CODEX ALIMENTARIUS COMMISSION

E

Food and Agriculture Organization of the United Nations

World Health Organization

Viale delle Terme di Caracalla, 00153 Rome, Italy - Tel: (+39) 06 57051 - Fax: (+39) 06 5705 4593 - E-mail: codex@fao.org - www.codexalimentarius.org

CF11/CRD34

JOINT FAO/WHO FOOD STANDARDS PROGRAMME

CODEX COMMITTEE ON CONTAMINANTS IN FOOD

Eleventh Session
Rio de Janeiro, Brazil, 3 – 7 April 2017

To be held at the Windsor Marapendi Hotel, Rio de Janeiro, Brazil

Comments from Tanzania submitted on agenda items 2, 3, 6, 7, 8, 9, 10, 11, 12 and 13

AGENDA ITEM 2: Matters referred to the committee by the Codex Alimentarius Commission and/or its subsidiary bodies

2.1 Adoption of the ML for inorganic arsenic in husked rice

Position: Tanzania is aware and has taken note that CAC 39 adopted the ML of 0.35mg/kg for inorganic arsenic in husked rice, subject to revision, three years after the implementation of the Code of Practice for the Prevention and Reduction of Arsenic Contamination in Rice.

2.2 Adoption of revised maximum levels for lead in fruit juices and nectars, ready-to-drink (inclusion of passion fruit); canned fruits (inclusion of canned berries and other small fruits); canned vegetables (inclusion of canned leafy vegetables and canned legume vegetables); jams, jellies and marmalades; pickled cucumbers and table olives

Position: Tanzania has taken note that the MLs were lowered without contamination data from Africa, however Tanzania is generating data for the same. When the data is in hand we can request for revision of the MLs if the data demonstrate that the lowered MLs cannot be achieved in Africa

2.3 A proposed risk management approach to address detection in food of chemicals of very low public health concern, based on a conference room document (CRD20) prepared by New Zealand

Position: Tanzania support the formation of an ad-hoc expert consultation (under the auspices of FAO/WHO) that would clarify the nature and extent of the problems and issues raised in this paper and review current approaches to risk assessment and risk management of chemicals of very low exposure and very low public health concern and provide recommendations regarding possible harmonized approaches for consideration at the international level.

2.4 Proposed draft Regional Standard for Fermented Cooked Cassava Based Products (Maximum Limits for Hydrocyanic acid and Mycotoxins)

Position: Tanzania is generating data on occurrence of Hydrocyanic acid and Mycotoxins (aflatoxin in particular) content in Fermented Cooked Cassava Products and use the data to estimate human exposure and subsequently formulate MLs for the chemicals.

AGENDA ITEM 3: Matters of interest arising from FAO and WHO (including JECFA)

3.1.0 JECFA 83rd Session Report on Glycidyl esters, 3-MCPD esters, sterigmatocystin and co-exposure to aflatoxins and fumonisins

3.1.1 Glycidyl esters

Position: Tanzania has taken note that JECFA evaluated glycidyl esters and noted that:

1. Glycidyl esters are processing-induced contaminants primarily found in refined fats and oils and foods containing fats and oils
2. Experimental evidence indicates that glycidyl esters are substantially hydrolysed to glycidol in the gastrointestinal tract and elicit toxicity as glycidol
3. Glycidol is a genotoxic compound
4. There are no published collaboratively studied methods for the determination of glycidyl esters in complex foods

Also Tanzania is ready to participate in collaborative studies of methods for the determination of glycidyl esters in complex food

Issue and rationale: Just like in other countries, people in Tanzania are at a risk of exposure to glycidyl esters through consumption of fats and oils such as refined palm oil, sunflower oil and rapeseed oil. We need to evaluate the extent of glycidyl esters contamination in oils and fats as well as fat and oil containing foods consumed in Tanzania. Thus, there is need to develop capacity for determination of glycidyl esters in foods.

