Risk-Based Food Profiling for Indonesia:
PATPI policy brief for the WHO public consultation

16th November 2026

Executive summary

The Indonesian Association of Food Technologists (PATPI) appreciates the opportunity to contribute to the World Health Organization's (WHO) consultation on food profiling. Reducing excessive dietary sodium and free sugars is an important public health objective. We recommend basing the model on measured food composition, actual dietary exposure and evidence relevant to each proposed measure. These principles reflect the diversity of Southeast Asian diets and the role of processing in safety, nutrient delivery and access (Ahrné et al., 2025; Henry et al., 2026; WHO, 2026a). The brief draws on Indonesian and international research, Codex and regulatory texts, publications from IUFoST and AIPG–AIPI, and the Food Industry Asia consultation draft (Food Industry Asia, 2026; AIPG–AIPI, 2024; IUFoST, 2026).

WHO Best Buys and Indonesia's Healthier Choice programme should apply transparent, evidence-based criteria to comparable foods. In an Indonesian audit, nine Healthier Choice instant noodles averaged 698 mg sodium per 100 g, 36.6% below the mean for 127 regular fried noodles. A product classified as ultra-processed can qualify as a healthier alternative within its category when it meets the applicable criteria (BPOM, 2026; Wibowo et al., 2024; WHO, 2024).

PATPI suggests no restrictions on Codex-consistent uses of colours, sweeteners and flavourings solely because they appear in an ingredient list. Safety applies to assessed uses, permitted levels and dietary exposure. Mineral fortification follows the Codex principles for essential nutrient addition. The trigger risks stigmatising compliant products and penalising producers whose reformulations lower free sugars (Codex Alimentarius Commission, 2008, 2015, 2026; WHO, 2026a).

A national analysis of 145,360 dietary recalls estimated that home-prepared foods supplied 73% of sodium. In a separate study of 323 South Jakarta residents, meals prepared outside the home supplied 49.8–64.6% of salt across study groups. WHO surveillance should cover staples, cooking oils, packaged foods and meals prepared outside the home. Local intake data should guide saturated-fat policy (Andarwulan et al., 2021; Prihatini et al., 2016; Pusat Data dan Sistem Informasi Pertanian, 2025).

PATPI advises against using NOVA to classify products for regulation or as the basis for dietary surveillance. The draft reports about 97% coverage of NOVA group 4 and suggests using the model to advance that group's moderation objective. Once adopted for surveillance, a category can become a default for labelling, marketing or procurement. Each measure requires its own evidence of risk and benefit (Henry et al., 2026; WHO, 2026a, pp. 9–10).

Section 1. Evidence on the draft criteria

Dietary exposure extends beyond packaged foods

In Indonesia's 2014 national recall analysis, average sodium intake was 2,764 mg per day and 52.7% exceeded 2,000 mg. More than 80% of adults sampled in Nganjuk exceeded 5 g salt per day based on urinary sodium. In a Semarang sample of 150 women with hypertension, seasonings, crackers and soy sauce were among the most frequently consumed high-sodium foods (Hendriyani et al., 2024; Prihatini et al., 2016; Sari et al., 2021).

Scope for sodium reformulation

A registry analysis of 3,850 products found that 7.4% of instant noodles met the WHO benchmark used in the study (Istiqomah et al., 2021). WHO's regional four-year ceiling for seasoned noodles is 1,730 mg sodium per 100 g as sold. The ceilings are 1,005 mg per 100 g for condiments such as chilli sauce and 6,325 mg per 100 g for soy and fish sauces (WHO Regional Office for South-East Asia, 2024).

Sugar and sweetener declarations

Of 58 sweetened ready-to-drink teas, about 17% combined sucrose with a second sweetener. In an audit of 70 drinks with a vitamin C claim, 74.3% exceeded 6 g total sugars per 100 mL. A Universitas Indonesia review found limited local evidence on sweetened beverages and health outcomes. A cross-sectional study of 100 Bandung pupils found no statistically significant association with overweight (Akhriani et al., 2016; Fadlillah et al., 2020; Hidayati, 2024; Sartika et al., 2022).

