners such as the IFRC and various UN agencies in preparing for and responding to natural disasters.

4. From a policy perspective, Mr Farbenbloom explained that there appeared to be little work done to date on the links between trade and natural disasters. He mentioned that increasing a country's disaster resilience had important benefits for its capacity to trade, and that strengthening a country's trade regime before a natural disaster struck would increase resilience. He expressed confidence that the WTO research would provide useful insights and policy ideas to support engagement in the natural disasters and trade topic.

5. **Wirya Khim, Natural Resources Officer, Climate Change Adaptation and Disaster Risk Reduction, Food and Agriculture Organization (FAO)** explained that agriculture was particularly vulnerable to natural disasters. FAO had produced reports in 2015 and 2017 on the impact of disasters on agriculture and food security as part of FAO's commitment to contribute to the Sendai Framework. Through the reports, FAO aimed to provide a clearer understanding of disaster impacts to develop better risk reduction-informed policies and investments in resilience building. Noting that the impacts of disaster on agriculture remained poorly documented and under-analysed, the reports would help fill a knowledge gap. The reports would also help provide more evidence in building the economic case for investment in the agriculture sector. With these reports, FAO hoped to provide updated and systematic data analysis on the damage and losses to help states meet their commitment to the Sendai Framework and the Sustainable Development Goals (SDGs).

6. FAO's 2015 disaster impact report had found that only 4% of total ODA was spent on agricultural assistance in the period 2012-2013. Between 2003-2013, roughly about US$121 billion was spent on humanitarian assistance for all types of disaster and crises. However, only 3.4% was directed to the agriculture sector, which was less than the UN target of 10%. The report reaffirmed that the economic impacts of disasters on agriculture were not well-documented, nor well-analysed due to a lack of data and methodological constraints. The 2017 report had considered impacts, not

only on crops and livestock, but also on forestry, fisheries and aquaculture. The report had placed special emphasis on conflict, with a dedicated chapter on agricultural production in Syria. The 2017 report had improved analysis of disaster impacts using macroeconomic analysis of trends in crop and livestock production yields from the FAO Stat, EM DAT CRED database and damage and loss analysis included in post-disaster needs assessments (PDNAs).

7. An average of 260 natural disasters had occurred annually over the period 2005-2016 at an average annual cost of US$27 billion in economic losses. About 23% of total economic damage and losses were registered by the agriculture sector. In monetary terms, the total production loss in Asia had been calculated at US$48 billion, followed by Africa at US$26 billion, and Latin America and the Caribbean at US$22 billion. Globally, natural disasters destroyed approximately 4% of total production. Ms Khim highlighted that the figures were significant because production disruptions of such magnitude could have severe impact on international markets and affect global food supply.

8. At a regional level, in West Africa, total production losses recorded were highest, at more than 10% of total production, followed by the Caribbean and Western Asia and Polynesia. Over the period 2005-2015, drought had caused 30% (US$29 billion) of agricultural loss. Floods caused 20% (US$19 billion) of the cumulative production loss in crops and livestock. Other meteorological disasters such as extreme temperatures and storms costed about 28% (US$ 26.5 billion) of the overall production loss. Biological disasters such as disease and infestation accounted for about 10% of the total loss.

9. Drought accounted for the majority of losses in Latin America and Africa. In Asia, floods and storms were the disasters responsible for most agricultural production losses. In Africa, crop pests and animal disease were among the costliest disasters in the region accounting for over US$6 billion in agricultural loss between 2005-2015. In Asia, alongside floods, agriculture systems were equally confronted by earthquakes, tsunamis and extreme temperatures which affected over US$9 billion and US$7 billion loss respectively.

10. In Asia, disaster-related production loss was high across all the commodity groups. Cereal production stood out with a cumulative loss of about US$4 billion over the past decade. Disasters in Asia also had a serious impact on fruit and nut production with a total loss of US$7.3 billion, followed by livestock production with a loss of over US$6 billion and vegetable production with a loss of about US$5 billion.

11. The FAO report also considered the impact of disaster in Small Island Developing States (SIDS). In monetary terms, agriculture sector losses were lower in SIDS than in non-SIDS countries, about ten times lower. In relative terms, the agriculture damage and losses in SIDS represented a substantial share of the sector's GDP. On average, the damage and loss caused by a single disaster in agriculture sector corresponded to about 19% of the agricultural value added in SIDS compared to 8% of the non-SIDS countries. Furthermore, disasters in SIDS affected a larger proportion of the population. On average 18% of the total population was affected by a disaster that hit a SIDS as compared to 2% in non-SIDS countries.