3.1.2 3-MCPD esters

Position 1: Tanzania has taken note that JECFA evaluated 3-Monochloro-1,2-propanediol (3-MCPD) esters and noted that:

1. 3-MCPD esters are processing-induced contaminants found in various refined oils and fats and are formed from acylglycerols in the presence of chlorinated compounds during deodorization at high temperature
2. Experimental evidence indicates that 3-MCPD esters are substantially hydrolysed to 3-MCPD in the gastrointestinal tract and elicit toxicity as free 3-MCPD
3. 3-MCPD was carcinogenic in two rat strains
4. The Committee established a group PMTDI of 4 µg/kg bw for 3-MCPD and 3-MCPD esters singly or in combination (expressed as 3-MCPD equivalents) (rounded to one significant figure)
5. There are no published collaboratively studied methods for the determination of 3-MCPD esters in complex foods

Position 2: Tanzania is ready to participate in collaborative studies of methods for the determination of 3-MCPD esters in complex foods.

Issue and rationale: Just like in other continents, people in Tanzania are at a risk of exposure to 3-MCPD esters through consumption of fats and oils such as refined palm oil, sunflower oil and rapeseed oil. We need to evaluate the extent of 3-MCPD esters contamination in oils and fats as well as fat and oil containing foods consumed in Tanzania. Thus, there is need to develop capacity for determination of 3-MCPD esters in foods.

3.1.3: Sterigmatocystin

Position 1: Tanzania has taken note that JECFA evaluated Sterigmatocystin and noted that:

1. Sterigmatocystin is genotoxic and carcinogenic, and the critical effect was determined to be carcinogenicity
2. For Africa, Sterigmatocystin data on occurrence in sorghum from Sudan, Mali, Ethiopia and Bukina Faso were used in the JECFA evaluation
3. Based on the available data the committee found highest exposure was estimated for the African Region
4. Contamination data were not enough for a complete exposure assessment.

Position 2: Tanzania is requesting CCCF to develop a Code of Practice for Prevention and Reduction of Sterigmatocystin in Sorghum, as an Annex to the CoP for Prevention and Reduction of Mycotoxins in Cereals.

Issue and rationale: Sterigmatocystin is a toxic fungal secondary metabolite (mycotoxin) that has been reliably reported to be produced by many fungal genera, including more than two dozen species each of Aspergillus and Emercella and one or more species of Bipolaris, Botryotrichum, Chaetomium (Botryotrichum, Humicola), Moelleriella, Monocillium, Moelleriella (Aschersonia), Podospora and a unique species of Penicillium, P. inflatum, closely related to A. tardus. The anamorphic names in parentheses are no longer in use.
The Committee evaluated sterigmatocystin at the 83rd session at the request of CCCF following availability of data on its occurrence in sorghum from Sudan, Mali, Ethiopia and Bukina Faso. Based on the available data the committee found highest exposure was estimated for the African Region. The Committee noted that these estimates, which are based only on adult populations and for which only one food commodity (sorghum) was considered, may indicate a human health concern. Overall, the Committee concluded that the data used for calculating the exposure had considerable limitations and consequently did not recommend any control measures for the toxins.

However, given the importance of sorghum as staple food in Africa it is advisable to take deliberate efforts to prevent and reduce sterigmatocystin contamination in sorghum, through a code of practice.

3.1.4. Co-exposure of aflatoxins with fumonisins as a contributing factor in human disease

Position : Tanzania has taken note the outcome of the JECFA Evaluation that there are few data available to support assessment of health risk for co-exposure of aflatoxins with fumonisins. Also, Tanzania is ready to participate in programs for monitoring of co-exposures to aflatoxins and fumonisins

Issues and rationale: Considering that fumonisins and aflatoxins are both frequent contaminants in cereal (especially maize, rice, sorghum and wheat) and cereal-based foods and that aflatoxins are common contaminants in groundnuts and tree nuts, co-exposure to both mycotoxins is likely in areas where these foods are consumed as part of the routine diet.

