# In focus

Front of pack labelling, the obesity epidemic and globalisation

Key information for food and beverage manufacturers as the global picture becomes more complex

**leatherhead
food research**
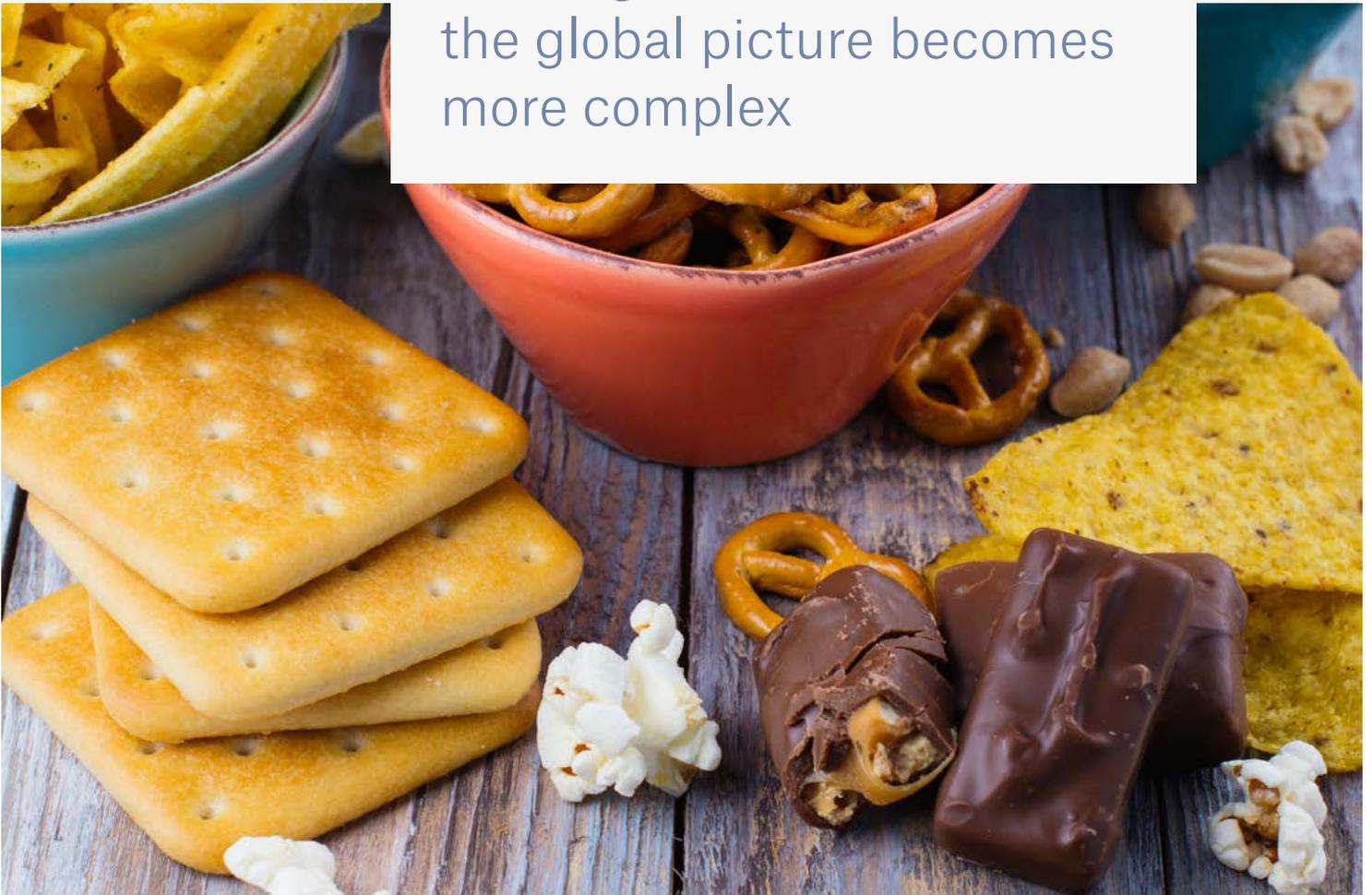
With governments around the world taking steps to curb obesity levels, front of pack labelling for food and drink products is under the spotlight. Recommendations are evolving fast in different regions, and a lack of cohesion brings challenges for global market strategies. This white paper looks at recent developments in three key markets: Australia and New Zealand, Latin America and the EU.
