PUBLIC VERSION

Before the Panel established pursuant to Chapter 31 (Dispute Settlement) of the Treaty between the United States of America, United Mexican States and Canada (USMCA)

Mexico—Measures Concerning Genetically Engineered Corn

(MEX-USA-2023-31-01)

Written Responses from the United Mexican States
to questions from the Panel

15 July 2024

PUBLIC VERSION

CONTENT

I. QUESTIONS DISTRIBUTED BY THE PANEL ON THE FIRST DAY OF THE HEARING

1. Mexico hereby submits its comments to requests made by Panel Members as a follow-up to Mexico's responses during the Second Day of the Hearing, as well as some additional clarifications to Mexico's responses. This includes responses to specific queries from the Panelists. In addition, the intention of these written responses is to clarify and resolve any discrepancies and misunderstandings that arose in the English interpretations of Mexico's oral responses.[1]

A. [Question 2] Is there any GM corn consumed directly by humans in the US, Mexico and Canada, other than for industrial use such as corn syrup, corn starch?

2. As discussed below, GM corn grain is not generally consumed directly by humans in Mexico for the following reasons: (i) GM corn cultivation is currently not permitted in Mexico; (ii) Mexico is generally self-sufficient with respect to white corn used for direct human consumption; and (iii) while Mexico imports large volumes of corn, including GM corn, it is generally corn for other end uses, including yellow corn (or "field corn") that is not suitable for direct human consumption.

3. Mexico reiterates that Article 2 of the 2023 Decree distinguishes between "corn for human consumption" and "genetically modified corn for industrial use for human consumption". When Mexico refers to direct human consumption, it refers to the first category, *i.e.*, GM corn "intended for human consumption through nixtamalization or flour processing, which is carried out in the sector known as the dough and tortilla". In these products, the whole corn grain is consumed in unprocessed or minimally processed forms. The End-Use Limitation applies only to the category of "corn for human consumption".

4. In Mexico, domestic production of white corn (non-GM hybrid and native) generally covers the demand for corn intended for direct human consumption. It mainly includes white corn

[1] For clarity, with respect to follow-up questions 1 and 8 discussed during the First Day of the Hearing, Mexico has no additional comments. With respect to question 25, Mexico reiterates its support in the event that the Panel decides to seek expert advice, as it indicated during the Hearing and as has been offered on several occasions to the United States.

produced for self-consumption by the communities that grow it and for the masa and tortilla industry. Therefore, Mexico is generally self-sufficient in white corn, using all that it produces for direct human consumption in the form of traditional, everyday staple foods. As Mexico has explained in its written submissions, this domestic supply of "subsistence" white corn does not include GM corn because the cultivation of GM corn is not permitted in Mexico. In contrast, Mexico relies on imports of corn for other end uses, including use in industrial chemical processing and consumer products (*e.g.*, biofuels, cosmetics), use in industrial food processing (*e.g.*, corn syrup and corn starch), and use in animal feed. Despite this, Mexico has presented evidence of the presence of transgenes in products of the masa and tortilla industry.[2]

B. [Question 4] Is there any type of Consumer Information in place/envisaged for GM/non-GM corn for human consumption?

5. For the benefit of the Panel, Mexico identifies with greater precision the legal instruments that were pointed out by Mexico during the second day of the Hearing and their legal status.

Legal instrument	Date of issue	Status/ Content
NOM-001-SAG/BIO-2014	30/12/2024	This regulation is focused on providing general labeling specifications for GMOs that are seeds or vegetative material intended for planting, cultivation and agricultural production. The recitals of the standard state that the labeling of GMOs that are seeds or propagative plant material will enable the Federal Government to contribute to avoid deviations of use; facilitate the implementation of monitoring plans through the traceability of GMOs when any direct, indirect, immediate, delayed or unforeseen effect that may be produced in plant health by activities with genetically modified organisms is detected and identified; identify through exclusive alphanumeric codes the genetic transformation; establish records with information on GMOs.

[2] Mexico's Rebuttal Submission, ¶¶ 283, 285, 300, 406, 531.

		In simple terms, the NOM requires that seeds or vegetative material intended for sowing, cultivation and agricultural production must contain a label that states "GM seed" or "GM propagating vegetative material", as well as that "this seed is not intended for consumption". This information does not reach consumers.
NOM-187-SSA1/SE-2023 Project	Project	The draft regulation is intended to establish, among other things, the commercial information to be complied with by products made from nixtamalized corn - masa, flour, tortillas, tostadas and other products derived from masa, as well as the sanitary provisions to be complied with by the establishments where they are processed. The standard and its operation are currently under internal analysis, so there is no clarity as of today regarding its issuance and scope.
General Law of Adequate and Sustainable Food	17/04/2024	Article 21 of this Law establishes that "producers and distributors of processed foods must warn [...] when their products contain ingredients that directly derive from the use of genetically modified organisms".

C. [Question 6] With respect to the Gradual Substitution measure, Mexico says on page 8 of its Opening remarks that "there is no regulatory or administrative mechanism capable of beginning to carry out a 'gradual substitution', and none is possible in the foreseeable future." If the latter is correct – if there really is no plan for acting on these provisions – then what was the purpose of including Articles 7 and 8 in the 2023 Decree?

6. Mexico's statement that "no regulatory or administrative mechanism capable of beginning to carry out a 'gradual substitution' … is possible in the foreseeable future" simply acknowledges, as a practical reality, that (*i*) there are many steps that must be completed to develop and implement such a mechanism, (*ii*) the process will require significant time and resources, and (*iii*) no steps have been taken yet. This does not mean that "there really is no plan for acting on these provisions",

as suggested in the question. While there are no schedules, deadlines, or other timing requirements, this does not mean that there is no intention "for acting on" the provisions in Articles 7 and 8.

7. In this regard, Mexico reiterates that Article 7 requires the competent authorities in Mexico to "carry out the *appropriate* actions in order to conduct the gradual substitution of genetically modified corn". These "appropriate actions" are disciplined by the conditions and requirements set out in Article 8, which require that "[t]he relevant scientific studies will be carried out" and that the implementation of the "gradual substitution" "shall be carried out based on supply sufficiency criteria, consistent with the country's food self-sufficiency policies, in accordance with scientific principles and relevant international standards, guidelines or recommendations". As Mexico explained during the Hearing, Articles 7 and 8 must be read together, jointly, rather than in isolation.[3] No "gradual substitution" measure can be implemented unless it complies with the conditions and requirements outlined above.

8. The purpose of these provisions in the 2023 Decree is to provide directions to the competent authorities in Mexico, instructing them to take the steps necessary to develop and implement a future measure. How and when the competent authorities will develop and carry out the "appropriate actions" in accordance with these instructions remains to be seen. As Mexico explained in its written submissions, the scope and structure of the future "gradual substitution" measure(s), including the mechanisms, conditions, and exceptions that would be applied and the products that would be covered, are all currently unknown. The instructions afford broad discretion to the competent authorities in this regard, allowing them to determine how and when to proceed.

9. It must be emphasized that the instructions call upon the competent authorities to carry out ***only*** actions that are "appropriate" and "in accordance with scientific principles and relevant international standards, guidelines or recommendations". Further, such actions must be "based on supply sufficiency criteria, consistent with the country's food self-sufficiency policies", meaning that feasibility in relation to the sufficiency of supply is a key factor.

10. It is only once all of the conditions and requirements set forth in Articles 7 and 8 are met that the "appropriate actions" may be carried out to implement and conduct a gradual substitution.

[3] Hearing MEX-USA-2023-31A (27-06-24), Spanish transcript, p. 20.

These provisions neither require nor authorize the competent authorities to carry out actions or to implement a gradual substitution in circumstances where the conditions and requirements have not been met. Carrying out an action that is not "appropriate", such as an action that is not "in accordance with scientific principles", would be non-compliant with the instructions in Articles 7 and 8. This includes, for example, any action that would be inconsistent with the outcomes of the "relevant scientific studies" required under Article 8.

11. Given that Articles 7 and 8 do not impose any time requirements, non-compliance within the meaning of Article 10 does not arise merely because the competent authorities have not yet started to take the steps set forth in these provisions. Rather, for the competent authorities, the risk of non-compliance arises from the possibility of taking actions that are not "appropriate" because, for example, they are contrary to supply sufficiency criteria or food self-sufficiency policies, or because they do not accord with scientific principles or the outcomes of the relevant scientific studies.

12. During the Hearing, Ms. Kalicki asked if the current wording of Article 7 prejudges the outcome of the relevant scientific studies required in Article 8.[4] Mexico understands that Ms. Kalicki is asking whether Article 7 simply mandates a gradual substitution to be conducted on the presumption that a scientific basis exists, regardless of the requirement to conduct the "relevant scientific studies" in Article 8 or the actual outcomes of those studies.

13. Similarly, Mr. Perezcano asked for clarification on whether Article 7 is an instruction to carry out the necessary actions to achieve "not … gradual substitution, but … total substitution gradually, which is different, total substitution done gradually"; "that is, an instruction to achieve total substitution gradually as circumstances permit and supply and demand concerns, etc., as all those things allow it".[5]

[4] Hearing MEX-USA-2023-31A (27-06-24), Spanish transcript, pp. 18-19.

[5] Hearing MEX-USA-2023-31A (27-06-24), Spanish transcript, p. 21.

14. As Mexico explained in response to Ms. Kalicki's question, Articles 7 and 8 in no way establish a predetermined result.[6] They do not dictate that implementation of a "gradual substitution" measure is inevitable. Similarly, they do not require that such a measure must be "total" or unconditional in scope. To the contrary, these provisions explicitly condition the actions to be taken and the implementation of a "gradual substitution" measure on the specific requirements outlined above. The competent authorities have broad discretion to determine how to comply with these requirements, including in relation to the outcomes of the relevant scientific studies, scientific principles and the relevant international standards, and in developing the scope, design, and structure of a future measure, and the mechanisms, conditions, and exceptions that would be applied. Again, all of this remains in the future.[7]

15. Mr. Perezcano also asked about the application of Article 10, observing that Article 7 provides "instructions aim to achieve a gradual total substitution", and "Article 10 imposes penalties for administrative obligations if the relevant authorities fail to comply with the instructions".[8] In this regard, he asked whether "not starting the risk assessment or the preparatory work for the scientific investigation, to be able to weigh and see what the measures are" "would in some way … open the door to the responsibilities of Article 10??"[9]

16. As Mexico explained in response, non-compliance with Articles 7 or 8 does not arise merely because the competent authorities in Mexico have not yet initiated the "relevant scientific studies" or taken other steps to develop the "appropriate actions". Time requirements have been completely removed from the instructions in Articles 7 and 8, and this provides the competent authorities with broad discretion to determine how and when to proceed. Thus, it cannot be said

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[6] Hearing MEX-USA-2023-31A (27-06-24), Spanish transcript, pp. 18, 22 ("Appropriate actions will only be implemented when the criteria specified in Article 8 are met. Therefore, the instruction is not a predetermined directive for the authorities to establish the gradual substitution as a measure."), and 25 ("Let us remember that this is an instruction for the authorities to carry out the scientific studies and, I repeat, it does not predetermine the outcome nor does it bind the outcome.").

[7] Hearing MEX-USA-2023-31A (27-06-24), Spanish transcript, p. 21 ("I want to make it very clear that there is nothing tangible or determined at this stage; it is just an instruction directed at the agencies, and it is a future action that has not yet been materialized").

[8] Hearing MEX-USA-2023-31A (27-06-24), Spanish transcript, p. 22.

[9] Hearing MEX-USA-2023-31A (27-06-24), Spanish transcript, p. 24.

that there has been any "non-compliance with the provisions of this Decree" within the meaning of Article 10. As noted above, risk of non-compliance with the instructions in Articles 7 and 8 would arise from actions that are not "appropriate" because, for example, they are contrary to supply sufficiency criteria or food self-sufficiency policies, or because they do not accord with scientific principles or the outcomes of the relevant scientific studies.

17. Finally, Mexico recalls that the United States and Canada requested technical consultations under the USMCA less than one month after the publication of the Decree 2023 on February 13, 2023.[10] Subsequently, consultations were held in June 2023 as a preliminary phase of the current dispute settlement procedure.[11] It is reasonable for the Mexican authorities to await the outcome of this dispute before planning next steps in relation to Articles 7 and 8.