As part of the evaluation of fumonisins at the seventy-fourth meeting, the Committee noted that the interaction between AFB1, a compound with known genotoxic and hepatocarcinogenic properties, and fumonisins, which have the potential to induce regenerative cell proliferation in the liver, would be of concern. At the request of CCCF, the Committee also evaluated co-exposure to aflatoxins and fumonisins. The 83rd session reported that international estimates of dietary exposure shows that two GEMS/Food clusters (G05 and G13) have high dietary exposure to both Aflatoxin B1 and fumonisin B1 and that coexposure has been confirm in Guatemala and the United Republic of Tanzania using urinary or plasma exposure biomarkers of FB1 and AFB1. The two countries belong to these two clusters. The committee observed that although evidence in laboratory animals from the previous and the present evaluations has suggested an additive or synergistic effect of fumonisin and aflatoxin co-exposure in the development of preneoplastic lesions or hepatocellular carcinoma, currently no data are available on such effects in humans. The Committee concluded that there are few data available to support co-exposure as a contributing factor in human disease.

However, the interaction between AFB1, a compound with known genotoxic properties, and fumonisins, which have the potential to induce regenerative cell proliferation (particularly at exposures above the PMTDI), remains a concern. This is due to the fact that the incidences of chronic liver disease and stunting are high in the areas of the world (Including Africa) where the exposures to both mycotoxins are high and the co-exposure has been confirmed with biomarkers.

Although the Partnership for Aflatoxin Control in Africa (PACA) is mandated to control aflatoxins control only, the potential of sysnergistic effects between aflatoxin and fumonisin exposures necessitates exploration of the extent fumonisins exposure can impact on aflatoxins mitigation measures.

3.2 WHO Guidelines for drinking-water and health-related limits for certain substances in the standard for natural mineral waters (Codex Stan. 108-1981)

Position: Tanzania is supporting realignment as proposed bearing in mind that some African countries are currently relying heavily on bottled natural mineral waters

1. CCCF11 will be reviewing the limits in the Codex Standard for Natural Mineral Waters (Codex Stan: 108-1981) in light of the revised values included in the WHO Guidelines for Drinking-Water Quality (GDWQ). Details are as follows:

	GDWQ (mg/L)	Codex Stan. 108-1981 (mg/L)
Barium	1.3	0.7
Boron	2.4	5
Cyanide	Withdrawn	0.07
Manganese	Changed to health based value	0.4
Selenium	0.04	0.01

2. For limits of barium, boron and selenium, consider aligning with the guideline values in the GDWQ as appropriate.

3. For cyanide consider reviewing the current level taking into account that the guideline value in the GDWQ was withdrawn.

4. For manganese consider reviewing the current level taking into account that the guideline value in the GDWQ was changed to a health-based values.

3.3 Ciguatera incidence

Position: Tanzania has taken note of possible increase in ciguatera incidence and attend the side event during the CCCF11 on Wednesday 5th April 2017.

Issues & rationale: This food-borne poisoning is due to consumption of fish exposed to toxic benthic dinoflagellates (or predatory fish consuming contaminated species). It causes nausea, pain, and cardiac and neurological problems. Although the producing dinoflagellates occur in tropical and subtropical waters (between 35 degrees north and south), contaminated fish have been discovered in imports into the EU and its incidence may be increasing with climate change. Incidences of ciguatera have been recorded in West Africa. Thus importing countries outside the tropics or landlocked countries also need to be aware of these problems. Consequently the committee is invited to consider the possibility of establishing MLs for two of the important ciguatera toxins and / or establishing risk management practices, as well as a review by JECFA of the toxins and of the available analytical methods

AGENDA ITEM 6: Proposed draft maximum levels for cadmium in chocolate and cocoa-derived products (at Step 4)

Position : Tanzania agrees with the setting of MLs for cadmium in chocolate and cocoa –derived products

Issue and Rationale: Contamination of cadmium in food has become a concern in many countries. The metal can accumulate in kidneys leading to irreversible renal tubular dysfunction. High cadmium intake is also associated with the formation of kidney stones as well as problems with the skeletal and respiratory systems. Cadmium is abundant in nature and can be released to the environment in different ways including natural activities such as volcanic activities and through anthropogenic activities such as mining and smelting of ores containing zinc, burning of fossil fuels and emissions from discarded batteries.

About 72% of the world supply of cocoa beans comes from West Africa, especially Cote d'Ivoire, Ghana and Nigeria. Cadmium levels in cocoa beans can vary considerably between regions. The region of lowest concentration is West Africa. For instance, the highest cadmium levels in cocoa shells of Ghana was

reported to be 0.75mg/kg. Studies by Takrama et al. (2015) in Ghana also showed that cadmium levels in cocoa nibs ranged from 0.248 to 0.336 mg/kg with a mean value of 0.269 mg/kg (n=67).