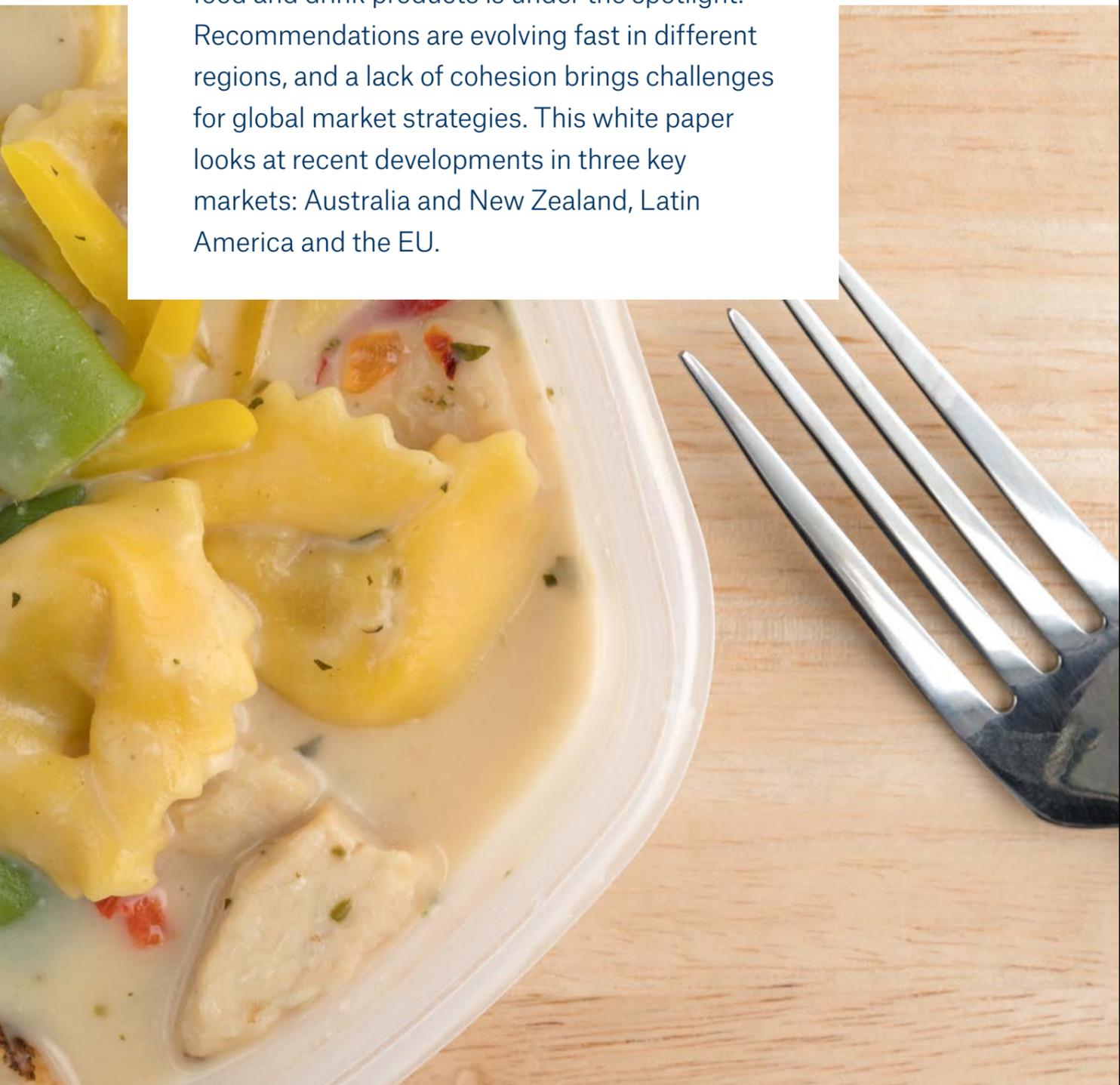
Empowering consumers to make informed choices

Obesity is now a global problem and governments worldwide are looking at ways to address it. Front of pack labelling on food and beverage products is widely seen as a vital tool, enabling consumers to make informed decisions about what they eat and drink. However, recommendations vary between countries and regions. Understanding how labelling models differ, and how products might be affected, is essential for effective and efficient globalisation.