D. [Question 7] Since the 2023 Decree has been handed down, what actions are "the agencies and entities" carrying out "in order to conduct the gradual substitution" or the additional "relevant scientific studies" referenced in Article 8? Can Mexico confirm what it stated today, that any actions to implement Article 7 were "conditional" on first completing a risk assessment? Does Article 7 of the 2023 Decree essentially prejudge the outcome of the risk assessment that is yet to come, by concluding that substitution eventually will be called for? If the risk assessment suggests that substitution is not warranted, would a further Presidential Decree be required to undo Article 7?

18. As the Panel observed during the Hearing, the discussion of the issues under questions 6 and 7 were merged.[12] Mexico therefore incorporates its written follow-up response to question 6, above, into this response to question 7, all of which is relevant to the specific issues addressed in this question.

19. Mexico confirms that, in order for any future "gradual substitution" measure to comply with the instructions in the 2023 Decree, the conditions and requirements in Articles 7 and 8 must be met, including, *inter alia*, that the "relevant scientific studies will be carried out" and that, in

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10 See US Initial Written Submission, ¶ 62.

11 See US Initial Written Submission, ¶ 63.

12 Hearing MEX-USA-2023-31A (27-06-24), Spanish transcript, p. 24 ("We are combining questions 6 and 7 which is fine because they were very much related questions").

this context, COFEPRIS will coordinate an assessment of "possible damages to health" arising from "the consumption of genetically modified corn". In Mexico's view, implementing a "gradual substitution" measure under Articles 7 and 8 in circumstances where these conditions and requirements have not been satisfied would result in non-compliance with the instructions.[13] As Mr. Häberli accurately summarized, "no substitutions without science, and no penalties without science".[14]

20. Similarly, for the reasons discussed above in Mexico's written response to question 6, the instructions in Article 7 do not "essentially prejudge the outcome of the risk assessment that is yet to come, by concluding that substitution eventually will be called for". Carrying out an action that is not "appropriate", such as an action that is not "in accordance with scientific principles", would be non-compliant with the instructions in Articles 7 and 8. This includes, for example, any action that would be inconsistent with the outcomes of the relevant scientific studies required under Article 8. While the wording in Article 7 is forcefully drafted, it does not and cannot predetermine the outcomes of the relevant scientific studies required under Article 8. Moreover, interpreted in its proper context, the instructions in Article 7 cannot render the conditions and requirements in Article 8 superfluous or inutile.

21. To the extent that the relevant scientific studies, including the coordinated assessment of possible damages to health, were to establish that substitution of GM corn with non-GM alternatives is not warranted for animal feed and/or industrial food processing, a "gradual substitution" measure could not be implemented in compliance with Articles 7 and 8. It could not be implemented, for example, "in accordance with scientific principles". Under these circumstances, carrying out actions in order to conduct a "gradual substitution" would not be "appropriate" within the meaning of Article 7 in its context, including Article 8. This situation

[13] Hearing MEX-USA-2023-31A (27-06-24), Spanish transcript, pp. 23-24 ("requirements established in Article 8, which among these requirements is precisely to carry out scientific studies and evaluate these scientific studies, are not met or if, for example, another requirement is not met, such as that the principle of sufficiency of supply be observed, then the measure would not be established because, precisely, the criteria of Article 8 would not be met").

[14] Hearing MEX-USA-2023-31A (27-06-24), Spanish transcript, p. 27.

would effectively discharge the instructions under Articles 7 and 8. The competent authorities in Mexico would not be required, without more, to take further actions.[15] However, as Mexico explained during the public hearing, we cannot speculate at this point on the results of the relevant scientific studies or what further executive orders might be made in the future.[16] In simple terms, the result is unknown.

22. Finally, Mexico considers that the foregoing is reflected in the 2023 Decree, which explains that "the alternatives for the aforementioned gradual substitution must be carried out based on criteria of supply sufficiency, in accordance with the country's food self-sufficiency policies, scientific principles and relevant international standards, guidelines or recommendations, it is convenient to eliminate the transition date indicated above, and that the Federal Commission for the Protection Against Sanitary Risks integrates a joint research protocol with the equivalent agencies in other countries, to carry out a study on the consumption of genetically modified corn and the possible damages to health".[17]

E. [Question 9] Mexico contends that there is an "indissoluble" relationship between glyphosate and GM corn. Does Mexico contend that all GM corn offered for export to Mexico has been treated with glyphosate, such that residues of that treatment may remain?

23. The risk assessment shows that 90% of the GM corn authorizations are herbicide tolerant and insect resistant, which are the HT and BT varieties. And of the HT varieties or crops, 94% are tolerant to the herbicide glyphosate and glufosinate.[18]

24. Mexico does not contend that all GM corn offered for export to Mexico has necessarily been treated with glyphosate. However, it is a fact that the vast majority of GM corn has been

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15 Hearing MEX-USA-2023-31A (27-06-24), Spanish transcript, pp. 23-24 ("It would not comply with the requirements established by Article 8 and, therefore, it would not be carried out, it would not establish any conducive action and it would not be necessary to publish another decree to establish this". … "Let me add on to what my colleague explained, those requirements and conditions would not be met. So, there would be no further action to be taken").

16 Hearing MEX-USA-2023-31A (27-06-24), Spanish transcript, pp. 25-26.

17 2023 Decree, Second-Last Preambular Recital.

18 Mexico's Rebuttal Submission, ¶ 43.

treated with glyphosate-based herbicide formulations and/or one or more other pesticides. Frequently, "stacked" GM varieties are treated with several different pesticides in combination during the growing cycle. As Professor Antoniou explains in paragraph 25 of his report, "US corn typically contains genes for tolerance to up to 4 different herbicides".[19]

25. As Mexico has explained in its submissions, Mexico's End Use Limitation addresses the full range of risks that arise in connection with the direct consumption of GM corn grain, including ingestion of transgenic insecticidal toxins, pesticide-resistant GM enzymes, other GM materials, and residues from the concentrated pesticides used in the cultivation of GM corn (including, but not limited to, systemic glyphosate). It is important to note that these types of contaminants and toxins are present in all GM corn kernels.

26. Attempting to assess and manage the individual risks posed to human health based on each individual GM corn event would not address the risks to human health in Mexico in a meaningful or effective manner. In the real world, such risks do not exist in isolation. Rather, they aggregate and accumulate in the corn grain market and in people's diets. In other words, these risks would not arise in the marketplace or in people's diets as isolated, event-by-event risks.

27. For example, GM corn grain that would be consumed directly by people in Mexico would not be consumed on an event-by-event basis. A tortilla made from nixtamalized masa produced with GM corn grain would contain an unknown combination of different varieties of GM corn. As such, it would contain unknown total amounts and combinations of transgenic proteins and pesticide residues. The risk to human health arising under these conditions would be multiplied by the large amount of tortillas and similar foods consumed each day over the long term. As Mexico explained in its submissions, the End-Use Limitation eliminates the human health risks arising from the direct consumption of GM corn kernels, thus achieving the adequate level of protection determined by Mexico.

28. As Professor Antoniou explains in paragraph 158 of his report: "For regulatory purposes, pesticide active ingredients are tested individually for safety. However, in real life, people are

[19] Expert Report Dr. Antoniou, ¶ 25.

exposed to a mixture of different pesticides. Studies show that such mixtures can be toxic even when each individual pesticide is present at a level that regulators deem safe to ingest".[20]

29. The only effective and practical way to manage and administer these risks in Mexico's unique circumstances is to limit the use of GM corn for direct human consumption. Moreover, as Mexico explains at paragraphs 280-286 of its Rebuttal Submission, this approach involves a very low degree of trade restrictiveness, if any, under the circumstances.

30. Also, Mexico provides the Panel with a list of studies that analyze the negative effects of GM corn on human health other than those associated solely with the ingestion of glyphosate residues:

- Linn, M.D., Moore, P.A. (2014) The Effects of Bt Corn on Rusty Crayfish (Orconectes Rusticus) Growth and Survival. Arch Environ Contam Toxicol, **MEX-115**.
- Bernstein IL, Bernstein JA, Miller M, Tierzieva S, Bernstein DI, Lummus Z, Selgrade MK, Doerfler DL, Seligy VL. "*Immune responses in farm workers after exposure to Bacillus thuringiensis pesticides. Environ Health Perspect*", 1999, **MEX-118**.
- Robinson, C., Antoniou, M., y Fagan, J. (2015). "*GMO Myths and Truths: A Citizen's Guide to the Evidence on the Safety and Efficacy of Genetically Modified Crops and Foods*", Chelsea Green Publishing, **MEX-119**.
- Vázquez RI, Moreno-Fierros L, Neri-Bazán L, De La Riva GA, López-Revilla R. *Bacillus thuringiensis Cry1Ac protoxin is a potent systemic and mucosal adjuvant*. Scand J Immunol. 1999, **MEX-120**.
- Jarillo-Luna A, Moreno-Fierros L, Campos-Rodríguez R, Rodríguez-Monroy MA, Lara-Padilla E, Rojas-Hernández S. *Intranasal immunization with Naegleria fowleri lysates and Cry1Ac induces metaplasia in the olfactory epithelium and increases IgA secretion*. Parasite Immunol. 2008. **MEX-121**.
- Shaban NZ, Helmy MH, El-Kersh MA, Mahmoud BF. *Effects of Bacillus thuringiensis toxin on hepatic lipid peroxidation and free-radical scavengers in rats given alpha-tocopherol or acetylsalicylate*. Comp Biochem Physiol C Toxicol Pharmacol. 2003. **MEX-122**.
- De Vendômois JS, Roullier F, Cellier D, Séralini GE. *A comparison of the effects of three GM corn varieties on mammalian health*. Int J Biol Sci. 2009**. MEX-127**.
- Kiliçgün, H., C. Gürsul, M. Sunar & G. Gökşen. (2013). *The Comparative Effects of Genetically Modified Maize and Conventional Maize on Rats*. J Clin Anal Med. **MEX-130**.

[20] Expert Report Dr. Antoniou, ¶ 158.

- Sagstad A, Sanden M, Haugland O, Hansen AC, Olsvik PA, Hemre GI. *Evaluation of stress- and immune-response biomarkers in Atlantic salmon, Salmo salar L., fed different levels of genetically modified maize (Bt maize), compared with its near-isogenic parental line and a commercial suprex maize*. J Fish Dis. 2007. **MEX-133**.
- Gu J, Krogdahl Å, Sissener NH, Kortner TM, Gelencser E, Hemre GI, Bakke AM. *Effects of oral Bt-maize (MON810) exposure on growth and health parameters in normal and sensitised Atlantic salmon, Salmo salar L*. Br J Nutr. 2013. **MEX-134**.
- Walsh MC, Buzoianu SG, Gardiner GE, Rea MC, Ross RP, Cassidy JP, Lawlor PG. *Effects of short-term feeding of Bt MON810 maize on growth performance, organ morphology and function in pigs*. Br J Nutr. 2012. **MEX-136**.
- Glöckner, G. & G-É. Séralini. (2016). *Pathology reports on the first cows fed with Bt176 maize* (1997–2002). Scholarly J. Agric. Sci. **MEX-138**.
- Mesnage R, Clair E, Gress S, Then C, Székács A, Séralini GE. *Cytotoxicity on human cells of Cry1Ab and Cry1Ac Bt insecticidal toxins alone or with a glyphosate-based herbicide*. J Appl Toxicol. 2013. **MEX-139**.
- Monica Andreassen, Elena Rocca, Thomas Bøhn, Odd-Gunnar Wikmark, Johnnie van den Berg, Martinus Løvik, Terje Traavik & Unni Cecilie Nygaard (2015) *Humoral and cellular immune responses in mice after airway administration of Bacillus thuringiensis Cry1Ab and MON810 cry1Ab-transgenic maize*, Food and Agricultural Immunology. **MEX-140.**
- Herrero, M., E. Ibañez, P. J. Martín-Álvarez and A. Cifuentes (2007). "Analysis of Chiral Amino Acids in Conventional and Transgenic Maize" *Anal. Chem* 79. **MEX-143.**
- Amerio, P., Motta, A., Toto, P., Pour, S.M., Pajand, R., Feliciani, C. and Tulli, A. (2004) *Skin toxicity from glyphosate-surfactant formulation*. J Toxicol Clin Toxicol. **MEX-202**.
- Bernstein JA, Bernstein IL, Bucchini L, Goldman LR, Hamilton RG, Lehrer S, Rubin C, Sampson HA. *Clinical and laboratory investigation of allergy to genetically modified foods*. Environ Health Perspect. 2003. **MEX-221.**
- Then, C. and Bauer-Panskus, A., "*Possible health impacts of Bt toxins and residues from spraying with complementary herbicides in genetically engineered soybeans and risk assessment as performed by the European Food Safety Authority EFSA*", 2017. **MEX-287.**

F. [Question 10] Is the determination of an ALOP entirely a subjective exercise by the Member (in the sense that it can "deem appropriate" any level of protection it wishes, in the language of Annex A.5 of the SPS Agreement), or is there also some requirement of objective reasonableness? Is there any limit to what a Member may unilaterally "deem appropriate" - and any role for a Panel other than determining what a Member itself has so "deemed"? Please refer to relevant jurisprudence and literature on record regarding the discretionary nature of ALOP.