12. The 2017 report also brought together a more holistic approach to FAO's damage and loss methodology that, for the first time, added the forestry, fisheries and aquaculture sectors to the analysis. The report also covered new ground. It focused on transboundary animal disease. The pest-petit ruminant (PPR) transboundary animal disease alone caused an estimated US$1.45-2 billion each year in production losses. The report also looks at the Rift Valley Fever outbreak that impacted and interplayed with other natural hazards. In terms of the conflict and protracted crises, the FAO report measured the damage and loss in the agricultural sector in Syria by adopting a specific methodology for the damage and loss assessment in conflict using very innovative methodology for data collection.

13. FAO methodology had been fully incorporated and integrated into the Sendai Framework monitor and was used to support the SDG monitoring indicator for goal 1.5.2 (i.e. direct economic loss attributed to disasters in relation to global gross domestic product). This methodology provided a very holistic presentation of the agriculture sector which covered all the subsectors including crop, livestock, fisheries, forestry and aquaculture. The methodology itself had been tested in two countries, in two different types of disasters, the drought in Ethiopia and Typhoon Haiyan in the

Philippines. The methodology had been used to monitor the target C of the Sendai Framework for Disaster Risk Reduction on agricultural losses from disasters.

14. Disaster risk reduction management needed to be systematically embedded in the agricultural sector and sub-sectoral development plans and investment for countries that were facing recurring hazards and for countries where the population depended on the agriculture sector. More financial resources needed to be directed at the agriculture sector in developing countries, by national governments, private sector and development actors in a manner that was more consistent with the sector's crucial role in eradicating hunger and achieving food security. In turn, this would contribute to sustainable agricultural development and economic growth. Humanitarian aid to the agricultural sector should better reflect the impact of disasters on the sector itself. Furthermore, national governments and the international community should establish targets for financing disaster risks in the agriculture sectors to reduce disasters and to prevent the creation of new risks.

15. There was also need for continued improvement of data and knowledge on disaster impacts on the agriculture sector. This entailed the improvement of local level data and information systems, damage and loss data collection and analysis at country level, national and subnational level. So-called "silent disasters" such as slow-onset events also needed to be captured in data sets because localized disasters were often unreported, yet they had big consequences for rural livelihoods. There was a need to continue to strengthen and build capacity and forge partnerships with all the key actors involved. This included by establishing and working on the improved mechanisms and resources for data collection management analysis. She called for support for national statistical offices, natural disaster risk management agencies and ministries of agriculture to build their capacity to be able to collect and report the damage and loss from disaster in the agriculture sector.

16. **Denis McLean, Head of Communications, United Nations Office for Disaster Risk Reduction** focused his presentation on the Sendai Framework for Disaster Risk Reduction. It had taken three years of consultations and another three years for members to agree on the indicators for the seven targets of the Sendai Framework. In March 2018, UNISDR had launched the Sendai Framework monitor - a global initiative to improve how losses were measured.. The first two Sendai framework targets related to mortality from disaster events. In recent years mortality from disasters had declined in many parts of the world due to much improved disaster preparedness and better early warning systems. Remarkable progress had been seen in Bangladesh and India. Great progress had also been made in bringing down mortality and reducing the numbers of affected people, which was target 2 of the Sendai Framework. That said, the number of people affected by extreme weathers was on the rise.

17. The most challenging of the Sendai targets was, 'helping to reduce economic losses as a percentage of GDP'. UNISDR was collaborating with CRED to measure the impact of economic losses. CRED maintained a global database on the impact of disasters. UNISDR's Report showed that extreme weather events accounted for 91% of recorded disasters worldwide. In addition, over the last 20 years, economic losses from these events were in the region of US$3 billion worldwide and 77% of that came from extreme weather events. This figure was also growing. He emphasized the need to enhance international cooperation to help LDCs, SIDS, and other lower-income countries, which suffered most from these losses.