This white paper outlines current front of pack labelling models adopted in Australia and New Zealand, Latin America and Europe. We consider the difficulties encountered when developing a consistent approach that accounts for the unique health profiles of individual products. And we look at the impact on the globalisation strategies of food and beverage businesses.

The obesity epidemic

Worldwide obesity levels have tripled since 1975[1]; in 2016, 1.9 billion adults were overweight and 650 million obese. This equates to 39% and 13% of the global adult population respectively.

Currently more people die from excess weight than from being underweight. In 2019, 38 million children under five were overweight or obese. Almost half of these children live in Asia, and Africa has seen a 24% increase in childhood obesity. What was once considered a high-income country problem has spread to low- and middle-income countries.

Without effective interventions at a governmental level, obesity figures look set to continue rising. Decisive steps are being taken in an attempt to reverse this trend.

[1]WHO (2020). Obesity and overweight. [online] WHO, Available at: https://www.who.int/news-room fact-sheets/detail/obesity-and-overweight (Accessed 10 December 2020).

Global snapshot

The Australia and New Zealand front of pack labelling model has been in operation for five years and is now under review. The same is true of Mexico's model, whereas Brazil introduced its scheme more recently. In Europe, the EU is developing the Nutri-Score model which has been adopted by a variety of countries.

Each of the models considered here is based on the idea of scoring nutrients in relation to their health benefits.

Australia and New Zealand: The Health Star Rating System

Australia and New Zealand's Health Star Rating System was first introduced in June 2014 on a voluntary basis. The goal is to make nutritional information on pre-packaged foods easier to understand, as well as making product comparison more straightforward. Various graphics are used to convey information, as illustrated in Figure 1.

The Health Star Rating System

This front of pack labelling system provides an overall nutritional profile for packaged foods rating them from 0.5 stars to 5 stars. The higher the rating the healthier the food. It was developed for processed pre-packaged products containing more than one ingredient. Products made of a single ingredient (e.g. oil) or products with no inherent nutrition value (e.g. coffee or tea) are excluded as they cannot be reformulated to achieve a better rating. Additional products that should not display a Health Star Rating include infant formulas and alcoholic beverages.

Figure 1 - Front of pack nutritional labelling used in Australia and New Zealand

How the rating is calculated

A Heath Star Rating calculator was developed by the Front of Pack Labelling Technical Design Working Group with input from Food Standards Australia New Zealand and other nutrition experts. It uses an algorithm to assess a product's levels of energy, saturated fat, sodium and total sugars together with positive components such as fruit, vegetable, nut or legume content, as well as dietary fibre and protein. Alongside the launch of the calculator, a Guide for Industry was published to support its use.

Recent developments

A formal review of the system was carried out in 2019[2] after five years of implementation. The findings were mostly positive, and it was recommended to continue on a voluntary basis rather than making the system mandatory. However, the review noted that uptake is not yet sufficient for consumers to make effective comparisons of similar products. Consequently, clear uptake level targets have been established with a recommendation to make the system mandatory if 70% of target products don't voluntarily adopt it within five years.

The report also prompted several changes to the way calculations are made. Recalculations are now needed for some products in line with a new Implementation Plan endorsed by the Australia and New Zealand Ministerial Forum on Food Regulation. For instance, fresh, frozen or canned fruits and vegetables can now receive a higher rating. Total sugars and sodium are more strongly penalised and dairy categories have been redefined and rescaled. Changes have also been made to the way the rating is calculated for non-dairy beverages. The start date for the Implementation Plan was 15 November 2020, and the calculator and style guide have been redeveloped to accommodate the new requirements.