31. The determination of an ALOP is an entirely subjective exercise. A WTO Member or USMCA Party may determine any level of protection that it considers to be appropriate or

"adequate" under the circumstances. There is no additional requirement for "objective reasonableness".

32. In *Australia – Salmon*, the Appellate Body explained as follows:

> We do not believe that Article 11 of the DSU, or any other provision of the DSU or the SPS Agreement, authorizes the Panel or the Appellate Body, to replace [...] Australia's consistently stated reasoning on the level of protection at issue with its own reasoning in this regard. The determination of the appropriate level of protection, [...], is the prerogative of that Member and not of a panel or the Appellate Body.[21]

33. As further explained by the Appellate Body in *India – Agricultural Products*: "In principle, the determination of the appropriate level of protection is the prerogative of the Member [concerned] and not of a panel or the Appellate Body".[22] The Appellate Body also determined that, "in the event that a Member fails to determine its ALOP, or fails to do so with sufficient precision, panels may establish the ALOP on the basis of the level of protection reflecting the SPS measure actually applied".[23]

34. It is therefore clear that the determination of the ALOP for an SPS measure is the prerogative of the WTO Member or USMCA Party applying the measure. A panel cannot substitute its own reasoning on what constitutes the appropriate level of protection in the circumstances. Mexico considers these points in paragraphs 336-338 of its Initial Written Submission.

35. Although there is no requirement of "objective reasonableness", a Party's ALOP is effectively disciplined by compliance with the requirements in Article 9.6 of the USMCA and the provisions of the SPS Agreement. For example, in *EC – Hormones*, the Appellate Body considered that Article 5.1 (which is equivalent to the second part of Article 9.6.3 of the T-MEC) "was intended as a countervailing factor in respect of the right of Members to set their appropriate level of protection". It further explained that the "requirements of a risk assessment under Article 5.1, as well as of 'sufficient scientific evidence' under Article 2.2, are essential for the maintenance of

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21 Appellate Body Report, *Australia – Salmon*, ¶ 199, **MEX-292**.

22 Appellate Body Report, *India – Agricultural Products*, ¶ 5.205, **MEX-290**.

23 Appellate Body Report, *India – Agricultural Products*, ¶ 5.205, **MEX-290**.

the delicate and carefully negotiated balance in the SPS Agreement between the shared, but sometimes competing, interests of promoting international trade and of protecting the life and health of human beings".[24] As Mexico has explained, the Risk Assessment at issue in this dispute meets these criteria.

36. A useful example is found in the *Australia – Salmon* case. The Appellate Body described Australia's determination of its ALOP as follows: "Australia expressly determined that its appropriate level of protection with respect to ocean-caught Pacific salmon is 'a high or "very conservative" level of health protection aimed at reducing risk to "very low levels", 'albeit not based on the zero risk approach'".[25] In this regard, the Appellate Body found that "Australia has determined its appropriate level of protection, and has done so with sufficient precision".[26]

37. According to this criterion, the ALOPs determined by Mexico in relation to the SPS purposes of the End-Use Limitation in Article 6.2 of the 2023 Decree meet the standard of "sufficient precision" to allow the application of the relevant provisions of Article 9.6 of the T-MEC.

G. [Question 11] What conclusions should the Panel draw from the fact that the 2020 Decree did refer directly to the precautionary principle while the 2023 Decree does not? To the extent that Mexico relies on the precautionary principle for either Measure, what factual findings would the Panel first need to make regarding (a) the sufficiency of scientific evidence, (b) the conduct of a risk assessment based on the evidence thus far on the case record, (c) the timeframe for those studies, and (d) the reasonableness or adequacy of such risk assessment? Please refer, inter alia, to Article 9.6.5 of the USMCA.

38. As discussed below, the precautionary principle played an important role in the 2020 Decree, and it has continued to play an important role in the 2023 Decree. To be clear, Mexico's position is not that the precautionary principle is capable of overriding the obligations under Chapter 9 of the USMCA or the SPS Agreement. Similarly, Mexico does not argue that the

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24 Appellate Body Report, *EC – Hormones*, ¶ 177**, MEX-286**.

25 Appellate Body Report, *Australia – Salmon*, ¶¶ 158 and 197, **MEX-292**.

26 Appellate Body Report, *Australia – Salmon*, ¶ 207, **MEX-292**.

precautionary principle would justify an inconsistency with those obligations.[27] However, in Mexico's view, nothing prevents a USMCA Party or a WTO Member from relying on the precautionary principle in selecting and applying an SPS measure, provided that it does so in a manner that is also consistent with the relevant WTO and USMCA obligations.

39. Thus, Mexico views the precautionary principle as complimentary and compatible with the obligations in Chapter 9 of the USMCA and the SPS Agreement. In this regard, Mexico recalls that the Appellate Body has considered that the precautionary principle is reflected in the SPS Agreement, particularly in the sixth preambular recital, Article 3.3, and Article 5.7.[28] Mexico elaborates on the relevance of this relationship below.

1. *The precautionary principle continues to play an important role in the 2023 Decree*

40. With respect to the first element of the Panel's question, the 2020 Decree was the predecessor to the 2023 Decree. As Mexico has explained, the 2023 Decree evolved from consultations between Mexico and the United States concerning the 2020 Decree. The 2023 Decree introduced changes that addressed the concerns raised by the United States. Mexico revised the measures to be more narrowly focused on the specific risks to human health and native corn established in the Risk Assessment (including Conahcyt's "Scientific Record on Glyphosate and GM Crops" and Cibiogem's collection of relevant studies in the National Biosafety Information System (SNIB)) and less trade restrictive. However, the Preamble of the 2023 Decree clearly demonstrates how it is based upon the measures initially established in the 2020 Decree.

41. As the Panel has observed, the 2020 Decree included an explicit reference to the precautionary principle, while the 2023 Decree did not. Nonetheless, Mexico considers that the

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[27] As Mexico acknowledged in its Initial Written Submission, the Appellate Body in *EC – Hormones* found that the precautionary principle "has not been written into the SPS Agreement as a ground for justifying SPS measures that are otherwise inconsistent with the obligations of Members set out in particular provisions of that Agreement", and that the "the precautionary principle does not, by itself, and without a clear textual directive to that effect, relieve a panel from the duty of applying the normal (i.e. customary international law) principles of treaty interpretation in reading the provisions of the SPS Agreement." Mexico's Initial Written Submission, footnote 389 to ¶ 355, citing Appellate Body Report, *EC – Hormones*, ¶ 124**, MEX-286**.

[28] Mexico's Initial Written Submission, ¶¶ 355, 368; Mexico's Rebuttal Submission, ¶¶ 253, 277, 385, 411.

precautionary principle has carried on in the 2023 Decree and continues to play an important role in the measures at issue.

42. The explicit reference reflects the initial nature of the measures set out in the 2020 Decree. The scope of Article 6, which was the predecessor to Articles 6, 7, and 8 in the 2023 Decree, was much broader. It set forth a general limitation on the use of GM corn grain in all human food in Mexico. This limitation covered not only the use of GM corn grain for direct human consumption in tortilla and other foods made with nixtamalized masa, but also use of GM corn in industrial food production. Specifically, it provided that "las autoridades en materia de bioseguridad … revocarán y se abstendrán de otorgar autorizaciones para el uso de grano de maíz genéticamente modificado en la alimentación de las mexicanas y los mexicanos, hasta sustituirlo totalmente en una fecha que no podrá ser posterior al 31 de enero de 2024".

43. Although the Preamble of the 2023 Decree did not include an explicit reference to the precautionary principle, it is clear that Articles 6, 7, and 8 were derived from the initial provisions in Article 6 of the 2020 Decree. These provisions were derived from a common origin in the precautionary principle and the evidence of the risks of harmful effects arising from the consumption of GM corn grain "en la alimentación de las mexicanas y los mexicanos". The 2023 Decree reflected the clear scientific evidence from reputable independent sources of the health risks related to the ingestion of pesticide residues and transgenic proteins in the *direct* consumption of GM corn grain, as well as the transgenic contamination of native corn in Mexico.

44. In Mexico's view, there are therefore no conclusions to be drawn from the absence of an explicit reference to the precautionary principle in the 2023 Decree. Mexico confirms that the precautionary principle has played an important role in the origins and evolution of the measures at issue in the 2023 Decree, although not to the exclusion or detriment of Mexico's USMCA and WTO obligations.

2. *Evaluation of the scientific evidence and risk assessment*

45. With respect to the second element of the Panel's question, the Panel asks what factual findings it would need to make regarding the sufficiency of the scientific evidence, and the

conduct, timeframe, reasonableness, and adequacy of the risk assessment in circumstances where Mexico has relied on the precautionary principle.

46. As noted above, the WTO Appellate Body considered the relationship of the precautionary principle to the SPS Agreement in paragraph 124 of its report in *EC - Hormones* (**MEX-286**). It found that the precautionary principle is "reflected in Article 5.7 of the SPS Agreement", which is equivalent to Article 9.6.5 of the USMCA. Mexico considered this point in its Initial Written Submission at paragraphs 355-356.

47. In this regard, Mexico recalls that the "Gradual Substitution" instructions in Articles 7 and 8 of the 2023 Decree, and the relevant context provided in the second-last preambular recital,[29] reflect the consideration that further information is needed to assess the extent to which the risks of consuming GM corn grain affect the consumption of processed food and animal products made using GM corn grain.[30] For this reason, the instructions require that a future "gradual substitution" instruction may only be implemented "in accordance with scientific principles", etc., and that the "relevant scientific studies will be carried out", including an assessment of "possible damage to health" arising from "the consumption of genetically modified corn". As the second-last recital in the preamble confirms, all timing requirements were withdrawn in the 2023 Decree to allow the competent authorities in Mexico to address these conditions and requirements. As Mexico has explained, this is broadly in line with the requirements contained in Article 9.6.5 of the TMEC, including the requirement to "seek to obtain the additional information necessary for a more objective assessment of risk", and to "complete the risk assessment after obtaining the requisite information".

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[29] "That, since the alternatives for the aforementioned gradual substitution must be carried out based on criteria of sufficiency in supply, in congruence with the country's food self-sufficiency policies, in accordance with scientific principles and relevant international standards, guidelines or recommendations, it is advisable to eliminate the transition date indicated above, and that the Federal Commission for the Protection against Sanitary Risks integrate a joint research protocol with equivalent bodies in other countries, to carry out a study on the consumption of genetically modified corn and the possible damage to the health".

[30] Mexico's Initial Written Submission, ¶¶ 331-332, 345, 357-359, 455; Mexico's Rebuttal Submission, ¶¶ 254-256.

48. However, the Appellate Body also considered that "there is no need to assume that Article 5.7 exhausts the relevance of a precautionary principle" and that "[i]t is reflected also in the sixth paragraph of the preamble and in Article 3.3."[31] The Appellate Body explained that a Panel "concerned with determining whether there are 'sufficient scientific terms' to justify a Member maintaining a certain sanitary or phytosanitary measure can, of course, and should, bear in mind that responsible and representative governments generally act from a perspective of prudence and precaution when it comes to risks of irreversible damage, e.g. termination of life, to human health".[32]

49. Similarly, in *EC – Approval and Marketing of Biotech Products*, the panel considered that a WTO Member following a precautionary approach may be justified in applying an SPS measure, notwithstanding uncertainty or constraints in the risk assessment, and even though another Member may decide not to take similar action to address the same risk. The panel explained as follows:

> We would agree that the fact that a Member has decided to follow a precautionary approach could have a bearing on a panel's assessment of whether an SPS measure is "based on" a risk assessment as required by Article 5.1. … [T]here may conceivably be cases where a Member which follows a precautionary approach, and which confronts a risk assessment that identifies uncertainties or constraints, would be justified in applying (i) an SPS measure even though another Member might not decide to apply any SPS measure on the basis of the same risk assessment, or (ii) an SPS measure which is stricter than the SPS measure applied by another Member to address the same risk. However, even if a Member follows a precautionary approach, its SPS measures need to be "based on" (i.e., "sufficiently warranted" or "reasonably supported" by) a risk assessment. Or, to put it another way, such an approach needs to be applied in a manner consistent with the requirements of Article 5.1.[33]

50. Article 5.1 of the SPS Agreement is equivalent to the second sentence of Article 9.6.3 of the T-MEC, which states that: "If a sanitary or phytosanitary measure is not based on relevant international standards, guidelines or recommendations, or if there are no relevant international standards, guidelines or recommendations, the Party shall ensure that its sanitary or phytosanitary

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31 Appellate Body Report, *EC – Hormones*, ¶ 124**, MEX-286**.

