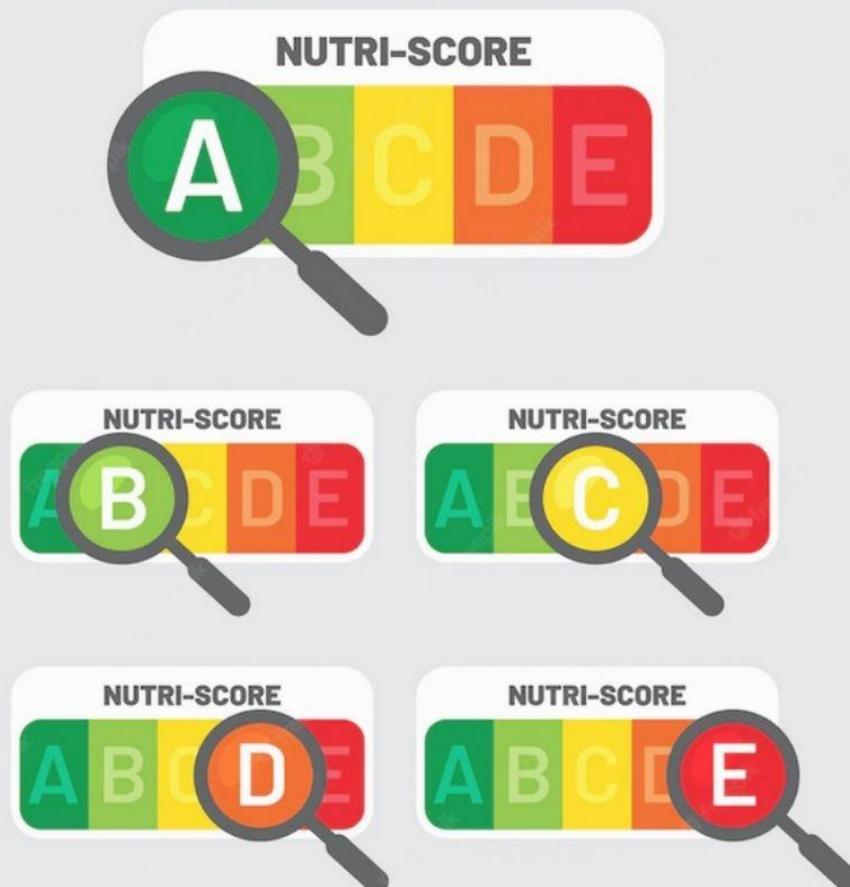
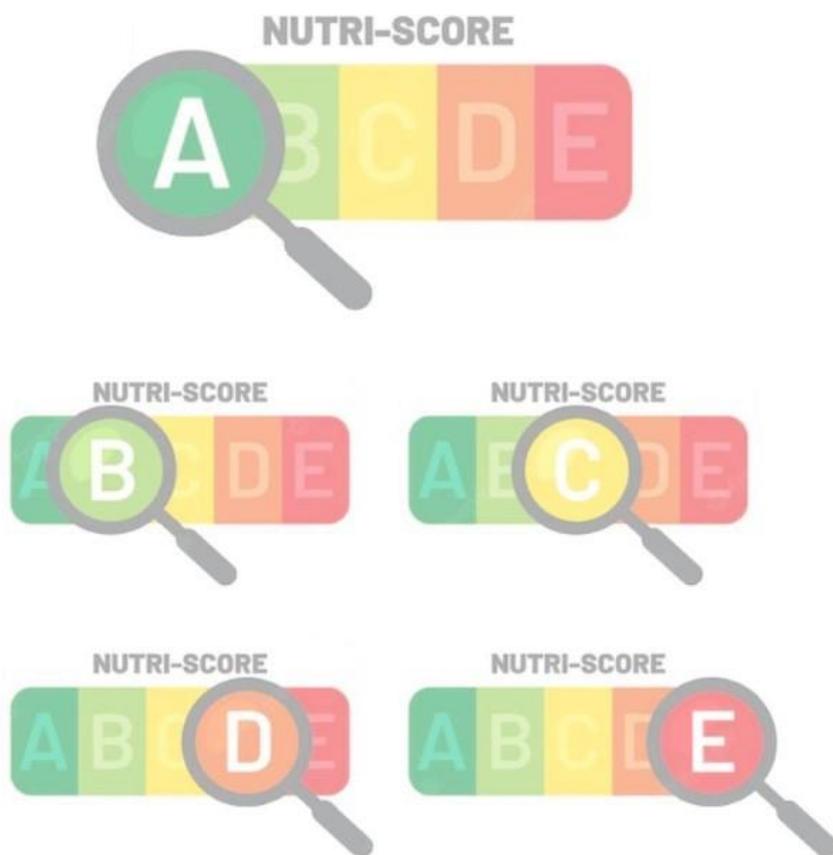


REPORT - SEPTEMBER 2022

# (MIS)UNDERSTANDING NUTRI-SCORE

Analysis of the algorithm's shortcomings





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# Introduction

According to the World Health Organization (WHO), obesity and overweight have reached epidemic proportions on a world scale. The rising concern on this phenomenon is due to its association with chronic diseases, including cardiovascular disease, diabetes mellitus type 2, high blood pressure and certain types of cancer<sup>1</sup>.

Unhealthy diets, characterized by intake of food with high fat, caloric and sugar content, and lack of regular physical activity are among the main causes of such diseases. In May 2004, the 57th World Health Assembly (WHA) approved the World Health Organization (WHO) Global Strategy on Diet, Physical Activity and Health<sup>2</sup>, recognizing the heavy and growing burden of non-communicable diseases.

Within the framework of this strategy, improved nutrition labelling, meant as a description intended to inform the consumer about a food's nutritional properties, has been recommended by the WHO and the Pan American Health Organization (PAHO) as a tool to prevent NCDs and to help consumers make healthier food choices. However, the adoption of stricter labelling measures to inform consumers of unhealthy nutrient components has been strongly opposed by the private sector.

The European Commission is currently considering several types of front-of-pack (FOP) models to create a harmonised labelling system among all Member States, as called for in the Farm to Fork Strategy published in May 2020. One of the options presented during the debates around the revision of the Food Information to Consumers Regulation is the Nutri-Score, the interpretative colour-coded label that ranks foods with a scale from A to E. The system is already applied on a voluntary basis in 7 Member States, but it still generates many uncertainties and doubts among scientists, consumers, national authorities with regards to its efficacy to properly inform consumers.

In its first part, this report analyses the situation of non-communicable diseases (NCDs) in Europe and highlights how vulnerable groups and low-income families are the population groups that are the most likely to consume High Fat, Sugar, and Salt (HFSS) foods and ultra-processed food products. Furthermore, the report highlights how the adoption of the Nutri-Score system as the next European harmonised FOP labelling system would compromise a clear understanding of what a real and healthy diet should involve amongst vulnerable populations groups. Products ranked as "A" would more than probably still be marketed and sold at a lower price than other products with lower Nutri-Score rankings, potentially worsening the situation of unhealthy diets among European consumers.