[2]MPConsulting (2019). Health Star Rating System Five Year Review Report [online] Available at: http://www.healthstarrating.gov.au/internet/healthstarrating/publishing.nsf/Content/D1562AA78A574853CA2581BD00828751/$File/Health-Star-Rating-System-Five-Year-Review-Report.pdf (Accessed 10 December 2020)

Latin America: Front of pack labelling in Mexico and Brazil

Mexico

Mexico is a pioneer in front of pack nutrition labelling for pre-packaged food in Latin America. Its initial system was introduced in 2014 with some success. However, it was not clear enough for consumers, which generated confusion and concern. As a result, the government developed a simpler system which is easier to understand. It also adopted different nutrition profiles based on the Nutrient Profile of the Pan American Health Organization (PAHO).

Recent developments

The new front of pack nutrition labelling system was published by The Federal Commission for Protection against Sanitary Risk (COFEPRIS) in March 2020 and applied from 1 October 2020. It was passed as an amendment of the Official Mexican Standard NOM-051-SCFI/SSA1-2010 of 27 March 2020 on labelling of foods and non-alcoholic beverages.

Information is displayed on the top right side of a product's main exhibition panel and should appear as shown in Figure 2. It must include the text "EXCESO" (high in), followed by "CALORÍAS" (calories), "AZÚCARES" (sugars), "GRASAS SATURADAS" (saturated fats), "GRASAS TRANS" (trans fats), "SODIO" (sodium); and the signature of the SECRETARÍA DE SALUD (Health Secretariat).

Products which must be labelled include those containing added sugars, fats or sodium and those that met the nutritional profiles for energy value, added - sugars, fats, trans fat and sodium. Table 1 illustrates the relevant nutritional profiles.

Figure 2 - Mexico's nutritional labelling system

	Energy	Sugars	Saturated fat	Trans fat	Sodium
Solids 100 g	≥ 275 total kcal	≥ 10% total energy from free sugars Except beverages with < 10 kcal of free sugar	≥ 10% total energy from saturated fats	≥ 1% total energy from trans fats	≥ 350 mg of sodium Zero calories beverages: ≥ 45 mg of sodium
Liquids 100 ml	≥ 70 total kcal or ≥ 10 kcal of free sugar				

Table 1 - Nutritional profiles of products that require nutritional labelling in Mexico and Brazil

Certain food products are exempt from the front of pack nutrition labelling requirements. Some of those include infant formulas, vegetable oils, sugar, honey, among others. A full list can be found under Official Mexican Standard NOM-051-SCFI/SSA1-2010.

Brazil

Following six years of discussion, the Brazilian Health Surveillance Agency's (Anvisa) Board approved a new regulatory framework for food labelling on 8 October 2020. Foods and beverages with high levels of added sugar, sodium and/or saturated fat will have to carry mandatory warnings. The aim is to ensure consumers are better informed about ingredients that may impact their health and to avoid misinterpretation of nutritional information.

The new rules will be in place within 48 months for SMEs and 24 months for other businesses. Transition periods will begin when the approved acts are published in the Federal Register. Products already on the market will have a 12-month timeframe to make necessary adjustments. However, products destined exclusively for industrial processing or food services must carry adequate information as soon as the regulations come into force. This is to ensure that manufacturers understand the nutritional profile of raw materials and ingredients used in their products.

Several more Latin American countries are looking at front of pack labelling schemes. It is important to keep track of developments and understand variations between different models to establish the impact on individual products and product categories.
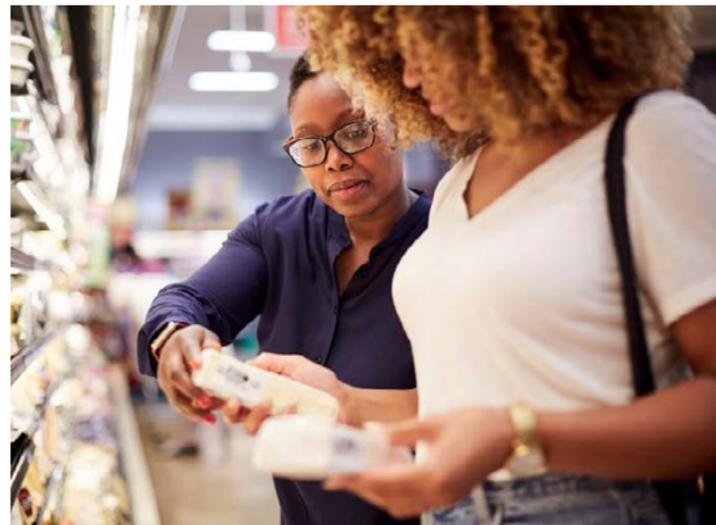
EU: The Nutri-Score Model

Nutri-Score is a five-level nutrition labelling system, ranging from A (healthy) to E (unhealthy) with an associated green-amber-red colour scheme.