The 10th CCCF (2016) streamlined the categories for which MLs for cadmium were to be developed. These were:

- Intermediate products (cocoa liquor and cocoa powder from cake)
- Finished products based on total cocoa solids content (%) i. chocolate and cocoa powder ready-for-consumption)

Position 2: Tanzania support the recommended classification for chocolates and the proposed MLs which are as follows:

Name of the product	Total dry solids of cocoa (%)	Proposed ML (mg/kg)
Milk chocolate Family milk chocolate Milk chocolate coverture Gianduja milk chocolate Table chocolate Milk chocolate Vermicelli/milk chocolate flakes	≤ 30%	0.1
<u>Dry mixtures of cocoa and sugars</u>: Sweetened cocoa, Sweetened cocoa powder and drinking chocolate with 25% or more total dry solids of cocoa Sweetened cocoa mix, Sweetened mixture with cocoa containing 20% or more total dry solids of cocoa Sweetened cocoa- flavored mix with 20% or more total dry solids of cocoa		0.65
Chocolate Gianduja chocolate Semi – bitter chocolate para mesa Chocolate Vermicelli/chocolate flakes Bitter table chocolate	>30% - 50%	0.3
Chocolates and products with declared cocoa content more than 50% and less than 70%	>50% - <70%	0.6
Chocolates and products with declared cocoa content more than 70%	>70%	0.8

Issue and Rationale: The recommended classification is aligned to the already existing Codex Alimentarius categorization/standards for cocoa and cocoa products.
MLs proposed for cocoa-derived products were based primarily on practical achievability worldwide, i.e., As Low As Reasonably Achievable (ALARA) principle (GSCTFF, CODEX STAN 193-1995). A 95% cut-off point was used to recommend MLs for the various categories of chocolate and cocoa powder as this would impact on only 5% of the global trade of these products.

The 77th session of JECFA evaluated exposure to Cadmium from the consumption of products containing cocoa and its derivatives. It estimated that the highest per capita cocoa and its derivatives consumption ranged from 0.1 – 7.5 g/day through the 17 GEMS/Food groups. Most African countries are in the lowest part of the consumption range. From the JECFA evaluation, the average Cd dietary exposure of cocoa and its derivatives for the entire population within the 17 GEMS / Food groups ranged from 0.005 to 0.39 µg/kg bw / month, which is equivalent to 0.02 to 1.6% of the PTMI (25ug/kg bw/month). Similar dietary exposures to Cd in the population for individual cocoa products were estimated from national data and these ranged from 0.001 to 0.46 µg/kg bw/month (0.004 to 1.8% PTMI). Since 5% of the PTMI of Cd from cocoa-derived products for the general population was not exceeded relative to cadmium dietary intake in even one of the GEMS/Food Consumption Cluster Diets, it was suggested that cadmium consumption from cocoa-derived products does not significantly contribute to the total cadmium exposure of the consumer justifying the use of the ALARA principle in the development of the MLs.

AGENDA ITEM 7: Proposed draft Code of practice for the prevention and reduction of arsenic contamination in rice (at Step 4)

Position : Tanzania is ready to continue supporting the development of a Code of Practice for the prevention and reduction of arsenic contamination in rice.

Issue & Rationale: Support for the development of a Code of Practice for the prevention and reduction of arsenic contamination in rice was based on the observation that the COP will provide national and relevant food control authorities, manufacturers and other relevant bodies with guidance to prevent or reduce arsenic contamination in rice.

AGENDA ITEM 8: Proposed draft maximum level for total aflatoxins in ready-to-eat peanuts (at Step 4). CL 2017/26-CF.

Position 1: Tanzania support the setting of ML for total aflatoxins in ready-to-eat peanuts.

Position 2: Based on the findings of the 83rd JECFA evaluation of aflatoxins, we support the maximum level of 15 ppb for total aflatoxins in ready-to-eat peanuts proposed in the draft for discussion at CCCF11, despite a Codex ML of 15 ppb already agreed for peanuts intended for further processing.