NOVA agreement is an unsuitable benchmark for health risk

Hariyadi identifies three limitations. NOVA provides no measurable threshold for processing intensity, combines formulation and processing markers, and groups foods with different compositions and dietary roles (Hariyadi, 2026a, 2026b; Monteiro et al., 2019). Adding sensory triggers raised the draft's coverage from 91.95% to 97.92%, or 5.97 percentage points. The reference set already includes products selected by ultra-processed food (UPF) markers. The gain describes classification coverage and leaves health effects unmeasured (WHO, 2026a, pp. 39–43, 50, 56).

Formulation and processing effects

IUFoST separates ingredient formulation from the measurable effects of processing, such as a change in nutrient profile. Its congress framework also addresses safety and affordability. Henry and colleagues show why these distinctions matter in Southeast Asia, where fortified staples, home cooking and informal food outlets all contribute to diets. The IUFoST framework remains under development (Ahrné et al., 2025; Henry et al., 2026; IUFoST, 2026).

Health effects depend on the diet and product group

In a 20-adult feeding trial, the ultra-processed diet increased intake by 508 kcal per day (Hall et al., 2019). In a 55-adult UK crossover trial, both diets met national dietary guidance. Weight loss was 1.01 percentage points greater after eight weeks on the minimally processed diet (Dicken et al., 2025). In a European cohort, hazard ratios for cancer and cardiometabolic multimorbidity per standard-deviation increase were 1.09 for beverages with sugar or non-sugar sweeteners (95% CI [1.06, 1.12]) and 0.97 for ultra-processed breads and cereals (95% CI [0.94, 1.00]). The trials compared whole diets, and cohort associations varied across products (Cordova et al., 2023).

Section 2. Evidence for the draft criteria

Page numbers refer to the WHO public consultation draft dated 2 November 2026.

Table 1 Nutrient thresholds and measurement

WHO draft page	Description	Evidence from Indonesia	References
20, 22–25 §3.1–3.2.6	The draft flags sodium above 1 mg per kcal or above 300 mg per 100 g. Category ceilings guide reformulation.	Soup noodles averaged 1,628 mg sodium per 100 g and Healthier Choice noodles 698 mg per 100 g in a 412-product retail audit. In a separate registry study, 7.4% met the WHO benchmark used there.	(Istiqomah et al., 2021) (Wibowo et al., 2024) (WHO Regional Office for South-East Asia, 2024)
23–24 §3.2.5	The sugars criterion is based on free sugars. The draft permits estimates when declarations are incomplete.	Across 30 liquid milk products, mean estimated added sugar was 0.15 g per 100 mL for plain milk and 6.11 g per 100 mL for flavoured milk. At those mean values, a 200 mL serving provides an estimated 0.30 g and 12.22 g, respectively.	(Asri et al., 2023) (WHO, 2026a)
20, 23, 28 §3.2.3, 4.2	The draft flags products with more than 10% of energy from saturated fat.	In 2023, 95.15% of Indonesia's population was recorded as consuming palm oil. Policies should account for the saturated fat from oils used in cooking as well as from packaged foods.	(Direktorat Jenderal Peternakan dan Kesehatan Hewan, 2024) (WHO, 2026a)
23 §3.2.4	The draft uses more than 1% of energy from trans fat as a product-profiling criterion.	Laboratory analysis found 11 of 130 selected foods above 2 g total trans fat per 100 g fat. One imported margarine–butter blend contained 22.68 g per 100 g fat, supporting a supply-wide industrial trans-fat ceiling.	(WHO, 2026a) (WHO Indonesia, 2024)

Table 2 Ingredient safety and reformulation

WHO draft page	Description	Evidence from Indonesia	References
14–15, 25–26 §1.3, 3.2.7	The draft allows specified flavourings, colours or sweeteners to trigger classification. PATPI calls for deletion.	Of 58 sweetened ready-to-drink teas, all contained sucrose and approximately 17% combined sucrose with a second sweetener. Presence alone gives no estimate of the dose consumed.	(Fadlillah et al., 2020) (WHO, 2026a)
25–26 §3.2.7–3.2.8	Warnings should reflect nutrient content. Codex provides conditions for safe essential nutrient addition.	In a label audit of 70 drinks with a vitamin C claim, 74.3% exceeded 6 g total sugars per 100 mL. Measured sugars provide a basis for an applicable warning.	(Codex Alimentarius Commission, 2015) (Hidayati, 2024)
26, 60–81 §3.2.8, Appendix 1	Risk assessment uses chemical identity, authorised use and dietary exposure.	Among the tea products using sweetener blends, the reported second sweeteners were fructose (60%), sucralose (20%) and steviol glycosides (20%) in the study's Figure 2B. The blend composition alone does not establish exposure.	(Codex Alimentarius Commission, 2026) (Fadlillah et al., 2020)

Section 3. Evidence for regulatory application

Page numbers refer to the WHO public consultation draft dated 2 November 2026.