A labelling system of this type was first proposed in France in 2014, then adopted in 2016 as part of a law to modernise its health system.

In 2016, following agri-food industry requests to delay Nutri-Score implementation, the French Ministry of Health agreed to conduct a study comparing several labelling systems. The study's steering group and scientific committee included representatives of the food industry. In September 2016, research was conducted in 60 supermarkets in four regions of France over a 10-week period to compare Nutri-Score with three alternative labelling systems: SENS, Nutri-Couleurs44 and Nutri-Repères. The study concluded that Nutri-Score was the best approach and its use on food packaging was authorised.

The following year, several supermarket and agri-food brands (Intermarché, Leclerc, Auchan and Fleury Michon) committed to the implementation of Nutri-Score across product portfolios. In February 2018, 33 agro-food and distribution companies followed suit. Nestlé did the same in 2019, having been previously opposed; then at the start of 2020 Kellogg's announced that it will adopt Nutri-Score on all products by the end of 2021.

Nutri-Score has performed well in further comparative scientific studies. It obtains the best results for consumer comprehension of foods' nutritional quality across different socio-cultural environments.

Following uptake in France, Nutri-Score was introduced in countries including Belgium, Spain, Germany and The Netherlands. Its use is also recommended by the World Health Organization. Currently, EU regulations do not allow Member States to make this system compulsory; they can only recommend it and guide its use.

Nutri-Score explained

Nutri-Score is a five-colour coded system ranging from green to amber to red with five associated letters 'A, B, C, D and E'. Green/A represents food with the best nutritional quality, while Red/E is used for products containing high quantities of energy, sugar, saturated fats or sodium.

Colour and letter qualifications are allocated according to an algorithm which assigns points based on the nutritional composition of 100g of the product.

The algorithm assesses favourable and unfavourable attributes.

Unfavourable: calories, sugars, saturated fats and sodium. Each is given points from 0-10.

Points	Energy (kJ)	Sugars (g)	Energy (kJ)	Sugars (g)	Saturated fats (g)	Saturated fats / Lipids (%)	Sodium (mg)
0	≤ 335	≤ 4.5	≤ 0	≤ 0	≤ 1	< 10	≤ 90
1	> 335	> 4.5	≤ 30	≤ 1.5	> 1	< 16	> 90
2	> 670	> 9	≤ 60	≤ 3	> 2	< 22	> 180
3	> 1005	> 13.5	≤ 90	≤ 4.5	> 3	< 28	> 270
4	> 1340	> 18	≤ 120	≤ 6	> 4	< 34	> 360
5	> 1675	> 22.5	≤ 150	≤ 7.5	> 5	< 40	> 450
6	> 2010	> 27	≤ 180	≤ 9	> 6	< 46	> 540
7	> 2345	> 31	≤ 210	≤ 10.5	> 7	< 52	> 630
8	> 2680	> 36	≤ 240	≤ 12	> 8	< 58	> 720
9	> 3015	> 40	≤ 270	≤ 13.5	> 9	< 64	> 810
10	> 3350	> 45	> 270	> 13.5	> 10	> 64	> 900

■ Specific limit for beverages   ■ Specific limit for fats

Favourable: proteins, fibres, fruits, vegetables, legumes, nuts, certain oils (rapeseed, olive, nut). Each is given points from 0-5.

Points	Fruits, vegetables (%)	Fruits, vegetables (%)	Fibre (g)	Proteins (g)
0	≤ 40	≤ 40	≤ 0.7	≤ 1.6
1	> 40		> 0.7	> 1.6
2	> 60	> 40	> 1.4	> 3.2
3	-		> 2.1	> 4.8
4	-	> 60	> 2.8	> 6.4
5	> 80		> 3.5	> 8.0

■ Specific limit for beverages

Once the points assessment is complete, a final score is allocated considering the following data:

Recent developments

Nutri-Score has faced issues related to poor outcomes for certain foods, including cheese and olive oil. However, national authorities have been discussing ways to amend points generated by the algorithm for such products.