32 Ibid.

33 Panel Report, *EC – Approval and Marketing of Biotech Products*, ¶ 7.3065, **MEX-277**.

measure is based on an assessment, appropriate in the circumstances, of the risk to human, animal or plant life or health". In *US – Continued Suspension*, the Appellate Body considered that the phrase "appropriate to the circumstances" "suggests that the scientific research involved in a risk assessment must take due account of the particular methodological difficulties posed by the nature and characteristics of the substance and the particular risk being assessed".[34]

51. Also relevant is Article 9.6.8(a) of the T-MEC, which reflects Article 5.2, providing that each Party shall "ensure that each risk assessment it conducts is appropriate to the circumstances of the risk to human, animal or plant life or health, and that it takes into account the relevant available scientific evidence, including quantitative and qualitative information and data".

52. With respect to the scientific evidence on which the risk assessment is based, the Appellate Body has explained that a risk assessment is neither shackled to "mainstream" scientific opinions or obliged to adopt a conclusion that coincides with a majority view in the relevant scientific community. In *EC – Hormones*, it explained as follows:

> Article 5.1 does not require that the risk assessment must necessarily embody only the view of a majority of the relevant scientific community. In some cases, the very existence of divergent views presented by qualified scientists who have investigated the particular issue at hand may indicate a state of scientific uncertainty. Sometimes the divergence may indicate a roughly equal balance of scientific opinion, which may itself be a form of scientific uncertainty. In most cases, responsible and representative governments tend to base their legislative and administrative measures on "mainstream" scientific opinion. In other cases, equally responsible and representative governments may act in good faith on the basis of what, at a given time, may be a divergent opinion coming from qualified and respected sources. By itself, this does not necessarily signal the absence of a reasonable relationship between the SPS measure and the risk assessment, especially where the risk involved is life-threatening in character and is perceived to constitute a clear and imminent threat to public health and safety. Determination of the presence or absence of that relationship can only be done on a

[34] Appellate Body Report, *US – Continued Suspension*, ¶ 562. In this regard, see Ureta, C., González, J., Piñeyro-Nelson, A., Couturier, S., González-Ortega, E., and Álvarez-Buylla, E., "*A data mining approach gives insights of causes related to the ongoing transgene presence in Mexican native corn populations*", Agroecology and Sustainable Food Systems, 2023, p. 189, **MEX-092** ("While it is very difficult to establish the impacts of recombinant DNA or proteins from transgenic crops on human health, toxicological feeding studies conducted in animal models such as rodents, pigs and cattle have shown negative physiological effects").

> case-to-case basis, after account is taken of all considerations rationally bearing upon the issue of potential adverse health effects.[35]

53. Moreover, the Appellate Body also explained that: "It is essential to bear in mind that the risk that is to be evaluated in a risk assessment under Article 5.1 is not only risk ascertainable in a science laboratory operating under strictly controlled conditions, but also risk in human societies as they actually exist, in other words, the actual potential for adverse effects on human health in the real world where people live and work and die".[36]

54. With respect to the relevant timeframe of a risk assessment and the scientific evidence that it takes into account, the panel in *EC – Approval and Marketing of Biotech Products* considered the "a risk assessment carried out before the adoption of a particular safeguard measure and a risk assessment carried out after its adoption could 'sufficiently warrant', or 'reasonably support', the maintenance of that measure".[37] Further, it considered that "at any given time, SPS measures must be based on an assessment of risks which is appropriate to the circumstances existing at that time" and, "[i]ndeed, this is consistent with the fact that relevant circumstances may change over time".[38] The panel considered that "it is of no particular importance whether a specific risk assessment which is claimed to serve as a basis for the [SPS measure] was performed before or after the adoption of that [SPS measure] because "[w]hat matters is that the relevant risk assessment was appropriate to the circumstances existing at the time this Panel was established".[39]

55. Based on the foregoing, factual issues that the Panel may need to consider in the circumstances of this dispute, include (based on the items listed in the question):

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35 Appellate Body Report, *EC – Hormones*, ¶ 194**, MEX-286**.

36 Appellate Body Report, *EC – Hormones*, ¶ 187**, MEX-286**.

37 Panel Report, *EC – Approval and Marketing of Biotech Products*, ¶ 7.3030, **MEX-277**.

38 Panel Report, *EC – Approval and Marketing of Biotech Products*, ¶ 7.3031, **MEX-277**.

39 Panel Report, *EC – Approval and Marketing of Biotech Products*, ¶ 7.3034, **MEX-277**. Similarly, the panel in *US – Animals* considered that the "obligation to 'maintain' a measure based on scientific evidence has a continuing dimension", such that "the ordinary variations in the underlying factual circumstances are to be taken into account by continuously updating the risk assessment". It acknowledged the view of the panel in *EC – Approval and Marketing of Biotech Products* that: "the relevant question becomes 'whether on the date of establishment of this Panel, each [SPS] measure was based on an assessment of risks which was appropriate to the circumstances existing at that time'". Panel Report, *US – Animals*, ¶ 7.340. **MEX-461.**

(a) Whether there exists relevant scientific evidence of the risks, including, *inter alia*: divergent opinions coming from qualified and respected sources, such as qualified scientists who have investigated the particular issues at hand; and evidence of actual potential for adverse effects on human health in the real world — for example, in Mexican society as it actually exists.

(b) Whether the evidence on the record in this dispute establishes that the Risk Assessment, including Conahcyt's "Scientific Record on Glyphosate and GM Crops" and Cibiogem's collection of relevant studies in the SNIB, is based on relevant available scientific evidence of the risks to human health and native corn in Mexico.

(c) Whether the Risk Assessment, including the relevant available scientific evidence in Cibiogem's collection of relevant studies, is appropriate to the circumstances existing at the time this Panel was established, and could "sufficiently warrant" or "reasonably support" the maintenance of the measures at issue at that point in time.

(d) Taking into account that Mexico has decided to follow a precautionary approach, does the Risk Assessment, on the basis of the relevant available scientific evidence outlined above, "sufficiently warrant" or "reasonably support" the measures at issue, notwithstanding the uncertainties and constraints involved in the assessment of the risks, and even though the United States and Canada might not decide to apply similar measures to address the same risks (to the extent that the same risks could arise in the specific circumstances prevailing in the United States and/or Canada).

56. Application of the foregoing to the evidence on the record in this dispute establishes that the Risk Assessment is based on relatively recent, relevant, independent scientific evidence from qualified and reputable sources that is sufficient to establish (i) risks to human health arising from the direct consumption of GM corn grain in Mexico, and (ii) risks to native corn of transgenic contamination arising from the unintentional, unauthorized, and uncontrolled spread of GM corn in Mexico.

57. With respect to the risks to human health, the End Use Limitation is based on the following considerations:

- There is sufficient scientific evidence that the contaminants and toxins present in GM corn grain include transgenic insecticidal toxins, transgenic pesticide-resistant enzymes, and residues of the concentrated pesticides used in the cultivation of GM corn (including, *inter alia*, glyphosate). These kinds of contaminants and toxins are present in all GM corn grain.

- There is ample scientific evidence that exposure to glyphosate is harmful in the long term, even at very low doses, and that transgenic proteins have deleterious internal health effects, as well as immunogenic and allergenic properties.[40] For example, although "it is very difficult to establish the impacts of recombinant DNA or proteins from transgenic crops on human health, toxicological feeding studies conducted in animal models such as rodents, pigs and cattle have shown negative physiological effects".[41]
- People in Mexico *directly consume* large quantities of corn grain on a daily basis, throughout their lives, in the form of tortillas and similar staple foods made from nixtamalized masa and corn flour. In this way, more corn grain is directly consumed per capita in Mexico than anywhere else in the world. This consumption pattern means that there would be substantially higher concentrations of GM corn grain contaminants and toxins being ingested *daily* by people in Mexico, *throughout their lives*, than in any other part of the world.
- There are no standards, recommendations or guidelines that address the cumulative risks associated with long-term daily ingestion of these contaminants and toxins, much less in Mexico's unique circumstances. Moreover, attempting to assess and manage the risks posed to human health of each individual GM corn event, assessed in isolation based on authorization applications, would not address the risks to human health in Mexico in a meaningful or effective way. In the real world, such risks do not exist in isolation. Rather, they aggregate and accumulate in the corn grain market and in people's diets. Thus, GM corn grain consumed directly by people in Mexico would not be consumed on an event-by-event basis. A tortilla made from nixtamalized masa produced with GM corn grain, for example, would contain an unknown combination of different GM corn varieties with unknown total amounts and combinations of transgenic proteins and pesticide residues.
- Mexico considers the health and well-being of people in Mexico to be of the utmost importance. In this sense, the Mexican Constitution enshrines the human rights to "nutritious, sufficient and quality food", to "health protection" and to "human welfare".

58. Under these circumstances, Mexico should not be prevented from adopting a precautionary approach to the protection of human health, specifically with respect to the direct consumption of

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[40] Mexico's Initial Written Submission, ¶ 131-136, 175-180, 193, 314; CONAHCYT, "*Scientific Record on Glyphosate and GM Crops*" (2020), pp. 7, 10 ("Transgenics", left column), 17-18 (**Exhibit MEX-085**), Mexico's Rebuttal Submission, ¶¶ 289-291, 410.

[41] Ureta, C., González, J., Piñeyro-Nelson, A., Couturier, S., González-Ortega, E., and Álvarez-Buylla, E., "*A data mining approach gives insights of causes related to the ongoing transgene presence in Mexican native corn populations*", Agroecology and Sustainable Food Systems, 2023, p. 189, **MEX-092**

GM corn grain in Mexico, based on the available independent scientific evidence on the risks of ingesting transgenic proteins and pesticide residues in GM corn grain.

59. Moreover, Mexico should not be forced to allow GM corn grain to be used for direct human consumption in Mexico and "wait" for scientific evidence to eventually confirm, *after the fact*, the adverse effects on the human population in Mexico over the long term. While the United States may consider that nothing less than definitive scientific evidence of harm to human beings is sufficient, Mexico considers that such an approach would be unacceptable. Mexico cannot be coerced into ignoring the independent scientific evidence that indicates the harmful effects of transgenic proteins and pesticide residues in GM corn, nor into placing the economic interests of U.S. biotech corporations ahead of people's health in Mexico.

60. As the Friends of the Earth (FOE) stated in their written submission in this dispute, Mexico is justified "in refusing to allow its people to participate in the experiment that the U.S. government is seeking to impose on Mexico".[42]

61. Thus, given Mexico's precautionary approach, the 2023 Decree is based on a Risk Assessment that is "appropriate to the circumstances of the risk to human health" in Mexico, has taken into account sufficient relevant scientific evidence of "the actual potential for adverse effects on human health in the real world" from qualified, reputable, independent sources. Notwithstanding the relevant uncertainties, constraints, and challenges in the assessment of the risks to human health, the Risk Assessment "sufficiently warrants" or "reasonably supports" the measures at issue.

62. For all of the reasons discussed in detail in Mexico's written submissions, the analysis arrives at the same conclusion with respect to the risks to native corn.

[42] Friends of the Earth (FOE), NGE Written Views, p. 10 ("The U.S. is, in effect, asking Mexico to trust the completeness and accuracy of the initial GE corn safety assessments carried out 15 to 30 years ago by the companies working to bring GE corn events to market. The Mexican government is both wise and on solid ground in refusing to allow its people to participate in the experiment that the U.S. government is seeking to impose on Mexico").

H. [Question 12] Please explain why the Codex Principles and Guidelines and the IPPC are sufficient/insufficient to qualify as relevant international standards, guidelines, or recommendations for GM corn?

63. The Chair of the Panel, Mr. Häberli requested the following information in follow-up to Mexico's response to question 12 of the Panel:

> … we would be very interested to know from you, which codex principle is saying what and why that is not sufficient in the Mexican case -- **which standard are you referring to? What is your standard? What is your packaging? Measures, you know? It is also contained in codex.** Same for (…).
>
> We may get exact details but maybe not today (…).[43]

64. Mexico considers that Codex MRLs are insufficient to address the risk posed to the Mexican population by glyphosate residues and transgenic proteins in food. Mexico also considers that the International Plant Protection Convention (IPPC) is insufficient to address the risk to native corn varieties from the genetic introgression of GM corn.