Table 3 Model coverage and dietary exposure

WHO draft page	Description	Evidence from Indonesia	References
9–10, 41–43, 58	Overlap with NOVA group 4 is a classification statistic. It cannot validate a health-risk threshold.	In a four-city audit of 8,077 packaged products, the WHO South-East Asia model flagged 90.1%, the Pan American model 90.7% and the study's best-practice model 94.6%. Among 1,626 sweetened beverages, 94.2% met the South-East Asia criteria for action and 43.6% were grade D under the September 2024 draft Nutri-Level criteria.	(CISDI, 2026) (Hariyadi, 2026b) (WHO, 2026a)
39–42, 59, 85	The model's coverage depends on the quality and completeness of declarations.	Indonesia supplied 32,155 launch records. Of 22,287 records with ingredient lists and nutrient declarations, 13,930 (62.5%) passed data validation. Among these, 12,701 (91.2%) exceeded at least one nutrient threshold.	(WHO, 2026a)
20, 29–30, 33	Dietary surveillance should estimate actual intake across food settings.	In Jakarta's 2014 dietary survey, culinary ingredients supplied 68.9% of sodium. Ultra-processed foods supplied 18.4% of sodium and 15.7% of energy. In a separate South Jakarta study, meals prepared outside the home supplied 49.8–64.6% of salt across groups.	(Andarwulan et al., 2021) (Setyowati et al., 2018)

Table 4 Labelling and child food environments

WHO draft page	Description	Evidence from Indonesia	References
27–30 §4.1–4.4	Explain the nutrient and its contribution to daily intake. Apply the same evidence requirements to endorsements.	Among 4,039 participants, correct product ranking improved by 16.3 percentage points with warnings (95% CI [13.5, 19.0]) and 13.9 with multiple traffic lights (95% CI [11.2, 16.6]).	(Colozza et al., 2026) (Mahkamah Konstitusi RI, 2026)
27–29, 32–33	Child-marketing criteria should address measurable nutrient excess and actual marketing exposure.	In an audit of 295 Indonesian social media advertisements, 17 of 20 brands promoted at least one product ineligible under the regional WHO profile for marketing to children.	(Guo et al., 2025) (WHO Regional Office for South-East Asia, 2017)
26, 28–33	Procurement criteria can recognise fortification. The draft excludes foods for special dietary uses.	A 24-village West Java evaluation found that vitamin A from fortified oil supplied an average 40% of recommended intake for children aged 24–59 months. Menu standards can retain documented fortification benefits.	(Henry et al., 2026) (Sandjaja et al., 2015) (WHO, 2026a)

Section 4. Recommendations for the WHO model

Redefine IFM using evidence for each measure

PATPI calls for WHO to revise sections 3.2.7–3.2.8 and delete the automatic trigger for flavourings, colours and sweeteners. IFM eligibility should be independent of NOVA group 4 status and UPF markers. A product should fall within a regulatory measure only when it meets an explicit criterion supported by evidence relevant to that measure. Comparable products should be assessed against the same criteria (Ahrné et al., 2025; Codex Alimentarius Commission, 2007; Henry et al., 2026; WHO, 2026a).

Apply fair criteria to Best Buys and Healthier Choice

WHO Best Buys include reformulation and front-of-pack nutrition labelling. Both benefit from published criteria for each food category, comparable serving information and credit for measured improvements. In the Indonesian noodle audit, soup varieties averaged 1,628 mg sodium per 100 g. At that concentration, an 80 g pack supplies about 1,302 mg, or 65% of the WHO adult daily benchmark. At the same pack weight, the Healthier Choice mean of 698 mg per 100 g gives about 558 mg. Eligible alternatives should meet the same nutrient and safety criteria, with particular attention to affordability. Monitor actual intake and reformulation to assess policy effects (BPOM, 2026; Wibowo et al., 2024; WHO, 2012, 2024).