The final part of the report assesses Nutri-Score effectiveness as a FOP label, also comparing it with other existing labels. It shows the legal reasons why Nutri-Score cannot be applied – as it does not fall under the scope of the Food Information to Consumers (FIC) Regulation.

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<sup>1</sup> World Health Organization (2021), "Global health estimates: life expectancy and leading causes of death and disability.", available at: <https://www.who.int/data/gho/data/themes/mortality-and-global-health-estimates> (accessed on: July 13, 2022).

<sup>2</sup> *Ibid.*

# **PART I: EUROPE'S ALARMING SITUATION ON THE RISE OF NON-COMMUNICABLE DISEASES**

## 1. Healthy diets and Europe: where do we stand?

In this first part, this report analyses the situation of NCDs in Europe and highlights how vulnerable groups and low-income families are the segment of the population mostly keen to consume HFSS foods and ultra-processed food. In relation to Nutri-Score, this consideration is made to highlight how its adoption as the next European harmonised FOP labelling system would hamper these families' understanding of what a real and healthy diet should be made up of. Products ranked as A would still be cheaper than others undermined by the Nutri-Score, worsening the situation of unhealthy diets among European consumers.

### 1.1. Situation of NCDs due to unhealthy diets in Europe

Unhealthy diets and malnutrition are major drivers of non-communicable diseases (NCDs). NCDs are originating from genetic, physiological, environmental, and behavioural factors, such as cardiovascular diseases, cancers, chronic respiratory diseases, and diabetes. Globally, 41 million people die of NCDs each year. In Europe, 90% of deaths were caused by NCDs in 2021<sup>3</sup>.

While a healthy diet can help protect against the development of NCDs, **European consumers' diet is not in line with the dietary recommendations set by the World Health Organisation (WHO)**<sup>4</sup>. Europeans are consuming more and more food high in energy, sugars, fats, salt (HFSS food), while the consumption of vegetables, fruits, and fibres such as whole grain is decreasing. Studies show that changing lifestyles, industrialisation, and urbanisation have led to these unhealthy dietary patterns<sup>5</sup>.

This issue is not new. In 2002, the WHO published a report with evidence of the effects of diet and nutrition on chronic diseases, showing that nutrition should be placed at the centre of public health policies to reduce the burden of chronic diseases such as obesity, diabetes, cardiovascular diseases, cancer, etc.<sup>6</sup> According to a 2022 WHO report, **overweight and obesity currently affect around 60% of adults in Europe. In the European region, obesity is the fourth most common risk factor for NCDs,<sup>7</sup> and assessed as a cause in the development of cardiovascular diseases, cancers, type 2 diabetes, as well as chronic respiratory diseases.**

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<sup>3</sup> World Health Organization (2021), "Global health estimates: life expectancy and leading causes of death and disability.", available at: <https://www.who.int/data/gho/data/themes/mortality-and-global-health-estimates> (accessed on: July 13, 2022).

<sup>4</sup> World Health Organization (2020), "Healthy diet – Key facts", available at: <https://www.who.int/news-room/fact-sheets/detail/healthy-diet> (accessed on: July 13, 2022).

<sup>5</sup> World Health Organization (2002), "Diet, nutrition and the prevention of chronic diseases: report of a Joint WHO/FAO Expert Consultation", Geneva, WHO Technical Report Series, No. 916, available at: <https://www.who.int/publications/i/item/924120916X> (accessed on: July 13, 2022).

<sup>6</sup> World Health Organization (2002), "Diet, nutrition and the prevention of chronic diseases: report of a Joint WHO/FAO Expert Consultation", Geneva, WHO Technical Report Series, No. 916, available at: <https://www.who.int/publications/i/item/924120916X> (accessed on: July 13, 2022).

<sup>7</sup> World Health Organization Regional Office for Europe (2022), "WHO European Regional Obesity Report 2022", Copenhagen, Licence: CC BY-NC-SA 3.0 IGO, available at: <https://www.who.int/europe/publications/i/item/9789289057738> (accessed on: July 13, 2022).

## 1.2. European and national policies addressing NCDs

Due to this worrying situation, the European Commission is already involved in the field of NCDs, namely through the “**Healthier Together Initiative**”<sup>8</sup>. This initiative aims to develop best practices on prevention and management of NCDs. Besides, the “Europe’s Beating Cancer Plan”<sup>9</sup> states that about 40% of cancer cases are preventable. According to the European Commission, cancers could be prevented with effective strategies, thereby saving lives, and reducing suffering. Tackling the issues of unhealthy diets, malnutrition and NCDs constitute a way of achieving this goal.

Outside the European Union, other initiatives are being presented to tackle this health issue. For instance, the United Kingdom (UK) adopted **specific measures to foster food reformulation** to reduce the harmful effects of food products that are high in fat, salt, and sugar (HFSS food)<sup>10</sup>. The UK Parliament encouraged reformulation to drive improvements in public health via fiscal policy approaches<sup>11</sup>. The “**Sugar Reduction Program**”, for example, was introduced in 2016 as part of UK “**Childhood Obesity Strategy**” and aimed to reduce the sugar added to those products that contribute the most to children’s intakes by 20% by 2020. This resulted in an average 3% decrease of home consumed product purchasing<sup>12</sup>. Moreover, the “**Salt reduction program**” aimed to reduce salt in products responsible for salt intake in most people’s diets<sup>13</sup>. As a result, salt content in products such as breakfast cereals and bread has decreased by up to 50%<sup>14</sup>.

This issue of obesity does not involve adults only. Children are alarmingly concerned too, with a third of European children in a situation of overweight or obesity<sup>15</sup>. Child obesity trends pose a serious public health challenge as it leads to higher risk of diet related NCDs. Malnutrition puts children at risk of poor brain development, weak learning, low immunity, increased infection risks, etc<sup>16</sup>. Psychological consequences of childhood overweight and obesity are also important to tackle, as those children are more likely to develop psychological disorders, low self-esteem, depression, and social isolation issues<sup>17</sup>.

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<sup>8</sup> European Commission, “Healthier Together Initiative”, [https://health.ec.europa.eu/non-communicable-diseases/overview\\_en](https://health.ec.europa.eu/non-communicable-diseases/overview_en) (accessed on: July 18, 2022).

<sup>9</sup> European Commission, “Europe’s Beating Cancer Plan”, [https://ec.europa.eu/info/strategy/priorities-2019-2024/promoting-our-european-way-life/european-health-union/cancer-plan-europe\\_en](https://ec.europa.eu/info/strategy/priorities-2019-2024/promoting-our-european-way-life/european-health-union/cancer-plan-europe_en).

<sup>10</sup> UK Parliament (2021), “Food and drink reformulation to reduce fat, sugar and salt”, accessible at: <https://post.parliament.uk/research-briefings/post-pn-0638/> (accessed on: July 19, 2022).

<sup>11</sup> UK government, HM Treasury (2018), “Soft Drinks Industry Levy comes into effect”, accessible at: <https://www.gov.uk/government/news/soft-drinks-industry-levy-comes-into-effect> (accessed on: July 19, 2022).