Position 3: Tanzania recommend the committee consider also setting a ML for aflatoxin B1 (AFB1) at 8 ppb.

Issue & Rationale: Currently, the only Codex ML for total aflatoxins in peanuts is applied to those intended for further processing (ML of 15 ppb). Over a number of years, many producing countries, especially those in Africa, have experienced difficulties in accessing export markets, particularly those in Europe where a ML for total aflatoxins of 4 ppb is applied. At the 9th CCCF (2015), a ML of 10 ppb (in line with that previously agreed for tree nuts) was proposed but it was agreed to forward a request to JECFA to do a new risk assessment on aflatoxin and consider the health and trade impact (violation rates) of levels between 4 and 15 ppb.

The evaluation was conducted by the 83rd JECFA in November 2016. A quantitative risk assessment was performed using newly derived cancer potency estimates. Highest aflatoxin-induced cancer rates were in GEMS/Food dietary cluster 13, including many sub-Saharan countries. Estimated cancer rates using central and upper-bound potencies were 0.21 and 3.94 cancers per year per 100 000 population. These same countries also have high HBsAg positive rates of 5.2 to 19%. However, importantly, the JECFA evaluation established overall that the primary source of aflatoxin exposure in all dietary cluster areas was

from cereals and not nuts and that in the sub-Saharan countries, maize and sorghum were the primary source of exposure. Consequently, MLs below 15 ppb for peanuts offer little additional health protection, but impact heavily on trade. The JECFA reported rejections at a ML of 15 ppb as being 10%, whereas lowering of the limit to 4 ppb doubled this figure. Consequently, the choice of ML between 4 and 15 ppb would appear to be an issue in trade rather than carrying public health consequences.

Although in the past Codex has set MLs only for total aflatoxin, most countries have enacted regulations that set MLs for both AFB1 and total aflatoxin. AFB1 is the most toxic and carcinogenic of the aflatoxins and itself, with natural mixtures of aflatoxins, is classified as a group 1 carcinogen by the International Agency for Research on Cancer (IARC). Toxicological evaluation of the other forms of aflatoxin is less well developed. It is known that the ratio of AFB1 to total aflatoxin is not fixed and can be quite variable. It is thus important to have regulation for both combined aflatoxin and for its most toxic form.

AGENDA ITEM 9: Proposed draft annex on ergot and ergot alkaloids in cereal grains (Annex to the Code of Practice for the Prevention and Reduction of Mycotoxin Contamination in Cereals (CAC/RCP 51-2003)) (at Step 4). CL 2017/27-CF.

Position: Tanzania supports the proposed draft Annex and recommend its adoption.

Issue & Rationale: It was agreed (and supported by us) that a new annex on ergot and ergot alkaloids be developed for inclusion in the General Code of Practice as Annex 6. Although ergot and the associated alkaloids are more commonly a problem associated with temperate northern climates, a serious outbreak of gangrenous ergotism was reported from Ethiopia in the 1970's resulting in nearly 50 deaths. The producing fungal species (*Claviceps* species, mainly *C. purpurea*) have been identified on African small grains. Hence, the inclusion of a separate Annex can be justified on the basis of inclusivity of all mycotoxin problems in different areas of the world and which may require more specific interventions than are contained in the General Code of Practice.

AGENDA ITEM 10: Proposed draft Code of practice for the prevention and reduction of mycotoxin contamination in spices (at step 4) CL 2017/28-CF 1

Position: Tanzania support having a Code of practice for the prevention and reduction of mycotoxin contamination in spices and will want the current revised COP which has included smoke drying, a common African practice, to be considered for advancement to step 4. We also support the other recommendations made by the EWG.

Issue & Rationale: The quest for COP for control of mycotoxins in spices started in the 8th CCCF where an EWG led by Spain and co-chaired by The Netherlands was established to prepare a discussion paper on the feasibility of a code of practice for mycotoxins in spices with specific annexes for consideration at CCCF 9. The discussion paper gave draft COPs to minimize mycotoxins, identified aflatoxin and ochratoxin A as the toxins to target and proposed a general outline for the draft COP. The EWG came to the conclusion that based on the available information it is now feasible to develop the COP.