Recognise measured sugar reductions

Report free sugars alongside total sugars. Exclude intrinsic lactose and include sugars in fruit juice and concentrates. In the UK, the share of potentially levy-eligible drinks above 5 g sugars per 100 mL was 33.8 percentage points below the estimated counterfactual after the levy. A product that meets the free-sugar threshold after reformulation should qualify for a change in warning status even if an authorised sweetener remains (Asri et al., 2023; Codex Alimentarius Commission, 2024; Scarborough et al., 2020; WHO, 2026a).

Respect Codex and national risk assessment

Codex use provisions draw on JECFA's assessments of additive safety and dietary exposure. Accept colours and sweeteners within the authorised food categories and use levels and the assessed exposure. Apply the relevant Codex guidance for flavourings and mineral fortification (Codex Alimentarius Commission, 2007, 2008, 2015, 2026). For aspartame, JECFA reaffirmed an acceptable daily intake of 0–40 mg/kg body weight. High-exposure estimates were up to 20 mg/kg per day for children and 12 mg/kg per day for adults. Any tighter restriction requires evidence of risk at relevant exposure and a proportionate response (JECFA, 2023; WHO, 2023b).

Limit industrial trans fat across the food supply

PATPI recommends a legal ceiling of 2 g industrial trans fat per 100 g total fat. WHO Indonesia found total trans fat above that concentration in 11 of 130 selected products. An imported margarine–butter blend contained 22.68 g total trans fat per 100 g fat (WHO Indonesia, 2024).

Identify missing data without imputing risk

Only 13,930 of 22,287 Indonesian records with ingredient lists and nutrition declarations passed validation. Among them, 12,701 exceeded at least one nutrient threshold. Use an unassessable outcome for missing values and apply warnings for verified exceedances (WHO, 2026a, p. 85).

Section 5. Applying the model in Indonesia

Apply the existing Indonesian regulatory framework

Government Regulation No. 28 of 2024 provides the basis for limiting sugar, salt and fat. Ministry of Health Decree No. 301 of 2026 covers voluntary Nutri-Level labelling for ready-to-serve beverages. BPOM Regulation No. 10 of 2026 provides for mandatory Nutri-Level on covered packaged beverages following a transition and retains the voluntary Healthier Choice logo. The Constitutional Court requires colour and symbol labelling for covered products. BPOM Regulation No. 11 of 2019 governs permitted additive uses (BPOM, 2019, 2026; Kementerian Kesehatan RI, 2026a, 2026b; Mahkamah Konstitusi RI, 2026; Pemerintah RI, 2024; WHO Indonesia, 2026).

Help consumers manage excess intake

In an Indonesian experiment, warnings improved correct product ranking by 16.3 percentage points and multiple traffic lights by 13.9. In Chile, purchases of beverages high in targeted nutrients fell 23.7% below the projected trend after a package of labelling, marketing and school sales measures (Colozza et al., 2026; Taillie et al., 2020). Some Chilean participants found danger wording too strong. In a Canadian experiment, at least 88% across formats rated labels about right or insufficiently strong (Acton & Hammond, 2018; Reyes et al., 2019). PATPI recommends naming the nutrient, stating its amount per serving and explaining how portions and frequency affect daily intake. Campaign messages that imply total avoidance can obscure WHO's diet-wide intake guidance. Suitable wording includes "Choose a smaller portion or a lower-sodium option." (Codex Alimentarius Commission, 2024; WHO, 2012, 2015)

Base child-marketing rules on exposure

In 295 Indonesian social media advertisements, 17 of 20 brands promoted a product that failed the regional nutrient profile used by the researchers. PATPI proposes criteria based on nutrient excess and marketing exposure, applied consistently across digital media and schools (BPOM, 2021; Boyland et al., 2022; Guo et al., 2025; WHO, 2026b; WHO Regional Office for South-East Asia, 2017).

Measure the effects of sodium policy

In a Chinese school trial, measured salt intake fell by 1.9 g/day in children and 2.9 g/day in adult relatives relative to controls. PATPI recommends using dietary intake and 24-hour urinary sodium to assess the impact of sodium policies (He et al., 2015; AIPG–AIPI, 2024; Sari et al., 2021).