<sup>12</sup> Public Health England (2020), “Sugar reduction: progress report, 2015 to 2019”, accessible at: <https://www.gov.uk/government/publications/sugar-reduction-report-on-progress-between-2015-and-2019> (accessed on July 19, 2022).

<sup>13</sup> Public Health England (2020), “Salt reduction: targets for 2024”, accessible at: <https://www.gov.uk/government/publications/salt-reduction-targets-for-2024> (accessed on: July 19, 2022).

<sup>14</sup> Pombo-Rodrigues S., Hashem K., He F., & MacGregor G. (2017), “Salt and sugars content of breakfast cereals in the UK from 1992 to 2015”, Public Health Nutrition, doi:10.1017/S1368980016003463.

<sup>15</sup> World Health Organization Regional Office for Europe (2022), “WHO European Regional Obesity Report 2022”, Copenhagen, Licence: CC BY-NC-SA 3.0 IGO, available at: <https://www.who.int/europe/publications/i/item/9789289057738> (accessed on: July 13, 2022).

<sup>16</sup> UNICEF (2019), “Poor diets damaging children’s health, warns UNICEF”, available at: <https://www.unicef.org.uk/press-releases/poor-diets-damaging-childrens-health-warns-unicef/> (accessed at: July 18, 2022)

<sup>17</sup>World Health Organization (2014), “Global nutrition targets 2025: childhood overweight policy brief”, Geneva, available at: <https://www.who.int/publications-detail-redirect/WHO-NMH-NHD-14.6> (accessed on: July 18, 2022).

Healthy dietary practices need to start early in life to protect children from risks of future NCDs. UNICEF notably underlines the dramatic consequences of poor diets for children and warns against a food system that is currently failing them<sup>18</sup>. Malnutrition has long-term implications. Life-long health behaviours are shaped during childhood and adolescence<sup>19</sup>. Over half of NCDs-related deaths are associated with behaviours started before or during the adolescence<sup>20</sup>.

In conclusion, the risks of childhood obesity are even higher in lower socio-economic groups<sup>21</sup>. They are more exposed to unhealthy foods, with ultra-processed products being cheaper and more easily available. At the same time, they lack access and opportunities for physical activities<sup>22</sup>.

### 1.3. Lack of accessibility to healthy diets for vulnerable groups

Healthy diets are crucial, but they need to be affordable. In the EU, in 2020, 96.5 million people were at risk of poverty or social exclusion<sup>23</sup>. 43 million Europeans cannot afford a quality meal every second day, and this crisis is leading to growing levels of food insecurity. Furthermore, as global poverty is rising<sup>24</sup> and inequalities are exacerbated, vulnerable, low-income households across Europe are primary victims. They are not able to cope with surging retail prices and that leads to a reduction in the quantity of quality food that they can purchase

The lack of access to healthy diets for vulnerable groups is a public health issue that needs to be addressed quickly. While obesity is rising among European children, the WHO has been alerting that obesity is socially patterned<sup>25</sup>. A study from 2017 shows that children from lower socio-economic backgrounds will be more vulnerable to overweight and obesity as they grow up<sup>26</sup>.

Disadvantaged groups should be able to access affordable and quality food to meet dietary recommendations. Promoting healthier diets must be linked to social integration. Better understanding of nutrition, affordability of healthy meals across Europe is urgently needed to decrease the NCDs burden and diminish the direct effects of poverty for disadvantaged groups.

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<sup>18</sup> UNICEF (2019), "Poor diets damaging children's health, warns UNICEF", available at: <https://www.unicef.org.uk/press-releases/poor-diets-damaging-childrens-health-warns-unicef/> (accessed at: July 18, 2022).

<sup>19</sup> World Health Organisation (2016), "Noncommunicable diseases: what ministries of education need to know", available at: <https://apps.who.int/iris/handle/10665/250231?show=full> (accessed on July 18, 2022).

<sup>20</sup> AstraZeneca Youth Health Programme, in partnership with others (), "Non-communicable Diseases and Adolescents: An opportunity for action", available at: <http://www.jhsph.edu/research/centers-and-institutes/center-for-adolescent-health/az/noncommunicable.pdf>.

<sup>21</sup> World Health Organization (2016), "Report of the Commission on Ending Childhood Obesity", Geneva, available at: <https://www.who.int/publications/i/item/9789241510066> (accessed on: July 13, 2022).

<sup>22</sup> World Health Organization (2016), "Report of the Commission on Ending Childhood Obesity", Geneva, available at: <https://www.who.int/publications/i/item/9789241510066> (accessed on: July 13, 2022).

<sup>23</sup> European Food Banks Association, "Poverty in Europe", available at: <https://www.eurofoodbank.org/our-mission-impact-values/poverty-in-europe/> (accessed July 13, 2022).

<sup>24</sup> United Nations, "Ending Poverty," accessible at: <https://www.un.org/en/global-issues/ending-poverty> (accessed July 18, 2022).

<sup>25</sup> World Health Organization (2014), "Obesity and inequities: guidance for addressing inequities in overweight and obesity", available at: <https://apps.who.int/iris/handle/10665/344619?show=full> (accessed on: July 13, 2022).

<sup>26</sup> Kim P., Evans G. W., Chen E., Miller G., & Seeman T. (2017), "How socioeconomic disadvantages get under the skin and into the brain to influence health development across the lifespan" *In Handbook of Life Course Health Development* (pp. 463–497), Springer International Publishing, do: 10.1007/978-3-319-47143-3\_19.

## 1.4. Health concerns related to ultra-processed foods

A recent study defines ultra-processed foods (UPFs) as “formulations of food substances often modified by chemical processes and then assembled into ready-to-consume hyper-palatable food and drink products using flavours, colours, emulsifiers and [...] other cosmetic additives”<sup>27</sup>. With changing lifestyles and diets, new products were developed by the agri-food industry, including UPFs. These food products namely include savoury snacks, reconstituted meat products, preprepared frozen dishes, as well as soft drinks.

The composition of these products is high in free sugars, saturated fat, and sodium, chemical additives or added fibres. Besides, UPFs have added protein, micronutrients, and phytochemicals, relative to unprocessed or minimally processed products. Furthermore, UPFs are highly palatable, energy dense, with a high glycaemic load<sup>28</sup>. Ultra-processing negatively affects both food structure and nutrients composition.

### The Handpur Study

The Handpur study<sup>29</sup> shows that today, in European countries, the proportion of daily energy intake ranges from 24,4 to 36%. Besides, it is particularly higher in disadvantaged families. Children in low-income households who lack a social network, from single-parent families or with unemployed parents, are indeed disproportionately likely to be UPFs consumers. The impact of UPFs consumption is important. Apart from nutritional deficiencies, the Handpur study suggests that the academic ability of children and adolescents on UPFs diets may also be compromised.