18. In terms of the largest absolute economic losses, these had been incurred in the USA, which had endured a record 16 disasters, each costing over US$1 billion in 2017. Other countries that had incurred large economic losses by value included Japan and China. Looking at the economic losses through the lens of percentage of GDP, the picture was different. Countries like Haiti, Tajikistan and many countries in Africa were continuously losing a high percentage of their GDP every year to extreme weather events, and agriculture was disproportionately affected. The most surprising thing about the report was the fact that there was no reliable economic data on losses for 63 percent of all recorded disasters in the CRED database. For over 7,000 events recorded over the last 20 years, reliable economic data was only available for less than 40% of those events. Better captured data would help member States understand losses and take action to improve disaster risk reduction.

19. For low-income countries, economic data was only available for 13% of the disasters which had been incurred in the last 20 years. A lot of work had to be done to support these countries do a better job of: (a) measuring their losses, and (b) helping them to operationalize strategies at national and local levels to reduce their losses.

20. **Tom de Groeve, Deputy Head of Unit, Joint Research Centre, European Commission** gave a scientific perspective on disaster risk reduction focusing on the work of the Joint Research Centre (JRC) that had been established in 2015 to help policy makers with risk-informed decision-making processes. He highlighted recent extreme weather events including floods in Italy, wildfires in the USA and Europe, Ebola in Congo, all of which had had devastating economic impacts. JRC was working, in collaboration with other international actors, to capture scientific data behind extreme weather occurrences. It took scientific knowledge and translated it into the context needed to help policy-makers make informed decisions.

21. The JRC was working with UNISDR on a global risk assessment framework to generate more knowledge and understanding at a global level. Mr de Groeve also highlighted the Disaster Risk Management Knowledge Centre and efforts towards making scientific knowledge more widely available. He highlighted the first global earthquake model which had been the outcome of ten years work with different countries and technological organizations to try and bring the best knowledge about earthquake risks into one coherent, consistent framework.

22. Key drivers of risk were climate and other hazards, on one hand, and changes in exposure and vulnerability on the other hand. On exposure to risk, JRC had conducted research which involved more than ten years of earth observations through satellites and artificial intelligence. The research showed that as population grow and buildings increased, they became exposed to risk. Additionally, the concentration of people and buildings along coastal lines created or increased risk. JRC raised awareness on such issues as it would be useful for policy making. Measuring and verifying vulnerability over time was a way of building resilience. The Global Risk Index, a multi-stakeholder project between the European Commission, UN agencies and donor agencies provided a better understanding of risk vulnerabilities.

23. In IPCC reports, climate scientists had modelled different scenarios, including what would happen if global warming was limited to below 1.5 degrees Celsius and an alternate scenario of less than 2 degrees Celsius. Given the risks that would arise, there was need to focus on adaptation. A recent JRC publication quantified coastal risks and showed that sea level rise and other extreme weather events would lead to increased risks, both in expected damage and losses. Risks were also quantified in economic terms. For instance, the EU suffered losses worth £217 million annually from heatwaves and these figures were expected to go up to £10 billion annually. Critical infrastructure would also be affected. Mr de Groeve also highlighted that risk was systemic and interconnected. For instance, if a port was destroyed, there would be knock-on effects on transport and employment systems. The JRC was looking at building resilience to capital, that is, natural, human, social and built capital.

Question and answer session

24. **UNCTAD** noted their participation at the COP 24 meetings in Katowice and highlighted that UNCTAD had been working in collaboration with JRC on issues of climate change impacts and adaptation for coastal transport infrastructure. UNCTAD had been conducting technical assistance projects with various island states on these issues.

25. **UNECE** stated that they had been working on disaster risk reductions and highlighted a recent publication on the transboundary impact of technological disasters. UNECE had also developed standards for business continuity and how to mainstream risk-based approaches in policymaking.

26. **Jamaica** appreciated FAO's presentation and stated that there was a gap in both knowledge and data. They recognized that for SIDS, the quantum and percentage of the economic losses were significant. In the case of Jamaica, hurricanes and droughts had cost the country an average of 2% of GDP between 2001-2012. This figure would grow to 56% of Jamaica's GDP by 2025 due to climate change. Jamaica was ready to collaborate with other international actors to better define the economic impacts of these disasters.