65. As indicated by Mexico in its Initial Written Submission (paras. 420-421), the Codex Committee on Pesticide Residues is the authority responsible for setting Maximum Residue Limits (MRLs) for pesticide residues in specific foods or in groups of foods or feeds moving in international trade.[44] The Codex standards identify a list of products and the maximum residue limit of glyphosate that the products may safely contain. Glyphosate is allowed for human consumption at concentrations up to 30 mg/kg for cereals (grain), 5 mg/kg for corn (grain), lentils (dry), peas (peas, grain) and edible offal of corn, 3 mg/kg for sweet corn (cob), 2 mg/kg for beans (grain) and sugar cane.[45]

66. However, the Codex MRLs do not address the toxicity of transgenic proteins in GM corn grain, such as insecticidal toxins and pesticide-resistant enzymes. Nor does Codex provide MRLs for such transgenic proteins in GM corn grain. As such, relevant international "standards, guidelines or recommendations" simply do not exist regarding these risks.

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43 Spanish Transcript 27 June 2024, p. 44.

44 FAO/OMS. "*About the Codex Alimentarius"*, 2021. **MEX-325**.

45 Codex Alimentarius. "*MRL of pesticides*", 2021. **MEX-326.**

67. Additionally, and as Mexico explains below, Codex MRLs also do not exist to address the risk of glyphosate residue in commodities made from maize/corn.

68. The Codex prescribes maximum residue levels for a number of corn/maize based products.[46] Specifically, Codex identifies the following relevant commodities, namely, maize meal (CF 0645),[47] maize flour (CF 1255),[48] corn flour (CF 5273)[49] and corn meal (CF 5275).[50] However, the standards either provide no MRL for the presence of glyphosate residue (maize meal and maize flour), or provide no MRL of any kind at all (corn flour and corn meal). Therefore, Mexico has never endorsed an MRL that addresses the concerns addressed by the Decree.

69. In light of the absence and inadequacy of international standards, Mexico undertook a risk assessment to determine the appropriate measure to address the risk to human health from consumption of glyphosate residue in nixtamalized masa and tortilla.

70. Moreover as Mexico has previously explained, the Risk Assessment also takes into account the unique circumstances that are present in Mexico, namely:

- Corn is the main staple food in Mexico. It is fundamental to the daily diet of Mexicans, who directly consume significant quantities of whole corn kernels in the form of traditional foods.
- The annual per capita consumption of corn in Mexico is approximately 123.47 kg, mainly through tortillas, but also other dishes of Mexican cuisine, based on the process of nixtamalization of the grain.

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[46] See FAO, Codex Alimentarius, Pesticide Database, Commodities, available on: https://www.fao.org/fao-who-codexalimentarius/codex-texts/dbs/pestres/commodities/en/. **MEX-462.**

[47] See FAO, Codex Alimentarius, Pesticide Database, Commodities Detail, CF 0645 - Maize meal, available on: https://www.fao.org/fao-who-codexalimentarius/codex-texts/dbs/pestres/commodities-detail/en/?c_id=72. **MEX-463.**

[48] See FAO, Codex Alimentarius, Pesticide Database, Commodities Detail, CF 1255 - Maize flour, available on: https://www.fao.org/fao-who-codexalimentarius/codex-texts/dbs/pestres/commodities-detail/en/?c_id=71. **MEX-464.**

[49] See FAO, Codex Alimentarius, Pesticide Database, Commodities Detail, CF 5273 - Corn flour, available on: https://www.fao.org/fao-who-codexalimentarius/codex-texts/dbs/pestres/commodities-detail/en/?c_id=1704. **MEX-465.**

[50] See FAO, Codex Alimentarius, Pesticide Database, Commodities Detail, CF 5275 - Corn meal, available on: https://www.fao.org/fao-who-codexalimentarius/codex-texts/dbs/pestres/commodities-detail/en/?c_id=1705. **MEX-466.**

- A Mexican receives 1022 kcal and 26.3 g of protein daily from corn, which for an adult person represents 50% of his or her daily intake, based on a diet of 2,000 kcal and 56 g of protein.
- According to FAO data, compared to consumption in the United States, corn and corn products were consumed in Mexico in 2021 at a rate 10 times higher than in the United States. In addition, the energy intake provided by corn was 10 times higher, and the protein intake from corn was almost 15 times higher.

71. Given the pattern of direct consumption of GM corn grain in Mexico, Codex MRLs for glyphosate are unable to address the risks that arise specifically with respect to long-term direct consumption of GM corn grain in Mexico's unique circumstances.

72. Since direct consumption of corn grain is much higher in Mexico than in any other country, exposure to contaminants and toxins in GM corn grain would also be higher than in any other country. Under these circumstances, a deviation from Codex standards is necessary to achieve Mexico's ALOP of zero risk. This is in order to address the risks from direct consumption of GM corn grain in masa nixtamalizada, tortillas and related foods.

73. Furthermore, the circumstances in Mexico with respect to corn cultivation are unique and differ greatly from countries that rely on industrial agriculture and biotechnology.

74. As Mexico has explained in detail in its written submissions, most farmers in Mexico use traditional farming practices and small-scale agriculture to grow corn. They commonly save the harvested grain from one crop cycle to use as seed for the next. They traditionally share and exchange seeds, building local seed stocks and creating informal and traditional seed systems. In addition, they experiment with corn grain from other sources, including corn grain purchased as food or fodder.

75. Under these circumstances, unintended transgenic contamination of native corn becomes embedded in seed stocks, spreading with each crop cycle. Through seed exchange with other farmers and communities, this contamination can proliferate through traditional seed systems and grain markets throughout Mexico.

76. Where GM corn is spread in this way, through traditional farming practices, GM contamination in Mexico is not a matter of cross-pollination between a GM monoculture field and a neighboring non-GM monoculture field. Rather, it is a matter of GM corn and Mexico's native

non-GM corn varieties growing together in the same milpas and small fields. Contaminated corn kernels produced by cross-pollination and harvested from those fields are saved for cultivation in the next crop cycle, exchanged with other farmers and communities, and sold locally (where they may be purchased as food or feed grain, but mixed with seeds to be grown by other farmers).

77. Therefore, the prevailing conditions in Mexico make Mexico's unique native corn varieties vulnerable to transgenic contamination and genetic erosion from the spread of GM corn. International standards, recommendations and guidelines geared toward industrial agriculture in the United States and Canada (among other jurisdictions such as the EU) simply do not address the risks that transgenic contamination from the unintentional and uncontrolled spread of GM corn poses to Mexico's native corn.

78. On these points, Mexico invites the Panel to consider the reasons explained in paragraphs 537-538 and 313-317 of its Rebuttal Submission.

79. The United States and Canada assert that the relevant standard for assessing risk to native corn is the IPPC's International Standard for Phytosanitary Measures ISPM-11 on pest risk analysis for quarantine pests. ISPM-11 states that parties should "manage risk to achieve the necessary degree of safety that can be justified and is feasible within the limits of available options and resources".

80. As mentioned above, ISPM 11 requires parties "to achieve the necessary degree of safety that can be justified and is feasible within the limits of available options and resources". In Mexico's opinion, Mexico's risk assessment and risk management strategies are consistent with this standard.

81. Moreover, as Mexico has explained in its submissions, the "End-Use Limitation" serves several purposes at once, including the purposes of the measures to protect human health and to protect native corn in Mexico. Because the ALOPs for each of these SPS objectives coexist in relation to the same measure, the "zero risk" ALOP for the protection of human health overlaps with and overshadows the ALOP for the protection of native corn. For this reason, the priority objectives cannot be examined in isolation from one another. However, these circumstances should not prevent the measure from contributing to the purpose of protecting native corn nor diminish

its ability to fulfil the purpose of protecting human health at the appropriate level of protection determined by Mexico.

I. [Question 13] To the extent that the evidence shows one principal motivation for the 2023 Decree was a concern about potential glyphosate residues, are Articles 6 and 7 appropriately targeted to that concern (given that they would seem to apply also to GM corn not exposed to glyphosate)? Was consideration given to a more targeted measure?

82. Mexico thanks the Panel for the opportunity to submit a written follow-up response to this question in order to provide clarifications, resolve discrepancies between the English and Spanish transcripts, and provide additional elaboration and detail in light of the discussion at the Public Hearing.

83. As Mexico has explained in its response to Question no. 9 (which is incorporated by reference), Mexico's "End-Use Limitation" in Article 6.2 of the 2023 Decree addresses the entire basket of risks arising in relation to the *direct consumption* of GM corn grain, including the ingestion of transgenic insecticidal toxins, transgenic pesticide-resistant enzymes, other transgenic materials, and residues of the concentrated pesticides used in the cultivation of GM corn (including but not limited to systemic glyphosate). This is reflected in the Risk Assessment and relevant documents on the SNIB database at the time the 2023 Decree was issued and at the time this Panel was established. For a discussion on this point, please see paragraph 314 of Mexico's Initial Written Submission.

84. As pesticide residues and/or transgenic proteins are present in all GM corn grain, the risks associated with ingesting them would arise in relation to the direct consumption of "GM corn not exposed to glyphosate".

85. Also, as Mexico explained previously, such risks do not exist in isolation from one another in the real world. Rather, they aggregate and cumulate in the corn grain market and in people's diets. Thus, attempting to assess and manage the individual risks posed to human health on the basis of each individual GM corn event (i.e., a more targeted measure) would fail to address the risks to human health in Mexico in a meaningful or effective manner.

86. Article 6.2 of the 2023 Decree constitutes a narrower targeting of the measure originally proposed in the 2020 Decree. Thus, a *broader* measure was considered, but Mexico selected a much narrower measure after consultations with the United States, targeting the end-use of GM corn for direct human consumption in minimally processed foods, such as tortilla and similar everyday foods made with nixtamalized masa in Mexico.

J. [Question 16] Do you agree that "benefits" can be "direct" or "indirect" in the present case? Does this cover both violation and non-violation complaints? In the answer, please refer to chapeau sub-paragraphs 1(a) and 1(b) and to the text of GATT Article XXIII:1, and WTO rulings relevant for the case at hand.

87. As a preliminary point, Mexico notes that this question continues to be posed under the heading "Article 2.11", although it does not appear to be connected to the interpretation or application of Article 2.11 of the USMCA. Article 2.11 does not include the terms "benefit", "direct", or "indirect", and is not directly concerned with non-violation complaints. Rather, in relevant part, it requires that "no Party shall adopt or maintain any prohibition or restriction on the importation of any good of another Party", except as otherwise provided in the USMCA or in accordance with Article XI of the GATT 1994. Mexico understands that this obligation may be relevant to the concept of a "benefit" within the meaning of Article 2.11 to the extent that it results in a reasonable expectation of market access and competitive opportunities for goods of one Party imported into the market of another Party. However, the Panel's question appears to be focused on the United States' non-violation claim under Article 31.2(c) of the USMCA and the relationship between this provision and Article XXIII:1 of the GATT 1994.

88. Mexico observes that, during the public hearing, the United States also acknowledged uncertainty about the relevance of the question to article 2.11.[51] It went on to state that, "[f]or purposes of this dispute, it is the United States' position that demonstrating [if] a benefit exists is only applicable under [a] non-violation claim".[52] Mexico does not necessarily disagree with this position.

[51] Hearing MEX-USA-2023-31A (27-06-24), English transcript, p. 30 of 56.

[52] Hearing MEX-USA-2023-31A (27-06-24), English transcript, p. 31 of 56.

89. In light of these points, Mexico proceeds to answer this question by focusing on the scope of the term "benefits" in Article 31.2(c), including as it relates to the interpretation and application of the corresponding wording in the text of Article XXIII:1 of the GATT 1994.

90. From the Panel's further enquiries during the hearing, Mexico understands that this question is aimed at addressing two main issues: (i) whether a non-violation complaint under USMCA Article 31.2(c) covers both "direct or indirect" benefits, considering given the difference in wording between GATT Article XXIII:1 and USMCA Article 31.2(c); and (ii) whether the Panel should interpret broadly the term "benefit" under Article 31.2(c) in the present case.