### The Moli-sani study

The Moli-sani study<sup>30</sup> shows that a diet rich in UPFs is associated with a 58% increased risk of cardiovascular diseases mortality, and 52% higher risk for heart and cerebrovascular diseases. Ultra-processed food negatively affects both the structure of the food and its nutrient composition. It leads to newformed compounds related to heating and processing, and to industrial chemicals used on some UPFs plastic packaging. This study clearly highlights that elevated UPFs intake represents a major public health concern in NCDs prevention.

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<sup>27</sup> Monteiro C.A., Cannon G., Levy R.B., et al (2019), “Ultra-processed foods: what they are and how to identify them”, *Public Health Nutr.* 2019, 2019;22:936-41, doi: 10.1017/S1368980018003762.

<sup>28</sup> Handpur N., Neri, D. A., Monteiro C., Mazur A., Frelut M. L., Boyland E., Weghuber D., Thivel D. (2020), “Ultra-Processed Food Consumption among the Paediatric Population: An Overview and Call to Action from the European Childhood Obesity Group”, *Annals of nutrition & metabolism* vol. 76,2, doi: 10.1159/000507840.

<sup>29</sup> Handpur N., Neri D. A., Monteiro C., Mazur A., Frelut M.L., Boyland E., Weghuber D., Thivel D. (2020), “Ultra-Processed Food Consumption among the Paediatric Population: An Overview and Call to Action from the European Childhood Obesity Group”, *Ibid.*

<sup>30</sup> Bonaccio M., Costanzo S., Di Castelnuovo A., Persichillo M., Magnacca S., De Curtis A., Cerletti C., Donati M.B., de Gaetano G., Iacoviello L. (2022), “Ultra-processed food intake and all-cause and cause-specific mortality in individuals with cardiovascular disease: the Moli-sani Study”, *European heart journal* vol. 43,3, doi: 10.1093/eurheartj/ehab783.

### The Rico-compà study

The Rico-compà study<sup>31</sup> demonstrated that people with a high consumption of ultra-processed foods. UPFs had a higher propensity to all-cause mortality compared with those in the lowest quarter. An 18% increase in mortality risk was caused by the consumption of each additional serving of UPFs.

### The Srour Study

The Srour Study<sup>32</sup> shows that higher consumption of ultra-processed foods. UPFs is associated with higher risks of cardiovascular, coronary heart disease, and cerebrovascular diseases. This study specifies that a range of factors in processing, such as nutritional composition of the final product, additives, contact materials, and neo-formed contaminants might play a role in these associations.

### The Study from the City University London

A 2021 study from the City University London<sup>33</sup> in collaboration with other Universities in Brazil identified, over the last 30 years, that Brazil experienced a nutrition transition towards a diet richer in UPFs, with similar trends to Europe. **They calculated the environmental impact of food items purchased. Increasing the consumption of UPFs has produced more greenhouse gas emissions and used more water and land.** This study highlights the need to finally acknowledge that the impacts on the environment and health must be tackled together.

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<sup>31</sup> Rico-Campà A., Martínez-González M.A., Alvarez-Alvarez I., de Deus Mendonça R., de la Fuente-Arillaga C., Gómez-Donoso C., Bes-Rastrollo M. (2019), "Association between consumption of ultra-processed foods and all-cause mortality: SUN prospective cohort study", doi: 10.1136/bmj. l1949.

<sup>32</sup> Srour B., Fezeu L.K., Kesse-Guyot E., Allès B., Méjean C., Andrianasolo R.M., Chazelas E., Deschasaux M., Hercberg S., Galan P., Monteiro C.A., Julia C., Touvier M., (2019), "Ultra-processed food intake and risk of cardiovascular disease: prospective cohort study", doi: 10.1136/bmj. l1451.

<sup>33</sup> City University London, (2021), "Environmental implications of ultra-processed foods", ScienceDaily, [www.sciencedaily.com/releases/2021/11/211111080345.htm](http://www.sciencedaily.com/releases/2021/11/211111080345.htm).

# **PART II: ASSESSING NUTRI- SCORE EFFICACY AND LEGAL VIABILITY**

## 2. Assessing Nutri-Score effectiveness on consumer choice

### 2.1. Introduction to Nutri-Score labelling system

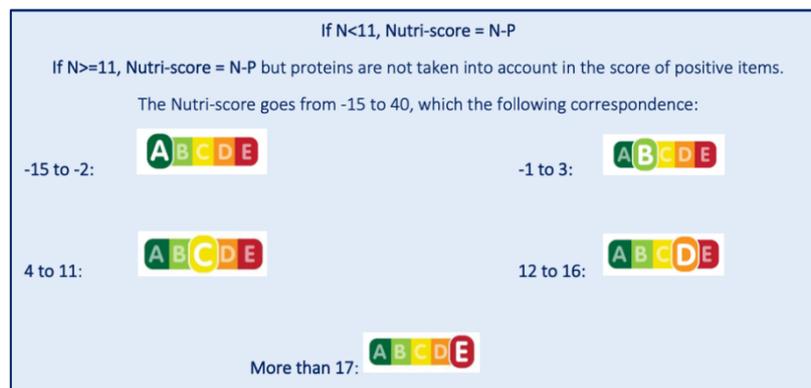
The Nutri-Score label was created by *Santé Publique France*, the French National Public Health Agency, on a mandate from the French Ministry of Solidarity and Health. First implemented in 2017, this system was developed by independent international research scientists led by Professor Serge Hercberg<sup>34</sup>, with the support of the National Health Security Agency (ANSES) and the High Council for Public Health (HCSP)<sup>35</sup>. The purpose behind the Nutri-Score was to make it easier for consumers to read and understand nutritional properties and help them make informed food choices.

After a calculation, the score obtained by a product allows to give it a grade from A, dark green, for the most favourable on the nutritional level, to E, dark orange, for the least favourable.

The final combination is attributed based on a score considering for 100 gr or 100 mL of product the content in:

- Nutrients to be favoured, known as positive P items (from A to B): fibre, protein, fruit or vegetable, dried vegetables (nut content). A score of 0 to 5 points is attributed to each of them. This sum theoretically goes from 0 to 15.
- Nutrients to limit, known as negative N items (From C to E): energy, simple sugars, saturated fatty acids, and salt. A score from 1 to 10 is assigned to each item. This sum theoretically goes from 0 to 40.

The calculation of the Nutri-Score depends on the sum (N) of the points of the negative items:



Set up in France, the Nutri-Score is currently in application in 6 other European countries:

**Belgium:** Nutri-Score was adopted on April 1st, 2018, through the Royal Decree on Nutri-Score<sup>36</sup>. It was adopted following an online study surveying over 1000 citizens on label comprehension. The survey

<sup>34</sup> Professor-epidemiologist at the University of Paris-Nord and President of the National Nutrition and Health Program and Director of the Nutritional Epidemiology Research Unit.

<sup>35</sup> Santé Publique France (2019), "Fibres", available at : <https://www.santepubliquefrance.fr/determinants-de-sante/nutrition-et-activite-physique/articles/fibres> (accessed on : December 3, 2021).