Session 2

27. **Robert Muir-Wood, Chief Research Officer, RMS** began his intervention by giving an overview of disaster risk modelling. Established 25 years ago, RMS created synthetic datasets used by insurers and reinsurers around the world to price, measure and monitor risks. These models

existed for risks including earthquakes, hurricanes and floods. The framework for developing risk models involved breaking risk down into sub-sets of hazards (such as extreme weather events), and examining the impact of each event at different locations on the ground. Researchers then identified exposure hazards and calculated damage. In calculating damages, they also factored in business downtime. By calculating the variable of business downtime, catastrophe risk modelling linked both to insurance and catastrophe modelling for supply chains. He explained the approaches to calculating risks through expected probability (which demonstrated risk through severity and frequency) and loss.

28. Exposure to recent critical events had provided a great deal of information on supply chain risks. In Thailand, large industrial estates had been built on flood plains, where land was both available and cheap. In 2011 flooding had taken these facilities off-line for between four to nine weeks. More than 7,000 industrial manufacturing plants had been affected. Many of these manufacturing plants were integrated into global value chains with significant disruptions to supply as a result.

29. Another example Mr Muir-Wood cited was that of a company that manufactured Xirallic paint. It was the sole manufacturer of a pearl-lustre pigment paint that made cars sparkle. The manufacturing plant for Xirallic had suffered damage during the March 2011 Japan Earthquake. Compounding the damage was the fact that the factory was situated in the initial radiation exclusive zone As such, the factory was inaccessible until radiation levels stabilized and people could safely access the site to repair the damage. The halt in production had had an impact on a wide range of manufacturers who relied on this paint, including big car manufacturing companies that had to cease temporarily the production of certain colours for cars due to this event. Production had resumed in May 2011 and the backlog was only cleared by September.

30. When developing a risk model for customers, RMS examined supply chains to identify risks and advised how to build in resilience. Based on where manufacturers were located, they were able to determine across a wide range of possible disaster scenarios what impacts would be felt and the critical drivers for the restoration of production at these facilities. Noting that it was impossible to get rid of risk completely, it was nevertheless possible to minimize the impacts of hazards on facilities and to reduce the time that facilities were off-line. Mr Muir-Wood emphasized the need for companies to incorporate risk. The economic cost associated with down-timing would help achieve such objectives, especially for supply chains.

31. **Michael Szoenyi, Programme Lead, Flood Resilience Program, Zurich Insurance Company** stated that every US$1 invested in resilience would return US$5 in economic benefits. A lot of investment had gone into response and recovery, but there was a need to shift the focus to ex-ante resilience building. A large proportion of the enabling infrastructure for trade and supply chains was not insured and would probably not be insured in the future. Supply chains and trade enablers like port infrastructure would not return to levels of economic activity registered prior to an extreme event. For example, before the 1995 earthquake, Kobe port had been the biggest port in Japan. After the earthquake hit, supply chains had been disrupted. Recovery had taken longer than expected and more than ten years later, levels of activity at the port had only reached 85% of 1995 levels.

32. One of the main challenges that Mr Szoenyi perceived was that risk management was viewed as an economic cost to business.Most companies failed to include into their cost calculations the full risk of a specific hazard. This oversight needed to be corrected in his view. He also emphasized the need to support risk-informed decision making in any kind of trade-enabling infrastructure.

33. In 2012, the Zurich Resilience Alliance had been created through a multi-sectoral collaboration. The program focused on practical bottom-up ways to work directly with communities at risk from floods, focusing on the most vulnerable and the most marginalized communities, both in developed and developing countries alike, to strengthen their resilience to flood risk. The Alliance had been created through social, political and financial investments in these communities. The program's success was attributed to partnerships with humanitarian agencies, academia and civil society as well as the private sector. The program had 225,000 beneficiaries. By establishing a resilience measurement framework, one million data points had been created in over 13 countries. The data generated translated into knowledge sharing about flood risk and resilience and was also conducted as part of the program's activities.

34. While hazards were natural, disasters were man-made in Mr Szoenyi's view. Zurich Insurance Company provided learning tools that would help communities understand why flooding events had grave consequences, the knock-on effects that were reported as unexpected or unprecedented and the unpredictability of such events. Zurich Insurance Company used two models to build a resilience building measurement framework known as the 5C-4R framework. The first model contained five elements of capital which built an axis on how to look at resilience. The second model used the four properties of a resilience system which came from engineering infrastructure systems, but could also be used in the social systems.

35. Investing ex-ante was difficult due to revenue impacts, budget constraints and political cycles. Ex-ante resilience measures included land zoning and building codes. In his view, there was a need for the insurance industry to go beyond simply selling insurance products and to start providing risk awareness and resilience services. He called on all Members to combine financial flows and risk informed development. He made the case for developing resilience bond instruments that could be traded in the financial markets.