In January 2019, new food recommendations were published by Public Health France (SPF). Among these is a recommendation to 'use more rapeseed oil, walnut oil and olive oil [and] limit the consumption of products classified D or E according to the Nutri-Score'.

However, there was a discrepancy here as olive and nut oils were classified D according to Nutri-Score, while rapeseed oil was classified C.

The General Directorate of Health (DGS) proposed a modification of the Nutri-Score algorithm to correct this. It allowed olive oil and walnut oil to move from category D to category C, without other food products having their Nutri-Score modified.

Following this, the French Agency for Food, Environmental and Occupational Health & Safety (ANSES) issued an Opinion concluding that the modifications are acceptable. To further enhance consistency, it advised integrating rapeseed oil, walnut oil and olive oil with calculations for the 'positive' component of the score. An Order published in August 2019 modified the Nutri-Score calculation, with the percentage of rapeseed, walnut and olive oils considered alongside that of vitamins, fruits, vegetables, legumes and nuts.

As the nutrition and health trend continues gaining momentum, manufacturers need to place greater focus on nutritional profiling to meet consumer demands. Nutri-Score provides a proven framework for use on product packaging to promote nutritional quality. As it is still voluntary at present, further improvements and adaptations from national governments are expected.

Front of pack labelling and globalisation

It's more than 30 years since the first front of pack logo was introduced by Sweden (Nordic Keyhole) to encourage healthy eating. Over the years, the trend has shifted from a focus on healthy food choices to warning of unhealthy food choices. This was first triggered by the UK in 2006 with the Food Standards Agency's 'traffic light scheme' and has evolved into warning statements such as those seen in Latin American markets.

The WHO recommends implementation of front of pack nutrition labels to guide consumers towards healthier food choices. However, there is limited guidance and capacity for policymakers and regulators, coupled with the possibility of legal challenge from food industry stakeholders that are affected. Consequently, global divergence on this matter is growing, as this white paper demonstrates.

We've considered just a small selection of the front of pack labelling and nutrient profiling approaches used globally. While there is a lack of consistency in criteria, they do share a common goal of educating and informing consumers in a bid to reduce obesity levels. The models also aim to encourage manufacturers to reduce fats, sugars and salt in

products while increasing nutrients that support positive nutrition, such as fibre, fruit and vegetables. An understanding of the different models is central to globalisation. It is an important piece of the jigsaw that needs to be carefully considered when entering new markets.

Historically, many food and beverage companies have focused reformulation work on the removal of fats, sugars and salt without considering the addition of positive nutrients. There is an opportunity to enhance the nutrition profile of products in a more holistic way moving forward.

COVID-19: A new perspective

Over the past two decades, more than 30 front of pack nutrition labelling systems have been established globally, but with little impact on soaring obesity levels.

In 2020, links between COVID-19 mortality and obesity underlined the desperate need for improvements here. It is vital that policymakers and the food industry work together on comprehensive strategies to prevent diet-related non-communicable diseases.

How Leatherhead can help

- Front of pack nutrient labelling, along with other matters related to obesity, are a high priority for policymakers. Leatherhead can monitor developments and conduct pre-assessment to qualify potential impacts on your business and support the advocacy process

- We can help you apply front of pack nutrition labelling globally by identifying risks and opportunities to discover the most efficient means of implementation

- We can develop/review global nutrition policies. Our horizon scanning activity ensures we understand likely changes in the short, medium or longer term and the potential impact on your business