91. *First*, Mexico notes that the *chapeau* in Article XXIII:1 refers to benefits accruing to a country "directly or indirectly." Similarly, during its opening statement the United States argued that the measures at issue "may directly or indirectly affect trade."[53] Mexico agrees that, in principle, benefits obtained under international trade agreements can be "direct" or "indirect." However, as noted by the WTO Appellate Body in *EC – Computer Equipment*, sub-paragraphs 1(a) and 1(b) deal with different types of complaints: violation and non-violation, respectively.[54] Consequently, the question before this Panel is whether the nature of the complaint, i.e. a violation complaint or a non-violation complaint, has any effect on the nature of the benefit (direct or indirect) that a claimant may allege to be nullified or impaired.

92. The term "directly or indirectly" is not defined in Article XXIII:1. Its meaning may be elaborated in the context of other GATT provisions. For instance, Article III:2 indicates that imported products shall not be subject "directly or indirectly" to internal taxes or other internal charges of any kind. The Panel in *Mexico – Taxes on Soft Drinks* clarified that the word "indirect" requires only "some connection."[55] For a claim concerning a "benefit accruing directly" to the claimant under the GATT 1994, it follows that the claimant must demonstrate something more than "some connection" between an obligation or right under the GATT 1994 and the alleged benefit at issue.

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53 US Opening Statement, ¶ 12.

54 Appellate Body Report, *EC – Computer Equipment* (DS62, DS67, DS68), ¶ 80, **MEX-418**.

55 Panel Report, *Mexico – Taxes on Soft Drinks*, ¶ 8.42. **MEX-467.**

93. In Mexico's view, this interpretation is consistent with the concept of "reasonable expectations" (also referred to as "legitimate expectations") of market access benefits with respect to trade in goods. The Appellate Body in *India – Patents* explained that this concept was developed in the context of non-violation complaints under GATT Article XXIII:1(b).[56] Mexico considers that a WTO Member (or a USMCA Party) may only have a "reasonable expectation" with respect to a direct benefit — that is, a benefit that accrues to it *directly* under the relevant trade agreement. Thus, "benefits" for the purposes of non-violation complaints must be "direct", in the sense that they must represent the intended market access that was conceded or granted to the goods of the claimant, such that the claimant can be said to have a "reasonable" or "legitimate" expectation of same, rather than merely an "indirect" benefit with "some connection". Since USMCA Article 32.1(c) specifically refers to a benefit that the Claimant "could reasonably have expected to accrue to it", Mexico considers that a non-violation complaint under this provision protects benefits that accrue directly to the claimant.

94. Unlike GATT Article XXIII:1, Article 31.2(c) omits any reference to or distinction between "direct" or "indirect" benefits. While GATT Article XXIII:1 refers to "any benefit" accruing to a party "directly or indirectly" in relation to both violation claims and non-violation claims, Article 31.2(c) of the USMCA only covers "a benefit" that a Party "could reasonably have expected" in relation to a non-violation complaint.[57]

95. This difference is not only significant in itself, but it aligns with the nature and systemic implications of non-violation complaints, which are exceptional remedies that must be approached with caution.[58] The demonstration of a nullification or impairment requires a "clear correlation" between the challenged measures and the alleged nullification or impairment of the benefit.[59] In light of these considerations, a non-violation complaint should not permit a claimant to challenge

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56 Appellate Body Report, *India – Patents*, ¶¶ 36 and 41, **MEX-270**.

57 Mexico's Rebuttal Submission, ¶ 583.

58 Appellate Body Report, *EC – Asbestos*, ¶ 186, **MEX-417**, citing Panel Report, *Japan – Film*, ¶¶ 10.36-10.37, **MEX-419**.

59 Panel Report, *Japan – Film*, ¶ 10.82, **MEX-419**.

a measure that is otherwise consistent with the respondent's obligations on the basis of a benefit accruing *indirectly*, that is, having "some connection", under the trade agreement.

96. *Second*, Mexico notes that, during the hearing, Mr. Häberli clarified that this question was aimed at determining whether the term "benefit" should be read broadly.

97. Similarly, Mr. Häberli noted that "the panel wanted to know did the parties agree -- and they seemed to agree -- that we need to read the word 'benefit' in a large sense".[60] In this regard, Mexico must clarify that, while it agrees that the term "benefit" is meant to be interpreted broadly (and not to exclude, for instance, future benefits), it cannot be read in isolation from the type of complaint being raised by the complaining party. Accordingly, the arbitrators in *US – COOL* held that "the breadth of the term 'benefit' as used in the covered agreements does not mean that it is unlimited".[61] They confirmed, once more, that "in the context of non-violation complaints under Article XXIII:1(b) of the GATT 1994, 'the claimed benefit has been considered to be that of legitimate expectations of improved market access opportunities arising out of relevant tariff concessions.'"[62]

98. Thus, Mexico does not agree that the term "benefit" must be interpreted broadly regardless of the context. While a benefit, in principle, can be direct or indirect, the nature of the claim affects whether the benefit at issue may be either or must be direct. In the context of a non-violation complaint, the "benefit" at issue must be sufficiently "direct" to be reasonably or legitimately expected by the claimant.

K. [Question 18] Can Article XX of the GATT 1994 be invoked where a Panel finds no inconsistency with the SPS Agreement? Does the *mutatis mutandis* language in Article 32.1.1 of the USMCA suggest any different application of Article XX of the GATT 1994 under the USMCA than under the WTO/DSU?

99. Mexico understands Article 32.1.1 of the USMCA to mean that the general exceptions under Article XX of the GATT 1994 are incorporated into the USMCA "for the purposes" of the

60 Hearing MEX-USA-2023-31A (27-06-24), English Transcript, p. 32.

61 Decisions by the Arbitrators, *US – COOL (Recourse to Article 22.6)*, ¶ 5.14. **MEX-468.**

62 Decisions by the Arbitrators, *US – COOL (Recourse to Article 22.6)*, ¶ 5.10. **MEX-468.**

listed chapters, including Chapters 2 and 9, *mutatis mutandis*. It is well established that the general exceptions in Article XX apply as exceptions to justify inconsistencies with the obligations under the GATT 1994.[63] In the context of the USMCA, the text of Article 32.1.1 clearly makes these general exceptions available to a wider scope of obligations, including those under Chapters 2 and 9.

100. The words "*mutatis mutandis*" simply mean "Article XX of the GATT 1994 and its interpretative notes are incorporated into and made part of" the USMCA, *with the necessary adjustments* to make the *chapeau* and sub-paragraphs of Article XX applicable in relation to measures breaching provisions under the USMCA Chapters listed in Article 32.1.1.

101. In the context of WTO dispute settlement, the Appellate Body has relied on the Black's Law Dictionary definition of *mutatis mutandis*, namely that "all necessary changes having been made; with the necessary changes".[64] Ultimately, the Appellate Body has provided that the phrase *mutatis mutandis* implies that the provisions of a particular article should apply to another with whatever changes needed.[65] Therefore, the language of Article 32.1.1 suggests that Article XX of the GATT 1994 should not be interpreted or applied any differently in the context of the USMCA than it is interpreted and applied in the context of the GATT 1994, except and to the extent that it is applied with respect to the covered USMCA provisions.

102. For the sake of completeness, Mexico notes that the eighth recital of the preamble of the SPS Agreement reflects the Members' desire "to elaborate rules for the application of the provisions of GATT 1994 which relate to the use of [SPS] measures, in particular the provisions of Article XX(b)". In addition, Article 2.4 provides that measures which are *consistent* with the SPS Agreement "shall be presumed to be in accordance with the obligations of the Members under the provisions of GATT 1994 which relate to the use of [SPS], in particular the provisions of Article XX(b)". Aside from this relationship, Article XX of the GATT 1994 could be invoked *in the context of a WTO dispute* to justify an inconsistency with the provisions of the GATT 1994

63 See e.g., Panel Report, *US – Tariff Measures* (China), ¶¶ 7.103-7.106. **MEX-335.**

64 Appellate Body, *US - Carbon Steel (India)*, fn. 1249, **MEX-469**.

65 Appellate Body, *US - Carbon Steel (India)*, fn. 1250, **MEX-469**.

regardless of whether there was, separately, a finding of inconsistency or no inconsistency with the SPS Agreement.

L. [Question 20] What specific legal obligations to indigenous peoples does the 2023 Decree fulfill?

103. The obligations of the Mexican State towards indigenous peoples that Decree 2023 fulfills are found in four types of legal orders: i) the international treaties or agreements that Mexico has signed; ii) the political constitution; iii) federal laws; and iv) state laws.

104. First, Article 21 of the Pact of San José, as interpreted by the Inter-American Court of Human Rights,[66] imposes an obligation on the Mexican State to respect the cultural property and identity of indigenous peoples, which takes into account their traditions, oral expressions, customs, languages, arts and rituals, their knowledge and uses, among other elements. Additionally, Article 2 of ILO Convention 169 concerning Indigenous and Tribal Peoples in Independent Countries obliges the Parties to take action to protect "full realisation of the social, economic and cultural rights of these peoples with respect for their social and cultural identity, their customs and traditions and their institutions."[67]

105. *Second,* Article 2 of the Constitution establishes that "[t]he right of indigenous peoples and communities [...] to preserve and enrich their languages, knowledge and all the elements that constitute their culture and identity" is recognized and guaranteed. As Mexico has explained in its written submissions, native corn is part of the identity of indigenous peoples and therefore, through the 2023 Decree, Mexico complies with this obligation at the constitutional level.

106. *Third*, at the federal level, Articles 1 and 2 of the Federal Law for the Protection of the Cultural Heritage of Indigenous and Afro-Mexican Peoples and Communities provide for Mexico's obligation to "guarantee the protection [...] of the cultural heritage […] of indigenous

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66 Mexico's Initial Written Submission, ¶ 547, citing Inter-American Court of Human Rights, Case of the Yakye Axa Indigenous Community v. Paraguay, Judgement 17 June 2005 (Merits, Reparations and Costs), ¶¶ 135, 154. MEX-358

67 ILO Convention 169 on Indigenous and Tribal Peoples, Article 2, **MEX-359**.

peoples and communities" and to "prohibit any act that threatens or affects" it.[68] In this regard, the same law mentions that cultural heritage is understood as "the group of tangible and intangible assets that include […] all the elements that constitute the cultures and territories of the indigenous […] peoples and communities, which give them a sense of community with their own identity and that are perceived by others as characteristic".[69] In this sense, it is important to note that there are native corn characteristic of specific indigenous communities[70] and that, as we have already mentioned, native corn is a central element in the construction of the cultural identity of Mexican indigenous communities.[71]

107. Likewise, Article 2 of the Federal Law for the Promotion and Protection of Native Corn establishes that native corn is that "which indigenous peoples, peasants and farmers have cultivated and cultivate from self-selected seeds". As we can see, the same definition of native corn refers to indigenous communities. This is due to the fact that the relationship between native corn and indigenous peoples is indivisible. This automatically implies that any measure to protect native corn is a measure that seeks to protect indigenous groups.[72]

108. In addition, Article 3 of the General Law on Culture and Cultural Rights states that a cultural manifestation is the material and immaterial elements inherent to the history, art, traditions, practices and knowledge that identify groups, peoples and communities.[73] In this sense, it has been stated that the production, marketing and consumption activities of Native Corn and Constant Diversification, as a cultural manifestation of conformity.[74]

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68 Federal Law for the Protection of the Cultural Heritage of Indigenous and Afromexican People and Communities, Articles 1 and 2, **MEX-255**.

69 Federal Law for the Protection of the Cultural Heritage of Indigenous and Afromexican People and Communities, Article 3, section XII, **MEX-255**.

70 Expert Report Dr. Eckart Boege, Annex II, **EBS-001.**

71 Mexico's Rebuttal Submission, ¶ 139.

72 Mexico's Rebuttal Submission, ¶ 145.

73 Mexico's Rebuttal Submission, ¶¶ 220-221.

74 Expert Report Dra. Espinosa, ¶ 17 citing Federal Law for the Promotion and Protection of Native Corn, Article 3. MEX-012

109. *Fourth*, at the state level, there are also laws for the promotion and protection of native corn as food heritage for the states of Colima, Guerrero, Michoacán, Sinaloa, among others. These laws seek to promote and protect native corn as heritage of the State, just like the Federal Laws.[75]

110. Native corn is related to indigenous peoples, so these laws are also related to Mexico's obligations to its indigenous peoples. As explained in Dr. Dulce Espinosa's reports, native corn constitutes a central element of the cultural identity of indigenous communities.[76] It is precisely because of this fact that the Mexican State, through the issuance of Decree 2023, protects native varieties, preserves the identity and culture of indigenous communities, as well as their customs and traditions.