<sup>36</sup> Arrêté royal relatif à l'utilisation du logo "Fibres" (2019), Available at : [https://etaamb.openjustice.be/fr/arrete-royal-du-01-mars-2019\\_n2019040711.html](https://etaamb.openjustice.be/fr/arrete-royal-du-01-mars-2019_n2019040711.html).

conducted by Sciensano, the Belgian National Institute of Public Health and research centre, identified Nutri-Score to be the most effective labelling scheme for consumers<sup>37</sup>. While retailers such as Delhaize or Colruyt quickly committed to supporting the system, while the Belgian food industry group Fevia (*Fédération de l'industrie alimentaire belge*) called it an “over- simplification of nutritional guidance”<sup>38</sup>.

**Spain:** Nutri-Score was implemented on November 12, 2018, as an attempt to tackle childhood obesity in Spain. According to WHO, Spain has one of the highest rates concerning childhood obesity<sup>39</sup>. Spain launched different initiatives such as the Global Strategy on Diet, Physical Activity and Health in February 2005<sup>40</sup>, aiming to promote a healthy diet and foster physical activity to invert the growing obesity, and the Collaboration Plan for the improvement of the composition of food and beverages aiming to improve the nutritional composition of various foods and beverages to provide to consumers the healthiest options<sup>41</sup>. The Nutri-Score caused controversy throughout the country, with food industry operators pointing out the contradiction with the Mediterranean diet in Spain. The Nutri-Score was accused of harming some products, such as olive oil, with manufacturers obtaining low scores for their foods without considering consumption practices.

**Switzerland:** Nutri-Score was endorsed in September 2019. The implementation of the Nutri-Score in Switzerland is the result of Danone's initiative to extend the use of the Nutri-Score to its fresh dairy products in Switzerland, Germany, Austria, and Slovenia in 2019<sup>42</sup>. However, the Federal Office for Food Safety and Veterinary Affairs shows the problem with the following example: "A pizza labelled green means that it is healthier than a pizza labelled orange. A yoghurt labelled red is less recommended than one labelled yellow. However, the Nutri-Score cannot be used to compare pizza and yoghurt."

**Germany:** In November 2020, the application of Nutri-Score was validated. Its implementation is the result of a legal dispute. The food industry Iglo was sued for using Nutri-Score on some of its products. In November 2019, an out-of-court settlement was reached "solely due to the introduction of the Nutri-Score, which is now also politically desired in Germany, the parties have decided to settle the dispute by mutual agreement"<sup>43</sup>. In a press release of 9 October 2020, the German Federal Ministry of Food and Agriculture (BMEL) validated the legal certainty of the application of the Nutri-Score logo.

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<sup>37</sup> Sciensano (2020), “Fibres : meilleur système d’étiquetage pour évaluer la qualité nutritionnelle des aliments emballés, selon les Belges” : <https://www.sciensano.be/fr/coin-presse/fibres-meilleur-systeme-detiquetage-pour-evaluer-la-qualite-nutritionnelle-des-aliments> (accessed on : December 1, 2021).

<sup>38</sup> Askew K. (2018), “Facilitating the choice of healthy eating’: Belgium launches Fibers labelling”, FoodNavigator, available at: <https://www.foodnavigator.com/Article/2018/08/23/Facilitating-the-choice-of-healthy-eating-Belgium-launces-Fibers-labelling> (accessed on: December 1, 2021)

<sup>39</sup> WHO (2013), “Nutrition, Physical Activity and Obesity: Spain”, accessible at: [https://www.euro.who.int/\\_data/assets/pdf\\_file/0020/243326/Spain-WHO-Country-Profile.pdf](https://www.euro.who.int/_data/assets/pdf_file/0020/243326/Spain-WHO-Country-Profile.pdf).

<sup>40</sup> Ministerio de Sanidad y Consumo (2005), “Estrategia para la nutrición, actividad física, prevención de la obesidad (NAOS)”, available at: <https://www.aesan.gob.es/AECOSAN/docs/documentos/nutricion/estrategianaos.pdf>

<sup>41</sup> Ministerio de Sanidad y Bienestar Social “Consumo PLAN de colaboración para la mejora de la composición de los alimentos y bebidas y otras medidas 2020”: [https://www.aesan.gob.es/AECOSAN/docs/documentos/nutricion/DOSSIER\\_PLAN\\_2020.pdf](https://www.aesan.gob.es/AECOSAN/docs/documentos/nutricion/DOSSIER_PLAN_2020.pdf).

<sup>42</sup> D-Journal Rédaction (2018), “Etiquetage des produits alimentaires”, *D-Journal*, available at : <https://www.d-journal-romand.ch/savoir-keine/etiquetage-des-produits-alimentaires/> (accessed on : December 6, 2021)

<sup>43</sup> Food Monitor (2019), “Klarstellung: Einigung zwischen iglo und dem Schutzverband zu Fibers”, Food-Monitor, available at: <https://www.food-monitor.de/2019/11/klarstellung-einigung-zwischen-iglo-und-dem-schutzverband-zu-nutri-score/>.

**Luxembourg:** Nutri-Score voluntary use was established on May 7, 2021. From now on, if the Nutri-Score is put on a product of a brand, the company is obliged to display it on all products of this brand<sup>44</sup>. The implementation is attributed to 'practical reasons', as the logo is already used in other European countries from which Luxembourg imports a large part of the foodstuffs on sale.

**Netherlands:** Nutri-Score was adopted on August 4, 2021. The Nutri-Score was considered to be better than the other two systems used in Europe (Keyhole and Traffic Lights) as it was the most intelligible to consumers. However, it was reported that the system had shortcomings, including that it did not "always comply" with Dutch dietary recommendations, being "too positive" for white bread and "too negative" for olive oil, for example<sup>45</sup>.

The national authorities of the 6 countries that have implemented the Nutri-Score have set up a transnational coordination mechanism to facilitate its use through several actions:

- A steering committee to facilitate the use of the Nutri-Score by the food industry, especially small businesses, by setting up common procedures<sup>46</sup>
- A scientific committee in charge of evaluating the possible evolutions of the Nutri-Score for a better effectiveness on the health of consumers, in coherence with the dietary recommendations. The international scientific committee is composed of independent researchers from « Countries officially engaged in Nutri-Score ». <sup>47</sup>

In all these 7 countries, the nutrition labelling system is to be affixed by producers on a voluntary basis, it's not mandatory. Nowadays, more than 600 companies use it. According to the French minister for food and agriculture at that time, Julien Denormandie, "*the State does not and will not make the Nutri-Score mandatory until the EU has not done so*"<sup>48</sup>. Indeed, the EU Regulation on nutrition and health claims prevents Member States from imposing nutrition labelling at national level, as this could hamper the free movement of food and create an uneven competitive environment<sup>49</sup>.