- Our literature reviews enable you to keep up-to-date with new research papers and ongoing studies to help inform product development. We offer dedicated nutrition horizon scanning and can provide direct access to academics involved in current work
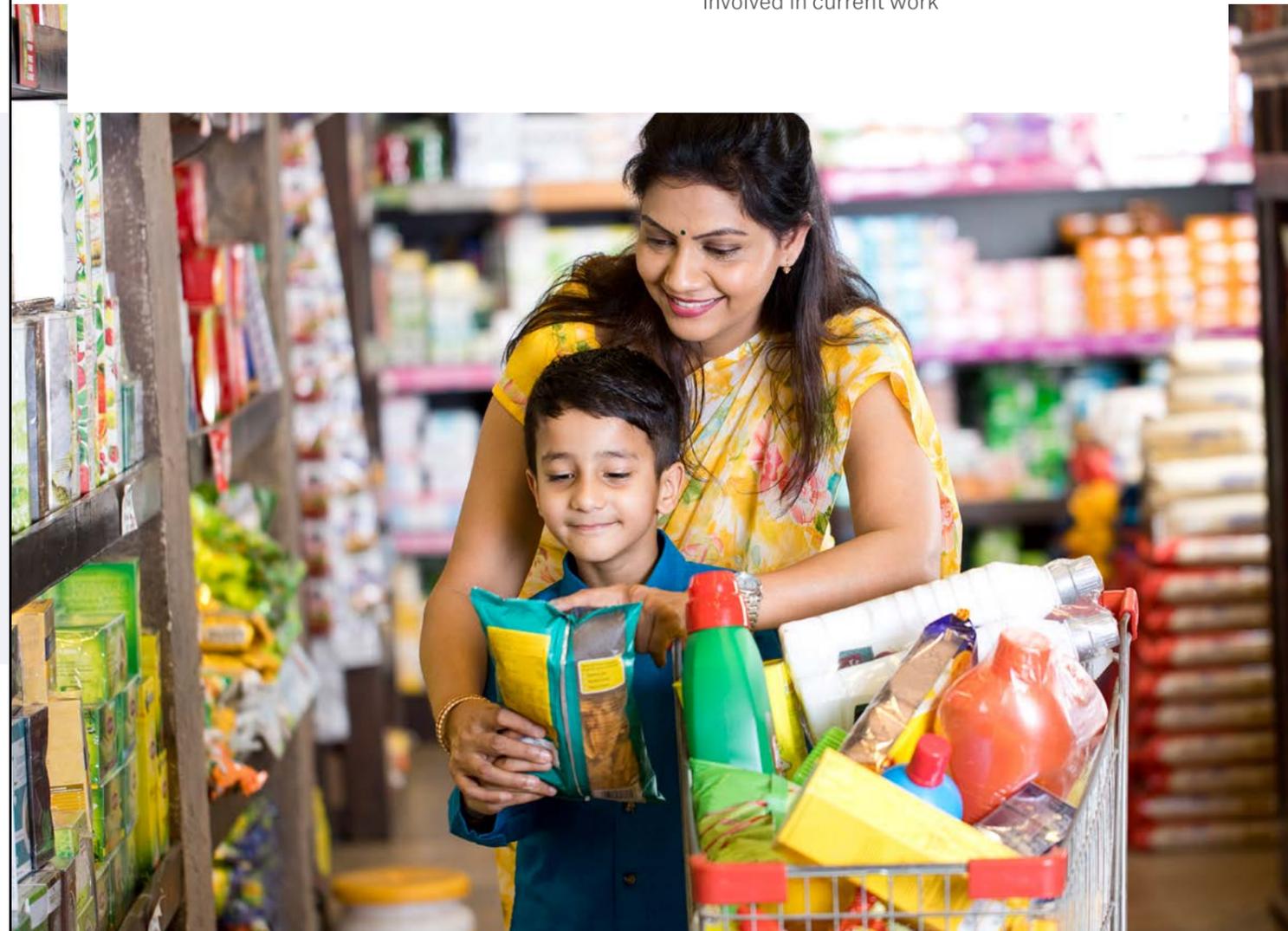
About Leatherhead Food Research ⌐

Leatherhead Food Research provides expertise and support to the global food and drink sector with practical solutions that cover all stages of a product's life cycle from consumer insight, ingredient innovation and sensory testing to food safety consultancy and global regulatory advice. Leatherhead operates a membership programme which represents a who's who of the global food and drinks industry. Supporting all members and clients, large or small, Leatherhead provides consultancy and advice, as well as training, market news, published reports and bespoke projects. Alongside the member support and project work, our world-renowned experts deliver cutting-edge research in areas that drive long term commercial benefit for the food and drink industry. Leatherhead Food Research is a trading name of Leatherhead Research Ltd, a Science Group Company.

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