36. There was a huge gap between the insured losses and uninsured losses, also known as the "protection gap". Under current assumptions of population growth, urbanization and climate change, there was a risk that floods and other natural hazards might become uninsurable. The insurance industry often focused on a classic "policy for premium" approach. However, once damage level exceeded the capacity of the sector to risk pool, then these hazards became uninsurable. As such, there was a need to explore a "non-traditional" role for insurance to make (residual) risk insurable by supporting disaster risk-reduction initiatives.

37. **Dr David Rogers, Meteorological Consultant, World Bank Group** focused his presentation on the Global Weather Enterprise (GWE). Forecasting weather was an important tool for early warning systems. Dr Rogers explained the change in approach that had occurred in meteorological forecasting towards an approach that sought to predict "what the weather would do", not "what it would be" at any given moment. This change in approach supported ex-ante action to prevent risks and to build resilience given that weather risks accounted for most economic damage. The GWE consisted of three important components: (1) the public sector which included national meteorological services; (2) the private sector, firms such as AccuWeather; and (3) academia, which played a crucial role in research and development.

38. Both the public and private sector agreed that their goal was to contribute towards sustainable economic growth and to contribute to the achievement of 10 of the 17 SDGs. To support these policy objectives, the GWE would have to grow tenfold in 10 years (from a US$50 billion industry to a US$500 billion industry) in order to meet the SDGs.

39. Significant investment had been made by the private sector in meteorological services. Scientific and technological innovation meant that the GWE was now able to provide information at a local level, enabling people to make risk-informed decisions. He expressed the need for people to embrace probabilistic information rather than deterministic solutions. In addition, as explained, significant international financing had been made towards national meteorological services, but this was not sufficient to meet global requirements.

40. Another issue raised by Dr Rogers was protectionism generated by perceived competition between the public and private sector in providing weather services. In some jurisdictions, weather observations by organizations other than the national meteorological service were illegal. Additionally, there was innovation in terms of the services that could be offered due to new data sets and improved data forecasting. Data was not always readily available to the private sector with governments limiting or preventing access altogether. Low and middle-income countries were missing out on services that could inform their disaster mitigation measures. Regulation of the GWE was still nascent. Provision of meteorological services by the private sector was outlawed in some countries. International service providers remained untaxed and thus did not contribute to revenue at the national level.

41. Investments in meteorological service provision were widely different when measured in terms of per capita of national population (from US$3.50 to US$0.25) and this contributed to the inability to act effectively in the face of natural disasters. Where major investments in meteorological services had been made, they often were not sustained. He urged WTO to examine guidance on the

rule making for GWE. Dr Rogers drew attention to a forthcoming GWE forum meetings. in April 2019 and encouraged WTO to engage in the deliberations.

Question and answer session

42. **UNEP** affirmed the need to adopt holistic approaches to risk. It was important to fully incorporate environment policies into risk approaches as part of resilience-building strategies and responses to natural disasters. The speaker also highlighted a joint publication authored by the WTO and UNEP which looked at how trade could create environmental sustainability and build resilience.

43. **Barbados** pointed out that lack of concessional financing prevented Small Vulnerable Economies (SVEs) and SIDS from investing in critical infrastructure. He expressed the need to address capacity gaps in SIDS and SVEs.

Session 3

44. **Michael Roberts, Head, Aid for Trade Unit, Development Division,** provided an overview of the topics arising from a preliminary scoping of issues arising from the on-going WTO research. He noted that the research work did not seek to define natural hazards. The research instead focused on specific hazards: geophysical and meteorological. In addition to discussing the trade effects of natural disasters, the research used a three-pronged approach that discussed trade issues arising in disaster response, recovery and resilience. He outlined the trade impacts of disasters (trade destruction, creation and diversion), how the efficiency of global production networks made them susceptible to events arising, and trade issues arising in response, recovery, resilience including. SPS, TBT, Trade Facilitation, waivers and other issues). He alerted Members to a conference that would take place in April 2019 at which the country research results would be presented.

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[i] **Disclaimer**: This is an informal report of the Symposium prepared by the WTO Secretariat. The opinions expressed are not intended to represent the positions or opinions of the WTO or its Members and are without prejudice to Members' rights and obligations under the WTO.