M. [Question 22] With reference to Article 31.13.4 of the USMCA, what "customary rules of interpretation of public international law, as reflected in Articles 31 and 32" of the VCLT do the Parties consider relevant in this case?

111. Article 31.13.4 of the USMCA confirms that the Panel "shall interpret this Agreement in accordance with customary rules of interpretation of public international law, as reflected in Articles 31 and 32 of the *Vienna Convention on the Law of Treaties*". As Mexico noted in paragraph 292 of its Initial Written Submission, this is the approach used by WTO panels and the Appellate Body under Article 3.2 of the *Understanding on Rules and Procedures Governing the Settlement of Disputes*.[77]

112. In Mexico's view, the most relevant customary rules of interpretation for the purposes of evaluating the United States' conditional non-violation complaint under Article 31.2(c) of the USMCA are those codified in Article 31.1, the *chapeau* of Article 31.2, Article 31.3(c), and Article 31.4 of the VCLT.

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75 Mexico's Rebuttal Submission, ¶ 362.

76 Expert Report Dra. Espinosa, ¶ 32.

77 Panel Report, *US — Steel and Aluminium Products* (China), ¶ 7.68. **MEX-268**, (citing: Appellate Body Report, *US - Gasoline*, pp. 19-20, **MEX-269;** *India - Patents (US)*, ¶ 46, **MEX-270;** *Argentina - Textiles and Apparel*, ¶ 42, **MEX-271.** and *US – Carbon steel*, ¶ 61. **MEX-272**.

- *First*, a treaty shall be interpreted in good faith in accordance with the ordinary meaning to be given to the terms of the treaty in their context and in the light of its object and purpose (Article 31.1).
- *Second*, the context of the treaty includes, *inter alia*, the text of the treaty (Articles 31.1 and the *chapeau* of 31.2). This refers not only to the text of the provision being interpreted, but the text of the treaty as a whole. As the panel in *India – Autos* explained, "context includes a reading of each Article in relation to other potentially relevant provisions and an analysis, where necessary, of any differences in terminology".[78]
- *Third*, the interpretative analysis must take into account, together with the context, any relevant rules of international law applicable in the relations between the parties. The panel in *EC – Approval and Marketing of Biotech Products* explained that: "Textually, this reference seems sufficiently broad to encompass all generally accepted sources of public international law, that is to say, (i) international conventions (treaties), (ii) international custom (customary international law), and (iii) the recognized general principles of law".[79]

113. The panel concluded that, "there can be no doubt that treaties and customary rules of international law are 'rules of international law' within the meaning of Article 31(3)(c)".[80] This may encompass, for example, the relevant rule(s) of international law applicable in relations between Mexico and the United States under Article XXIII:1 of the GATT 1994.

- *Fourth*, a special meaning shall be given to a term if it is established that the parties so intended. In this regard, Mexico explained in its Rebuttal Submission that the phrase "could reasonably have expected" in Article 31.2(c) appears to incorporate "the concept of 'reasonable expectations'" that "was developed in the context of *non-violation* complaints" under Article XXIII:1(b) of the GATT 1994.[81] Thus, the "special meaning" of "reasonable expectations" that was developed in the context of non-violation complaints under Article XXIII:1(b) of the GATT 1994 appears to be relevant to the interpretation of Article 31.2(c) of the USMCA in this case.

114. In *China – Publications and Audiovisual Products*, the Appellate Body explained that "interpretation pursuant to the customary rule codified in Article 31 of the *Vienna Convention* is

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78 Panel Report, *India – Autos*, ¶ 7.222, **MEX-328**.

79 Panel Report, *EC – Approval and Marketing of Biotech Products*, ¶ 7.67, **MEX-277**.

80 Panel Report, *EC – Approval and Marketing of Biotech Products*, ¶ 7.67, **MEX-277**.

81 Mexico's Rebuttal Submission, ¶ 583, citing Appellate Body Report, *EC – Computer Equipment* (DS62, DS67, DS68), ¶ 80**, MEX-418**, citing Appellate Body Report, *India – Patents*, ¶¶ 36 and 41, **MEX-270**.

ultimately a holistic exercise that should not be mechanically subdivided into rigid components".[82] It considered that, although a panel may start with the dictionary definitions of the terms to be interpreted, those definitions alone are not capable of resolving complex questions of interpretation. Rather, the "ordinary meaning" of treaty terms may be ascertained only in their context and in the light of the object and purpose of the treaty. Therefore, it cautioned "against equating the 'ordinary meaning' of a term with the definition provided by dictionaries".[83]

115. In paragraph 175 of the United States' opening statement, the United States disagrees with Mexico's interpretation of the words "not inconsistent" in Article 31.2(c) of the USMCA. In Mexico's Rebuttal Submission, Mexico explained that this wording "indicates that a measure that has been found to be inconsistent with obligations under the USMCA, including such a measure that has subsequently been justified pursuant to one of the exceptions under Article 31.1 or Article 32.5, does not fall within the scope of a non-violation complaint under Article 31.2(c)"[84]. The United States, relying on dictionary definitions of the words "inconsistent" and "preclude", argues that the meaning of the phrase "does not preclude" in Article 32.5 should be interpreted to mean that any measure found to be inconsistent with USMCA obligations, but subsequently justified under Article 32.5, should be deemed to be "not inconsistent" with the USMCA for the purposes of Article 32.1(c).[85]

116. The United States relies exclusively on the dictionary definitions of the terms "inconsistent" in Article 31.2(c) and "preclude" in Article 32.5 without further analyzing the meaning of these terms in their broader context, together with relevant rules of international law (namely Article XXIII:1 of the GATT 1994), and in the light of the object and purpose of the USMCA. As part of a holistic, integrated analysis under Article 31 of the VCLT, Mexico considers that a systemic interpretation of Article 31.2(c) is appropriate, in which the role of this provision

82 Appellate Body Report, *China – Publications and Audiovisual Products*, ¶ 348, **MEX-299**.
83 Appellate Body Report, *China – Publications and Audiovisual Products*, ¶ 348, **MEX-299**.
84 Mexico's Rebuttal Submission, ¶ 590.
85 United States Opening Statement, ¶ 176.

within the USMCA as a whole text, including "in relation to other potentially relevant provisions",[86] is carefully considered.

117. In Mexico's view, reading Article 31.2(c) in the context of the whole treaty, including "in relation to other potentially relevant provisions", involves distinguishing between non-violation complaints and violation claims. Violation claims hold Parties accountable to the substantive obligations of the treaty, although violations of those obligations may be justified on the basis of the exceptions for public policy interests of overriding importance, as agreed by the Parties (such as those under Article 32 of the USMCA). In contrast, non-violation complaints "should be approached with caution and treated as an exceptional concept" because "Members negotiate the rules that they agree to follow and only exceptionally would expect to be challenged for actions not in contravention of those rules".[87]

118. Permitting a non-violation complaint against a measure that has already been found to be (i) inconsistent with a substantive USMCA obligation, but (ii) justified under an exception provided for in Article 32, would undermine the capacity of the USMCA parties to protect the public policy interests covered by the Article 32 exceptions.[88] Such an outcome would be inconsistent with the preamble of the USMCA, which recognizes the Parties' "inherent right to regulate".

119. As noted above, Article 31.3(c) of the VCLT indicates that there shall be taken into account, together with the context, any relevant rules of international law applicable in the relations between the parties." The Panel in *EC – Approval and Marketing of Biotech Products* considered that the "rules of international law" include "all generally accepted sources of public international law," such as other treaty obligations applicable to relations between the parties.[89]

120. Mexico considers that the provisions of GATT Article XXIII:1 are "relevant rules of international law applicable in the relations between the parties" (meaning the parties to both the

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86 Panel Report, *India – Autos*, ¶ 7.222, **MEX-328**.

87 Mexico's Rebuttal Submission, ¶ 587, citing Panel Report, *Japan – Film*, ¶¶ 10.36-10.37, **MEX-419**

88 Mexico's Rebuttal Submission, ¶ 599.

89 Panel Report, *EC – Approval and Marketing of Biotech Products*, ¶ 7.67, **MEX-277**.

USMCA and the GATT 1994) for the purposes of interpreting Article 31.2(c) of the USMCA pursuant to Article 31.3(c) of the VCLT. In Mexico's view, the similarities and the differences in the wording between these highly analogous provisions are relevant to the interpretive analysis. In this regard, Article XXIII:1(b) covers nullification or impairment that results from the application of "*any* measure, *whether or not* it conflicts with the provisions of" the GATT 1994. In contrast, Article 31.2(c) covers nullification or impairment that results from the application of only "*a* measure … that is *not inconsistent*" with the USMCA.[90] In Mexico's view, this difference in wording must be given meaning. Mexico has addressed this point in paragraphs 596-599 of its Rebuttal Submission.

N. [Question 24] If the Panel were to make a determination that the US's benefits under the USMCA are nullified or impaired, could the 2023 Decree be modified to avoid nullification and impairment?

121. Mexico observes that it is extremely difficult to respond to this question in the absence of specific findings and reasoning from the Panel to explain how and why a benefit that the United States could reasonably have expected to accrue to it under one or more provisions of Article 9.6 and/or Article 2.11 of the USMCA is being nullified or impaired as a result of the application of Article 6.2 and/or Articles 7 and 8 of the 2023 Decree.

122. Moreover, to the extent that the United States alleges that the benefit being nullified or impaired is market access and competitive opportunities for exports of US corn to Mexico, the evidence clearly establishes that no such nullification or impairment is occurring and none is likely to occur in the foreseeable future. It is a clear and simple factual matter that exports of US corn to Mexico have not only continued since the 2023 Decree was issued, but have increased.[91] It is clear from this unassailable evidence that US corn continues to enjoy market access and competitive opportunities in Mexico.

123. Under these circumstances, it is unclear how Mexico could modify the 2023 Decree to avoid the alleged nullification or impairment.

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90 Mexico's Rebuttal Submission, ¶ 584.

91 See Mexico's Rebuttal Submission, ¶¶ 572-579.

124. Moreover, if Mexico were forced to altogether withdraw Article 6.2 and/or Articles 7 and 8 of the 2023 Decree in order to avoid the nullification and impairment determined by the Panel, it would be withdrawing measures that had been found to be justified under Article 32.5. That is, Mexico would be forced to withdraw measures deemed necessary to fulfil Mexico's legal obligations to indigenous peoples that the Panel had found were not being used as a means of arbitrary or unjustified discrimination against persons of the other Parties or as a disguised restriction on trade in goods. The determination of nullification and impairment would completely undo the justification of the measure under Article 32.5, undermining this critical protection for indigenous people.

II. FINAL QUESTIONS DISTRIBUTED BY THE PANEL

A. [Question 1] Please confirm whether there is data on the volume of Mexico's imports of GM and non-GM corn in the years 2017-2023, including the breakdown of white and yellow corn, and if so, please provide such data.

125. In accordance with the Tariff of the Law of General Import and Export Taxes, there is currently no distinction that allows identifying whether or not corn imports correspond to GM corn. As a result, there are no import volumes differentiated between GM corn and non-GM corn. Mexico is consulting with the competent authorities to determine whether the information can be obtained from the information provided by corn importers and, if so, will follow up on the Panel's question.

B. [Question 2] How much of the white corn produced in Mexico is classified as native corn (as defined in Article 2.VII of the Federal Law for the Promotion and Protection of Native Corn [MEX-12]), as opposed to domestically produced non-native corn? Please provide data for the years 2017-2023. Is there data that indicates how much of each category (native and non-native corn) is produced by indigenous peoples?

126. Below is the information for the period 2017-2023 generated by the Undersecretariat of Food Self-Sufficiency of the Secretariat of Agriculture and Rural Development based on data obtained from the 2007 and 2022 Agricultural Census of INEGI, as well as the Agrifood and Fisheries Information Service (SIAP, by its acronym in Spanish).