There is still no certainty that the Nutri-Score will be adopted at EU level as a new EU-wide food labelling scheme, which is currently under discussion. The label is indeed facing strong opposition at EU level,

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<sup>44</sup> Gouvernement du Grand-Dûché de Luxembourg (2021), "Publication du règlement grand-ducal sur l'application du Nutri-Score au Luxembourg (Communiqué)", [https://gouvernement.lu/fr/actualites/toutes\\_actualites/communiques/2021/05-mai/27-reglement-Fibres.html](https://gouvernement.lu/fr/actualites/toutes_actualites/communiques/2021/05-mai/27-reglement-Fibres.html) (accessed on December 7<sup>th</sup>, 2021).

<sup>45</sup> Askew K. (2019), "Netherlands backs nutritional labelling: 'Fibers is best to promote healthy choices'", Food Navigator, available at: <https://www.foodnavigator.com/Article/2019/12/02/Netherlands-backs-nutritional-labelling-Nutri-Score-is-best-to-promote-healthy-choices> (accessed on December 4, 2021).

<sup>46</sup> BEUC (2021), "Pro-Fibers countries join forces to step up label roll-out ", available at: <https://www.beuc.eu/press-media/news-events/pro-fibres-countries-join-forces-step-label-roll-out> (accessed on February 1, 2022).

<sup>47</sup> Ministère des solidarités et de la santé (2021), "Comité scientifique international chargé de coordonner l'évolution scientifique du Fibres dans le cadre de son expansion européenne (Mandat)", available at <https://www.santepubliquefrance.fr/fibres> > ... (accessed on : February 1, 2022).

<sup>48</sup> De Castro P., Twitter, 26/11/21: <https://mobile.twitter.com/paolodecastro/status/1464306418090192903>.

<sup>49</sup> Recital 2, Regulation (EC) No 1924/2006 of the European Parliament and of the Council of 20 December 2006 on nutrition and health claims made on food.

with a recent European Parliament report from the special committee on combating cancer rejecting parts of amendments supporting the use of the Nutri-Score<sup>50</sup>.

## 2.2. Weaknesses in the Nutri-Score algorithm

The possibility of the Commission appointing the Nutri-Score as a harmonised FOP labelling system for the EU is of major concern for public health.

The diet of Europeans does not currently follow dietary recommendations and half of the European adult population is overweight or obese<sup>51</sup>. It is now essential to ensure that consumers' nutritional needs are met and that healthier diets become more accessible and easily chosen by consumers. For this reason, adopting the Nutri-Score would not help consumers improve their diets, and could cause serious damages to EU public health.

Labels are intended to influence purchasing behaviour and lead to positive public health outcomes. It is hard to assess whether the Nutri-Score system has been effective for public health, as it takes years to correctly identify a decline in obesity rates or in the incidence of NCDs<sup>52</sup>. However, effectiveness can be measured concretely in terms of consumer information, by studying factors such as reading and understanding, and consumers' behaviour towards the label.

### Occurrences when Nutri-Score does not comply with European rules for consumers information

The Nutri-Score algorithm has many shortcomings and limitations.

**The ability of the positive elements considered by the Nutri-Score to offset the negative ones increases the risk of consumers assuming the negative elements without being aware of them.**

The Scientific Committee of the Nutri-Score revised the algorithm recently. It admitted this serious deficiency but failed to address the problem. Last changes made by this revision were introduced in the category of vegetable oils, and value products with more monounsaturated fats. But the outcome is that both an extra virgin olive oil (77g/100 monounsaturated fats) and an olive pomace oil (8g/100 monounsaturated fats) are getting a B score. Besides the difference of monounsaturated fats, these two oils also contain different amounts of vitamins A and E that are known for their anticarcinogenic and antioxidant action. In the end, two oils with quite different prices due to their nutritional qualities are both scored A. **This will result in consumers opting for the cheapest one, thinking that they are equivalent because of the same B score on the packaging.**

- **The calculation on 100gr/ml and not per portion is misleading for consumers and it is not in conformity with the European Regulation**

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<sup>50</sup> Special Committee on Beating Cancer of the European Parliament (2021), Report on strengthening Europe in the fight against cancer – towards a comprehensive and coordinated strategy (2020/2267(INI)), Compromise amendment on paragraph 13: [https://www.europarl.europa.eu/meetdocs/2014\\_2019/plmrep/COMMITTEES/BECA/DV/2021/12-09/2021\\_12\\_01\\_BECA\\_Final\\_compromise\\_amendments\\_EN.pdf](https://www.europarl.europa.eu/meetdocs/2014_2019/plmrep/COMMITTEES/BECA/DV/2021/12-09/2021_12_01_BECA_Final_compromise_amendments_EN.pdf).

<sup>51</sup> Eurostat study on European population [https://ec.europa.eu/eurostat/web/products-eurostat-news/-/ddn-20210721-2#:~:text=While%2045%25%20of%20adults%20living,body%20mass%20index%20\(BMI\)](https://ec.europa.eu/eurostat/web/products-eurostat-news/-/ddn-20210721-2#:~:text=While%2045%25%20of%20adults%20living,body%20mass%20index%20(BMI).).

<sup>52</sup> Basdevant A. et al (2006), "Obesity: Assessment and the evaluation of obesity prevention and management programs" NSERM Collective Expertise Centre, Paris.

It concerns the different use of the Nutri-Score system for multiple and mono ingredients food product. In this case, the score is not calculated for 100g/mL of each individual ingredient but considering the actual amount of each ingredient in the product. Thus, a pizza or a sandwich can be scored B, despite containing mozzarella (scored D), olive oil (scored C) and ham (scored D). It is correct to consider the amount of individual ingredients in a multi-ingredient' product. However, it is not correct to not use the same principle for single-ingredient products, where the Nutri-Score is calculated for 100g/mL and not on the portion size. This example clearly shows that the Nutri-Score system is inefficient and that it leads to a sense of confusion for consumers. **The article 33(5) of Regulation 1169/2011 that requires the Commission to adopt implementing acts on the rules of expression per portion or per consumption unit could fix/solve this significant issue.**

- **It does not consider crucial factors such as the degree of processing of a product.** A recent Spanish study<sup>53</sup> linked the Nutri-Score labelling system to NOVA, a system that ranks the degree of food processing. More than 20% of the products assessed had particularly good scores with Nutri-Score and negative scores with NOVA. Consumers can therefore be misled into buying foods with an excellent Nutri-Score, which are UPFs instead. This issue is of particular concern as scientific evidence more often finds a correlation between the consumption of UPFs and NCDs<sup>54</sup>, which could also cause premature death<sup>55</sup>.

### **Nutri-Score usage rules mislead consumers**

Nutri-Score operating rules<sup>56</sup> (such as dilution, beverage category or the rules for prepacked fries' product) were published on *Santé Public France* website. These rules are not well trackable by consumers who cannot be aware of these methods. Therefore, consumers cannot always make conscious choices, which contravenes the INCO regulations.

### **Nutri-Score Usage rules for product "as prepared" and "as sold"**

The Nutri-Score of a product can be calculated after its preparation. The calculation of the Nutri-Score for prepared products should only be considered if enough details are available about the preparation method are provided by the producer. It should also be considered that food products are assessed easier more leniently than beverages. For instance, chocolate milk drinks containing more than 80% of milk as an ingredient is not considered as beverages according to the Nutri-Score algorithm.