AGENDA ITEM 11: Discussion paper on the establishment of maximum levels for mycotoxins in spices CX/CF/17/11/11

Position 1: Tanzania support the continuation of work for the establishment of MLs for aflatoxin B1, total aflatoxins and ochratoxin A in dried and dehydrated of a group of spices comprising of nutmeg, chilli and paprika, ginger, pepper and turmeric.

Issue & Rationale: The work on mycotoxins in spices started at CCCF 8 with submission of new work proposals by India and Indonesia for establishment of maximum limits for aflatoxin in spices and nutmeg respectively. The committee therefore set up an EWG chaired by India and co-chaired by Indonesia and EU to prepare a discussion paper for the next session on mycotoxins in spices. The paper titled "Discussion paper on mycotoxin contamination in spices (Prioritization for potential work in Maximum levels for mycotoxins in spices) made the following recommendations:

1. The priority list comprising of chili, paprika, nutmeg, ginger, turmeric, pepper, clove, garlic, sesame seed and mustard seed.

2. The committee may consider harmonizing MLs of aflatoxin and ochratoxin A in spices for protection of health of consumer and fairness in trade practices.

3. The Committee may establish MLs for aflatoxins (for Total Aflatoxins & Aflatoxin B1) and for ochratoxins (Ochratoxin A) in spices (dried or dehydrated form).

4. That in establishing MLs for mycotoxins in spices the Committee may consider not only the effect on health but also the consequences on trade and its effects on developing economies.

At CCCF 9, an EWG chaired by India and co-chaired by Indonesia and EU was established to prepare a discussion paper which will address the following:

1. Further clarify on which mycotoxins/spices combinations to establish MLs and provide rationale for the choices
2. Prepare a project document for establishment of MLs for mycotoxins in spices
3. Propose possible MLs to assist CCCF10 take decisions on new work

The EWG therefore provided a priority list of spices based on global occurrence and rejection due to aflatoxin and ochratoxin A contamination and importance with regards to international trade. The prioritized spices were categorized based on volume of data collected into

Group 1 (chilli, ginger, paprika, pepper and turmeric) and
Group 2. (caraway, celery seed, cloves, coriander seed, fenugreek and garlic).

Group 1 had more data while members in group 2 will require more information to understand the extent of risk due to mycotoxins. The EWG also provided two project documents for new works on establishment of MLs for aflatoxins and ochratoxin A in the two groups of spices. The justifications for the new works are to harmonize MLs to ensure fair practices in international trade and protect public health.

During the 10th session of CCCF, it was generally agreed that MLs be established for spices, however, there were needs for clarification on whether to set MLs for each spice in the priority list or for the priority group as a whole, and whether to set MLs for both total aflatoxins and aflatoxin B1 or aflatoxin B1 only. Therefore, the Committee agreed to establish an EWG chaired by India and co-chaired by EU to:

1. provide a rationale for selection of spices (chilli, paprika, ginger, nutmeg, pepper, turmeric)
2. provide rationale for selection of total aflatoxins and OTA
3. take into account the outcome of evaluation of aflatoxins from the 83rdmeeting of JECFA in 2016 (JECFA/83/SC)
4. consider trade aspects of existing national standards
5. Prepare a Project document for new work with proposals for MLs for spices.

The conclusions of the EWG

1. Based on data on frequency of occurrence and median concentration of Total aflatoxins, AFB1 and OTA in spices that were rejected in trade, rejections due to the toxins and estimated per capital consumption of spices and herb (data only from USA), the following spices: nutmeg, chilli and paprika, ginger, pepper and turmeric in group1, and (caraway, celery seed, cloves, coriander seed, fenugreek and garlic in group 2 were identified as the most significant with regards to abundance in spices, losses in trade and consumption.
2. Aflatoxins and ochratoxin A are the commonest mycotoxins contaminants in spices and are the major reasons for rejection of the product in international trade and should be targeted for mitigation
3. Since more countries support and have regulatory limits for both total aflatoxins and AFB1 than countries with that support and have MLs for only total aflatoxins, it is suggested that MLs be established for total aflatoxins, AFB1 and ochratoxins A. More so, AFB1 is the most toxic and carcinogenic of the aflatoxins.