Keep fortification and therapeutic nutrition accessible

PATPI recommends retaining safe, affordable fortified staples that meet programme standards (Henry et al., 2026; Bappenas & UNICEF Indonesia, 2024). In 24 West Java villages, vitamin A deficiency ranged from 6.5% to 18% across groups before fortified oil and from 0.6% to 6% after introduction (Sandjaja et al., 2015). Iodised household salt supplied an estimated 49% of recommended iodine intake for school-aged children (Sutrisna et al., 2018; WHO, 2014). WHO should explicitly recognise ready-to-use therapeutic foods under the special-dietary-use provision (Henry et al., 2026; WHO, 2023c, 2026a).

Section 6. Dietary surveillance and saturated fat

Base surveillance on what people actually eat

Consider an Indonesian family that eats plain rice at all three meals and obtains more than half its daily energy from this minimally processed staple. In that household, less than half of daily energy can come from all other foods combined, including any ultra-processed foods (Monteiro et al., 2019). Nationally, cereals, including rice, provided 39.3% of energy in the March 2025 household survey (Pusat Data dan Sistem Informasi Pertanian, 2025). In a 2014 Jakarta study, foods classified as ultra-processed supplied 12.1% of energy among 882 adults aged 19–55. In the U.S. national survey, the estimate was 53.0% for adults aged 19 and older in 2021–2023. Sweet bakery products alone supplied 5.2% of energy for those U.S. adults. The surveys differ in geography, age coverage, years and classification methods (Setyowati et al., 2018; Williams et al., 2025). PATPI recommends representative dietary recalls that capture recipes and portions for staples, side dishes, cooking oils, condiments, drinks and snacks. For example, home-prepared and commercially formulated French fries may use different ingredients. WHO should use measured contributions to energy and nutrient intake to set national priorities and exclude NOVA status as a trigger for action (Henry et al., 2026; Prihatini et al., 2016).

Target the sources of saturated fat that matter locally

In Indonesia, 95.15% of the population was recorded as consuming palm oil in 2023. Household use of palm or sunflower cooking oil averaged 11.91 litres per person in 2024. These figures describe use and volume. In a separate U.S. analysis of 2017–2020 dietary data, dairy supplied 28.4% of saturated fat and meat supplied 22.1% (Direktorat Jenderal Peternakan dan Kesehatan Hewan, 2024; Pusat Data dan Sistem Informasi Pertanian, 2025; Wambogo et al., 2023). Section 3.2.3 of the draft applies a threshold of more than 10% of an individual product's energy from saturated fat. PATPI recommends reporting grams per typical serving and using national intake data to identify the main dietary sources. This approach captures cooking oils and mixed dishes alongside meat, dairy and packaged foods. It also gives countries a basis for prioritising measures where they will reduce exposure most (WHO, 2026a, pp. 20, 23, 28).

Use evidence on the specific fat and its replacement

In a meta-analysis of 16 trials, LDL cholesterol was 10.47 mg/dL higher with coconut oil than with nontropical vegetable oils (95% CI [3.01, 17.94]) (Neelakantan et al., 2020). For palm oil, the difference versus oils low in saturated fat was 0.24 mmol/L (95% CI [0.13, 0.35]) (Sun et al., 2015). In a 54-trial network meta-analysis, both oils yielded lower LDL cholesterol than butter at equal energy intake (Schwingshackl et al., 2018). In chocolate research, one cocoa butter sample contained 37.3% stearic acid, 25.4% palmitic acid and 33.5% oleic acid. Nutrition criteria should assess the finished chocolate, including saturated fat and free sugars per serving (Chen et al., 2021). In the revised PREDIMED analysis of 7,447 high-risk adults, the Mediterranean diet with extra-virgin olive oil had a major cardiovascular event hazard ratio of 0.69 (95% CI [0.53, 0.91]) versus advice to reduce dietary fat. The estimate describes the full dietary intervention (Estruch et al., 2018).

Support feasible substitutions and preserve fortification

PATPI recommends applying WHO's diet-wide goal of at most 10% of energy from saturated fat. Procurement and reformulation can favour affordable oils richer in unsaturated fats for suitable culinary uses. Consumer guidance should address the amount of oil used, and changes to the oil supply should preserve access to vitamin A fortification (Bappenas & UNICEF Indonesia, 2024; Sandjaja et al., 2015; WHO, 2023a).

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