If we take into consideration account the example of a cocoa powder, the preparation method indicated by the producer is the following: "Dilute 13,5g of chocolate powder (equivalent to 10g of sugar) in 200ml of semi-skimmed milk". When purchasing this product consumers will see a Nutri-Score B on the FOP of the product. But this good score is received thanks to the fact that, to be consumed,

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<sup>53</sup> Ferreira dos Santos A. (2018), "Early application of Global Subjective Evaluation Produced by the Patient and survival in patients with cancer", *Nutrition Hospitalaria*, 36(1), pp. 103-108.

<sup>54</sup> Jardim M.Z., Vieira de Lima Costa B., Pessoa M.C., Duarte C.K. (2021), "Ultra-processed foods increase non communicable chronic disease risk", *Nutrition Research*, 95, pp. 19-34.

<sup>55</sup> Gallagher J. (2019), "Ultra-processed foods linked to early death", BBC News: <https://www.bbc.com/news/health-48446924>.

<sup>56</sup> <https://www.santepubliquefrance.fr/media/files/02-determinants-de-sante/nutrition-et-activite-physique/fibres/reglement-usage-en>.

this product must be diluted in milk, and yet it is not considered as a drink, which explains its good Nutri-Score evaluation.

**This calculation method is even possible for products without a preparation method printed on the label,** as there is no obligation to indicate it in the front-of-pack.

**The same product can be scored C, D or E, depending on whether the preparation** is diluted in whole milk, considered in powder form or as beverage.

Could consumers know and consider all these misleading rules when they look at a product scored B?

The Nutri-Score of a product can be calculated before its preparation (**as sold**).

If we focus on prepacked fried products, the ineffectiveness of the Nutri-Score system is clear. These products, such as fries, breaded meat, or fish, usually get a Nutri-Score A or B. But what is missing is that consumers need to cook these products to be able to eat them. To do so, they usually need a certain amount of fat, that the Nutri-Score does not consider for the final mark of the product. If the entire process was taken into consideration for the calculation of the Nutri-Score, the final score would be different, **one or two bands higher** depending on the type and quantity of fat used, as it is written page 5 of the Nutri-Score usage rules.

Instead of that, consumers find the nutritional information on the FOP with an A score, without being able to know what the final score should be.

**The simple warning phrase on the packaging, recommended but not required by the Nutri-Score rules, is not enough to ensure that consumers are not misled.**

We emphasize the fact that these rules are unknown to consumers and are therefore against the Article 35(1) of the Regulation 1169/2011. As a matter of fact, this provision requires that supplementary nutrition information systems facilitate consumers in understanding of the contribution or importance of the food to the energy and nutrient content of a diet.

## The Nutri-Score system impact on children

The use of Nutri-Score does not help tackling the problem related to misleading marketing practices for food products for children. **Products having a low score on Nutri-Score can sometimes feature images of superheroes or comics on the FOP.** Those icons are meant not only to attract children, but also to mislead them, hence dangerous when it comes to fight against childhood obesity.

### The Ultra processed Foods

With its position rankings, Nutri-Score overall supports different categories of type of UPFs. In European countries, **the proportion of daily energy intake from UPFs ranges from 24,4% to 36%**, becoming particularly high in low-income families<sup>57</sup>. There is evidence of severe health risks caused by UPFs consumption for consumers, resulting in NCDs to cognitive problems for children. Studies show that diets rich in UPFs are associated with a **58% increased risk of CVD mortality and 52% higher risk of**

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<sup>57</sup> Handpur N., Neri D. A, Monteiro C., Mazur A., Frelut M.L., Boyland E., Weghuber D., Thivel D.: Ultra-Processed Food Consumption among the Paediatric Population: An Overview and Call to Action from the European Childhood Obesity Group. *Ann Nutr Metab* 2020; 76:109-113. doi: 10.1159/000507840.

dying from HD/cerebrovascular uses<sup>58</sup>. Health risks might be triggered by **additional factors such as food contact materials, additives, and other chemical substances, going beyond the nutritional problems<sup>59</sup>**, which are factors not considered by the Nutri-Score algorithm.

The lack of **elements not considered by Nutri-Score** such as **naturally present** substances and not artificially added that have already been recognized as "positive health claims" (unsaturated fats, vitamins, minerals, polyphenols, omega-3 fatty acids, etc..) also favours UPFs and discourage the purchase of minimally processed, natural products. Children have no means to avoid consuming UPFs. Regarding the valorisation of fibres in the product, for most foods, there is no difference between the amount of natural present fiber and the added one. This rule also benefits ultra-processed products and disadvantages the natural ones. **By adding the fibres to an ultra-processed product, it is possible to have a better Nutri-Score.**

In addition, the Nutri-Score does not consider additives, colorants, and endocrine disruptors. SAFE has gathered evidence about the harming these chemicals can cause when present in food<sup>60</sup>. Food products in the same Nutri-Score category were compared. In both cases, the nutritional information given to consumers is misleading, as relying on the Nutri-Score rating on all products could be dangerous for the consumer:



Both apples and pre-cooked potatoes are considered healthy by Nutri-Score despite their nutritional differences.

While Cola light is rated B (semi-healthy), the pineapple is C because it is high in sugars.

<sup>58</sup> Bonaccio M., Costanzo S., Di Castelnuovo A., Persichillo M., Magnacca S., De Curtis A., Cerletti C., Donati M.B., de Gaetano G., Iacoviello L. Ultra-processed food intake and all-cause and cause-specific mortality in individuals with cardiovascular disease: the Moli-sani Study. Eur Heart J. 2022 Jan 25;43(3):213-224. doi: 10.1093/eurheartj/ehab783. PMID: 34849691.

<sup>59</sup> Lawrence M.A., Baker P. I. Ultra-processed food, and adverse health outcomes BMJ 2019; 365: l2289 doi:10.1136/bmj. l2289

<sup>60</sup> European Heart Network (2020) Front-of-pack (FOP) nutrition labelling – European Heart Network position.

## 2.3. Comparing Nutri-Score with other labelling systems

Given the worrying situation of unhealthy diets in Europe and around the world, other labelling systems were developed besides the Nutri-Score.

In the examples below<sup>61</sup>, food products ranked with Nutri-Score are compared with other type of labelling systems. What appears from the table is that information to consumers is not consistent, given how well-rated products under Nutri-Score are considered as “to be limited” under different labels.

In 2018, according to the WHO, Latin American regions showed the highest increase in overweight, obesity and associated NCDs<sup>62</sup>. To address this issue, the WHO, civil society, and international organisations recommended several public health measures, including the adoption of warning labels on the FOP to indicate the presence of excessive nutrients (salt, sugar, fat).