4. In a questionnaire based survey conducted, there was more support for establishing MLs for group of spices rather than for individual spices. This position was further strengthened by the fact that 39 out 0f 41 have set national MLs for spices or all foods which include spices rather than for each spice. It will be more difficult setting for individual spices since there are no consumption data for each spice.
5. JECFA 83 did not evaluate mycotoxins in spices
6. Recommends the following MLs (20 µg/kg for total aflatoxins and 20 µg/kg for ochratoxin A) each of the spice in group 1 (nutmeg, chilli and paprika, ginger, pepper and turmeric)

7. Request CCCF to consider requesting JECFA to perform an exposure assessment for health impact on proposed MLs for spice(s)/mycotoxin(s) combinations.

8. The EWG proposes new work on the establishment of MLs for aflatoxin B1, total aflatoxins and ochratoxin A in dried and dehydrated nutmeg, chilli and paprika, ginger, pepper and tumeric

We supported the recommendations of the CCCF 9 on this matter, Africa will continue to support setting of MLs because they will protect public health and ensure fairness in international trade of spices in which Africa ranks second to Asia. We will continue to support establishment of limits as long as the proposed limits are achievable in Africa and data from the Continent are considered in the setting of the limits.

AGENDA ITEM 12: Discussion paper on maximum levels for methyl mercury in fish

Position 1: Tanzania request that JECFA should carry out trade impact assessments and exposure assessment (including data from Africa) for the proposed MLs.

Issue & Rationale: The 6th CCCF (2012) agreed to the development of a discussion paper on the review of the guideline level (GL) for methylmercury in fish and predatory fish through an EWG led by Norway and co-chaired by Japan for consideration and discussion at the 7th session with the view of identification of possible actions or new work on this issue. The current GLs for methylmercury in fish (1 mg/kg for predatory fish and 0.5 mg/kg for other fish species) were adopted in 1991, based on the Provisional Tolerable Weekly Intake (PTWI) of 3.3 µg/kg body weight.
In 2003, the Joint FAO/WHO Expert Committee on Food Additives (JECFA) revised the provisional tolerable weekly intake (PTWI) for methylmercury to 1.6 µg/kg body weight, based on the most sensitive toxicological end-point (developmental neurotoxicity) in the most susceptible species (humans) .
The 10th CCCF (2016) agreed that it would establish an ML for tuna, but that it was not ready at this point to submit a project document to the CAC for approval of new work, as it was necessary to determine whether it was possible to establish a single ML for tuna or whether it should be set for different species of tuna, and whether it was possible and appropriate to set MLs for canned tuna. The Committee agreed to establish an electronic working group, chaired by The Netherlands, and cochaired by New Zealand and Canada, working in English only to prepare a discussion paper on the matter.

The EWG prepared the discussion paper showing that:
1. It is possible to formulate different MLs for different subspecies namely, Alfonsino, Kingfish/Amberjack, Marlin, Shark, Dogfish and Swordfish
2. There is no need to establish an ML for canned tuna as contamination levels are generally low and canned tuna is consumed in smaller quantities than fresh or frozen fish
3. There is need to gather data on Methylmercury contamination in Spanish or King mackerel, Orange roughy and Gulf tilefish, as recent data were lacking to determine the need for MLs in these species
4. There is need to consider starting discussion on MLs for other species, namely, Cardinal fish (Epigonus telescopus), Inshore hagfish (Eptatretus burger), Ribaldo (Mora moro), Selachoidae (Pleurotremata), Toothfish (Dissostichus sp.) and Tusk (Brosme brosme), Barbel and Hapuku, and Anchovies, Bass, Bream, (Sea) catfish and Wolffish, Cod, Halibut, Ling, Monkfish, Mullet, Rays, Ribaldo, Sardines and Snapper.

The EWG recommends CCCF to decide to establish MLs based on ALARA or guided by risk/benefit, as both options have different consequences. As there was no agreement in the EWG on which option is preferred the group recommended two options for CCCF11 consideration, as follows.