Table 1: Production with native and improved seed 2017**.**

Type of seed	Production units		Surface		Production	
	Number	%	Hectares	%	Tons	%
Native seed [92]	1,548,274	63.7	5,351,046	76.7	14,126,760	57.3
Improved seed (mejorada y certificada)[93]	721,880	29.7	1,164,294	16.7	9,304,325	37.7
No response	160,418	6.6	460,399	6.6	1,220,057	4.9
Total	2,430,572	100	6,975,738	100	24,651,142	100

Table 2: Production with native and improved seed 2018**.**

Type of seed	Production units		Surface		Production	
	Number	%	Hectares	%	Tons	%
Native seed	1,490,206	63.2	5,170,248	76.4	13,701,156	57.9
Improved seed (improved and certified)	712,092	30.2	1,150,348	17	8,784,433	37.1
No response	155,623	6.6	446,637	6.6	1,183,589	5
Total	2,357,921	100	6,767,233	100	23,669,178	100

Table 3: Production with native and improved seeds 2019

Type of seed	Production units		Surface		Production	
	Number	%	Hectares	%	Tons	%
Native seed	1,403,932	62.9	4,998,757	76.1	13,246,705	55.4
Improved seed (improved and certified)	690,753	30.8	1,137,401	17.3	9,525,627	39.9
No response	148,018	6.6	433,604	6.6	1,127,371	4.7
Total	2,242,703	100	6,569,762	100	23,899,703	100

Table 4: Production with native and improved seeds 2020

Type of seed	Production units		Surface		Production	
	Number	%	Hectares	%	Tons	%
Native seed	1,458,639	62.1	5,255,802	75.8	13,666,085	55.8
Improved seed (improved and certified)	735,192	31.3	1,233,108	17.6	9,622,450	39.3
No response	155,024	6.6	457,825	6.6	1,190,344	4.9
Total	2,348,855	100	6,936,734	100	24,477,879	100

Table 5: Production with native and improved seed 2021

Type of seed	Production units		Surface		Production	
	Number	%	Hectares	%	Tons	%
Native seed	1,415,214	61.5	5,108,543	75.4	13,486,552	55.4
Improved seed (improved and certified)	734,070	31.9	1,216,014	18.0	9,690,005	39.8
No response	151,877	6.6	446,917	6.6	1,179,862	4.8
Total	2,301,161	100	6,771,474	100	24,356,419	100

[92] Native seed or "semilla criolla" is understood as "the seed generally native to the region, traditionally used in subsistence agriculture. It is characterized by being used in the planting of small plots, with little use of fertilizers and pesticides, and where the final destination of the production is usually self-consumption," that is, those varieties of native corn that are recognized by CONABIO as indicated in Article 2.VII of the Federal Law for the Promotion and Protection of Native Corn.

[93] Improved and certified seed is defined as that "resulting from a process of improvement or selection of crop varieties in order to increase the productive capacity, resistance to diseases, pests, drought, or any other desirable characteristic. It includes hybrid seeds and all those treated, selected and packaged by commercial companies", distinguishing them from GM seeds.

Table 6: Production with native and improved seed 2022

Type of seed	Production units		Surface		Production	
	Number	%	Hectares	%	Tons	%
Native seed	1,351,269	60.9	4,781,732	75.1	12,910,677	55.7
Improved seed (improved and certified)	721,121	32.5	1,164,356	18.3	9,143,360	39.4
No response	146,443	6.6	420,173	6.6	1,134,468	4.9
Total	2,218,833	100	6,366,261	100	23,188,505	100

Table 7: Production with native and improved seed 2023

Type of seed	Production units		Surface		Production	
	Number	%	Hectares	%	Tons	%
Native seed	1,342,230	60.3	4,776,782	74.8	12,897,311	53.0
Improved seed (improved and certified)	736,780	33.1	1,189,997	18.6	10,310,826	42.4
No response	146,911	6.6	421,634	6.6	1,138,412	4.7
Total	2,225,921	100	6,388,393	100	24,346,549	100

127. With respect to the second element of the Panel's question, it is specified that according to the information contained in the Agricultural Census (CA) 2022 and 2007 of INEGI and the Agrifood and Fisheries Information Service (SIAP 2022), 67% of white corn producers use native seed, of which 46% are indigenous peoples and communities.

Image 1: White corn producers

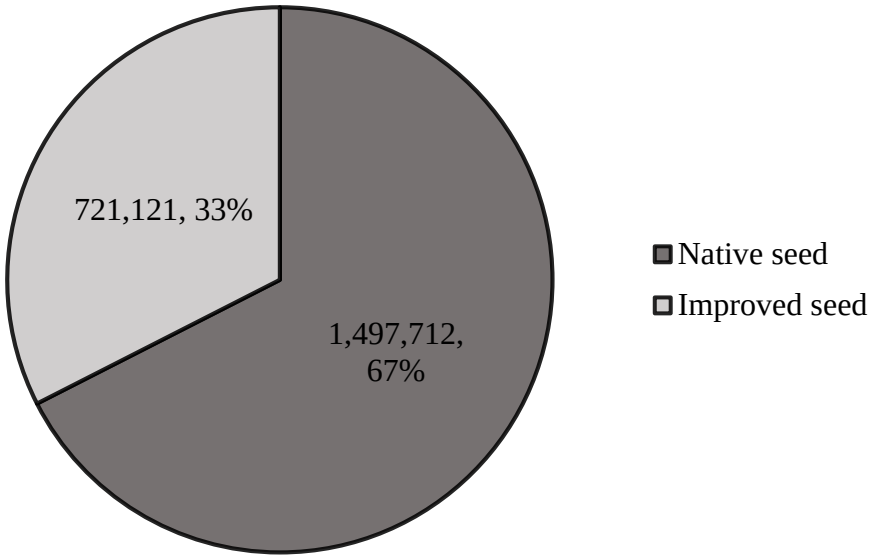
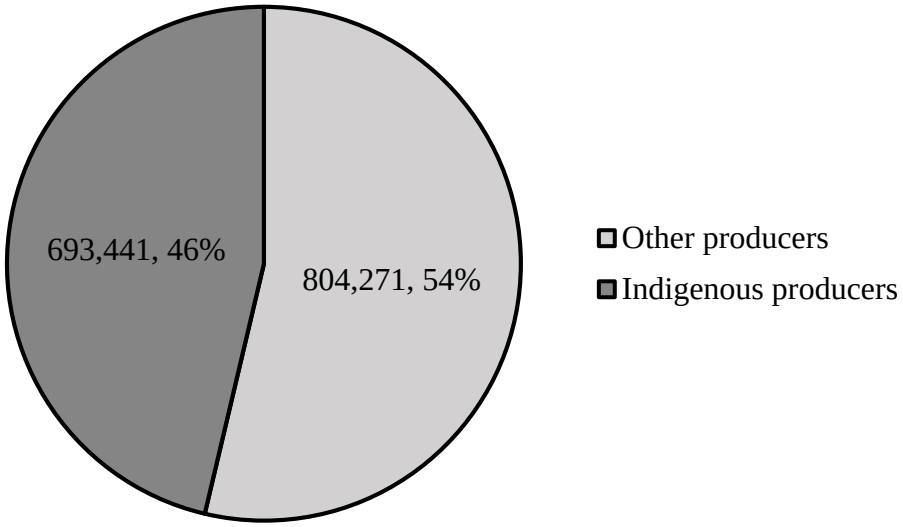


Image: 2 White corn producers using native seeds



C. [Question 4] Are there regulations in Mexico, which govern seed exchange as it pertains to corn?

128. In Mexico, a distinction must be made between the formal or commercial exchange of seeds (i.e., seed trade) and the traditional, informal exchange of seeds (i.e., as part of the traditional agricultural practices of indigenous peoples).

129. On the one hand, the exchange of seeds is regulated *inter alia* by the Federal Law on Seed Production, Certification and Trade (LFPCCS by its acronym in spanish), which aims to ensure that the seeds available on the market meet quality standards through the National Seed System.[94] The LFPCCS classifies seed in terms of procedures, factors and quality levels, including a classification of commonly used plant varieties, which includes native corn seed.[95] The Law recognizes the uses and customs of rural and indigenous communities, including the informal exchange of these seeds, but does not seek to regulate them.[96]

130. In other words, Mexican law regulates the trade of seeds, without interfering with the uses and customs fundamental to the maintenance and development of native varieties of corn, including the informal exchange of seeds.

131. On the other hand, the informal exchange of seeds is a practice that is part of the uses and customs of indigenous peoples and communities. Mexican legislation recognizes the right of indigenous communities and peoples to exploit native varieties as they have traditionally done.[97] For example, the Federal Law for the Promotion and Protection of Native Corn (LFFPMN by its acronym in spanish) establishes mechanisms to promote and protect native corn varieties, considering their cultural, ecological and economic value.[98] The LFFPMN also promotes the conservation of native varieties through respect for the traditional knowledge of indigenous communities, including the informal exchange of seeds.[99]

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94 Federal Law of the Production, Certification and Trade of Seeds, Articles 1-2. **MEX-470**.

95 Federal Law of the Production, Certification and Trade of Seeds, Article 4, section V. **MEX-470**.

96 Federal Law of the Production, Certification and Trade of Seeds, Article 3, section XXIX. **MEX-470**.

97 Federal Law on Plant Varieties, Article 3, section XI. **MEX-471**.

98 Federal Law for the Promotion and Protection of Native Maize, Article 1. **MEX-012**.

99 Federal Law for the Promotion and Protection of Native Maize, Article 2, section III. **MEX-012**.

132. In this sense, the Mexican State has specific obligations to respect and protect the uses and customs of indigenous communities in agriculture, particularly with respect to the exchange of native corn seeds. These obligations are based, *inter alia*, on the following provisions:

- Article 2 of the Political Constitution of the United Mexican States (CPEUM by its acronym in Spanish) establishes that the State must guarantee the right of indigenous peoples to preserve and enrich their cultures and traditional knowledge,[100] including agricultural practices such as seed exchange.
- Article 31 of the United Nations Declaration on the Rights of Indigenous Peoples grants indigenous peoples the right to "maintain, control, protect and develop their cultural heritage, traditional knowledge, traditional cultural expressions, traditional knowledge and traditional cultural practices",[101] this includes genetic resources and seeds. This Article stresses that the State must adopt effective measures to "recognize and protect the exercise of these rights".[102]
- The United Nations Declaration on the Rights of Peasants and Other People Working in Rural Areas, in Article 19, reaffirms that peasants have the right to "save, use, exchange and sell seeds"[103] that they have conserved. This right encompasses the maintenance and development of seeds, such as corn, in their cultural and economic context.[104]

133. The United States pointed out during its opening statement that "the Mexican Government currently, and in the past, has run programs to educate farmers on advantegeous agricultural techniques, including to promote the sustainability of traditional farming, and has distributed what it considers to be desired seed. It is hard to understand how Mexica can credibly rebuke these very programs as ineffective".[105] Mexico does not "rebuke" these programs or consider them ineffective for the purposes for which they were designed and implemented. Given that GM corn grain is not separated from non-GM corn grain in the marketplace or labeled to be identified and distinguished by consumers, Mexico does not believe that the educational programs could be effective, much

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100 CPEUM, Article 2.A, section IV. **MEX-237**.

101 United Nations Declaration on the Rights of Indigenous Peoples, Article 31.1.**MEX-356**.

102 United Nations Declaration on the Rights of Indigenous Peoples, Article 31.2. **MEX-356**.

103 United Nations Declaration on the Rights of Peasants and Other People Working in Rural Areas, Article 19.1 d). **MEX-472**.

104 United Nations Declaration on the Rights of Peasants and Other People Working in Rural Areas, Article 19.1 a) y 19.2. **MEX-472**.

105 *See*, Opening Statement of the United States, ¶75, referring to the Annexes USA-299 to USA-301.

less capable of meeting the adequate level of protection established by Mexico. To the extent that the United States suggests that Mexico should educate its indigenous peoples and farmers to abandon their traditional agricultural practices, Mexico rejects this proposal. Such a measure cannot be considered "reasonably available".

LIST OF ANNEXES

ANNEX	ANNEX NAME
MEX-461	Panel Report, *US – Animals*.
MEX-462	FAO, Codex Alimentarius, Pesticide Database, Commodities
MEX-463	FAO, Codex Alimentarius, Pesticide Database, Commodities Detail, CF 0645 - Maize meal.
MEX-464	FAO, Codex Alimentarius, Pesticide Database, Commodities Detail, CF 1255 - Maize flour.
MEX-465	FAO, Codex Alimentarius, Pesticide Database, Commodities Detail, CF 5273 - Corn flour.
MEX-466	FAO, Codex Alimentarius, Pesticide Database, Commodities Detail, CF 5275 - Corn meal.
MEX-467	Panel Report, *Mexico – Taxes on Soft Drinks*.
MEX-468	Decisions by the Arbitrators, *US – COOL (Recourse to Article 22.6)*
MEX-469	Appellate Body, *US - Carbon Steel (India)*.
MEX-470	Federal Law on Seed Production, Certification and Trade.
MEX-471	Federal Law on Plant Varieties.
MEX-472	United Nations Declaration on the Rights of Peasants and Other People Working in Rural Areas.