Based on ALARA, the P95 values per subspecies which could be used as a starting point for establishing MLs are:

Species	**Proposed ML based on P95 (in mg/kg)**
Bigeye tuna, Atlantic Bluefin tuna and Southern Bluefin tuna:	1.2 or 1.3
Albacore tuna and other (than Atlantic and Southern) Bluefin tuna	0.9
Or: All tuna (based on worst case scenario)	1,2
Alfonsino	1.2 or 1.3
Kingfish/Amberjack	0.8
Marlin (based on methylmercury data only)	0.8
Shark	1.4
Dogfish	2.3
Swordfish	2.0

Guided by the FAO/WHO quantitative risk/benefit assessment, the MLs would be

Species	**Proposed ML based on risk/benefit (in mg/kg)**
Albacore tuna and other (than Atlantic and Southern) Bluefin tuna, Bigeye tuna, Alfonsino, Dogfish, Marlin, Shark, and Swordfish	0.3
OR:	
Albacore tuna and other (than Atlantic and Southern) Bluefin tuna, Bigeye tuna, Alfonsino, Dogfish, Marlin, Shark, and Swordfish	0.75 (number of servings per week to be restricted, the amount depending on EPA + DHA levels)

The EWG recommends to add a footnote to the higher MLs, indicating the need for additional risk management measures to protect health (e.g. consumption advice). One option could also be to indicate the amount of servings of fish that could be consumed safely based on the FAO/WHO risk benefit evaluation.

There was no agreement in the EWG if an impact assessment of proposed MLs should be performed by JECFA. Several members commented that, as the FAO/WHO expert consultation on risk benefit of fish consumption was performed in 2010, CCCF could examine if new information on the benefits of (EHA + DHA in) fish give cause to verify the values used in 2010.

It has been observed that none of the data used in determination of the proposed MLs originate from Africa. Therefore, there is an urgent need to generate data for fish from Africa and request JECFA to evaluate impact of different scenario of MLs on trade and health.

AGENDA ITEM 13: Discussion paper on non-dioxin like PCBs in the Code of Practice for the Prevention and Reduction of Dioxins and Dioxin-like PCB. CX/CF 17/11/13.

Position: Tanzania support further work on a Code of Practice.

Issue & Rationale: Polychlorinated biphenyls (PCBs) are widespread persistent environmental pollutants. They are members of the group known as Persistent Organic Pollutants (POPs) due to their long term survival in the environment. They have a wide range of adverse health effects including endocrine disruption, dermal toxicity and chloracne, and neurocognitive development problems in children. They are classified as human carcinogens (Group 1) by International Agency for Research on Cancer (IARC). Other than occupational exposure, exposure is mainly via food (90%), especially meat, dairy, fish and shellfish where they accumulate in the lipid components. Cereals, fruits and vegetables contain only low levels, whereas infants are exposed via breast milk.
The PCBs are chemically stable aromatic chlorinated hydrocarbons previously manufactured for their many industrial applications. The chlorination of the parent compound, biphenyl, can produce a total of 209 congeners, ranging from singly chlorinated to fully chlorinated structures. Although PCBs as a group are classified as POPs, some of the less substituted compounds exhibiting a degree of biodegradation. Stereochemically, the PCBs fall into two distinct groups, namely those in which rotation around the bond linking the two phenyl rings of the parent structure occurs and those in which this rotation is hindered by the pattern of chlorine substitution. The former congeners are able to form a planar structure like polychlorinated dibenzo-*p*-dioxins (PCDDs) and act toxicologically as PCDDs and are hence termed dioxin-like PCBs. The congeners that are unable to form the planar structure akin to PCDDs form a group termed nondioxin-like PCBs. The 57th JECFA established a joint provisional maximum tolerable monthly intake (PMTMI) of 70 pg/kg body weight for dioxins, furans and dioxin-like PCBs. Exposures were widely found to be near or over this level. The 80th JECFA evaluated the nondioxin-like PCBs and concluded that based on Margin of Exposure (MoE) estimates, exposure for adults and children were unlikely to be a health concern. For breast-fed infants, the MoEs were lower (greater exposure), but considered not sufficient to outweigh the benefits of breast feeding.