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<sup>61</sup> i. Score extracted from [www.delhaize.be](http://www.delhaize.be). The Fibers algorithm ranks food products from A (green) to E (red). It considers the combination of positive items and negative items.

ii. The NOVA classification ranks products according to the nature, extent & industrial processes: 1) Unprocessed and minimally processed foods 2) Processed culinary ingredients 3) Processed food, and 4) “Ultra-processed” foods (FAO and Science Direct).

iii. The SIGA classification considers the list of ingredients, presence or not of additives. It has/is divided in 7 categories: 1 - unprocessed, the most simple, 2 - slightly processed product, 3 - product based on raw food to which ingredients have been added (sugar, fat, salt: cooked products), 4 - product a little more processed than level 3, but more “greedy”: more fat, sugar or salt, 5 - ultra-processed product at the most acceptable level, 6 - “Gourmet” ultra-processed product : with more additives, 7 - ultra-processed product to be limited: consumption of this product is not recommended and should remain occasional.

iv. This section is interpretive, anticipating the Mexican labels which would apply based on the Belgian ingredient list and nutritional values. According to the Especificaciones generales de etiquetado para alimentos y bebidas no alcohólicas preenvasados- Información comercial y sanitaria (2010), warning labels are to be affixed on pre-packaged foods containing added free sugars, fats, or sodium. For solid product (in 100g), “*excess calories*” is used when total energy  $\geq 275$  kcal, “*excess sugars*” if  $\geq 10\%$  of total energy from free sugars, “*excess saturated fats*” if  $\geq 10\%$  of total energy from saturated fat, “*excess trans-fat*” if  $\geq 1\%$  of total energy from trans-fat, “*excess sodium*” if  $\geq 1$  mg sodium per kcal of  $\geq 300$  mg.

<sup>62</sup> World Health Organization (2011), “Informe sobre la situación mundial de las enfermedades no transmisibles”: [https://www.who.int/nmh/publications/ncd\\_report\\_summary\\_es.pdf](https://www.who.int/nmh/publications/ncd_report_summary_es.pdf).

| Product (name & front-of-pack)  | Ingredient list and nutritional values (per 100 grams) <sup>63</sup>  | Nutri-Score <sup>64</sup>   | NOVA score <sup>65</sup>   | SIGA score <sup>66</sup>  | Food Warning Label(s) using Mexican standards <sup>67</sup>                         |
|---|---|---|--|---|---|
| <p><b>CORN FLAKES</b></p>  | <p><b>Ingredients:</b> wholewheat flour 29,0%, wholewheat barley flour 29,0%, wholewheat barley flour 17,2%, sugar, WHEAT starch, honey 3,8%, sunflower oil, wholewheat maize flour 2,1%, wholewheat rice flour 2,1%, invert sugar syrup, salt, molasses, antioxidant: extract rich in tocopherols, natural flavour</p> <p><i>Energy value 499 kJ /118 kcal, fat 1g, carbohydrate 21g, sugar 6g, dietary fiber 2g, protein 2g</i></p> |  | <p><b>NOVA</b></p>  |  <p><b>Ultra-processed product to limit</b></p> <p>5 ultra-processed ingredients, important levels of sugar, medium levels of fat and salt, risk-free additives (e306)</p> |  |

<sup>63</sup> Information extracted from [www.delhaize.be](http://www.delhaize.be) and [www.carrefour.fr](http://www.carrefour.fr).

<sup>64</sup> Score extracted from [www.delhaize.be](http://www.delhaize.be). The Fibers algorithm considers the combination of positive items (P), i.e., fiber (g), protein (g), fruit or vegetable/nut content (%) negative items (N), i.e., energy (kJ), simple sugars (g), saturated fatty acids (g) and salt (mg). A score. A score of 0 to 5 points is attributed to each P, with the total sum going from 0 to 15. A score from 1 to 10 is assigned to each N, with the total sum going from 0 to 40. If N<11, Fibres = N-P, If N>=11, Fibres = N-P. Results: -15 to -2: green, -1 to 3: light green, 4 to 11: yellow, 12 to 16: orange, more than 17: red

<sup>65</sup> Score extracted from the Nutriscan+ app. The NOVA classification ranks products according to the nature, extent, and purposes of the industrial processes they undergo in 4 groups (sources: FAO and Science Direct).

<sup>66</sup> Rating extracted from the SIGA app. The SIGA classification considers the list of ingredients, presence or not of additives and nutritional thresholds. It classifies the products in 7 categories: 1 - unprocessed, the most raw and simple possible (fruits, vegetables, legumes, meat, fish, cereals, eggs), 2 - slightly processed product (pressing, cooking on raw food), 3 - Product based on raw food to which ingredients have been added (sugar, fat, salt: cooked products), 4 - Products a little more processed than level 3, but more "greedy": more fat, sugar or salt, 5 - Ultra-processed product at the most acceptable level (ingredient or additive), 6 - "Gourmet" ultra-processed product : with more additives, 7 - Ultra-processed product to be limited: consumption of this product is not recommended and should remain occasional.

<sup>67</sup> This section is interpretive, anticipating the Mexican labels which would apply based on the Belgian ingredient list and nutritional values. We were not able to directly use Mexican food-warning labels since cases of dual food quality have been identified (i.e., same branding and front-of-packs but different ingredients and nutritional values). According to the 2020 MODIFICACIÓN a la Norma Oficial Mexicana NOM-051-SCFI/SSA1-2010, Especificaciones generales de etiquetado para alimentos y bebidas no alcohólicas preenvasados-Información comercial y sanitaria, publicada el 5 de abril de 2010 (NOM) 051, warning labels are to be affixed on pre-packaged foods containing added free sugars, fats, or sodium. For solid product (in 100g), "excess calories" ≥ 275 kcal, "excess sugars" if ≥ 10% from free sugars, "excess saturated fats" if ≥ 10% from saturated fat, "excess trans-fat" if ≥ 1% from trans-fat, "excess sodium" if ≥ 1 mg sodium per kcal of ≥ 300 mg.

| Product (name & FOP)   | Ingredient list and nutritional values (per 100g)   | Nutri-Score   | NOVA score  | SIGA score   | Food Warning Label(s) using Mexican standards   |
|--|---|---|---|--|---|
| <p>Cacao powder</p>                                   | <p><b>Ingredients:</b><br/>Sugar, lean cocoa powder 23%, emulsifier: soja lecithin, salt, vitamins: C, D, natural flavouring (cinnamon).</p> <p><i>Energy value: 386 kcal, fat 3g, saturated fatty acids 1g, carbohydrate 78 g, sugar 75 g, dietary fiber 7 g, protein 5g</i></p>                                   |    | <p>NOVA</p>    |  <p><b>Ultra-processed product to limit</b><br/>7 ultra-processed ingredients, 1 risky additive, important levels of sugar, medium levels of fat and salt, additives (E322, E450)</p> |    |
| <p>Dehydrated mashed potatoes cream &amp; nutmeg</p>  | <p><b>Ingredients:</b><br/>Potato 90%, Cream powder 3,5%, salt, potato starch, buttermilk, emulsifier: mono- and diglycerides of fatty acids (vegetable origin); turmeric, onion, nutmeg, flavourings (milk), antioxidant: rosemary extracts; natural flavours of nutmeg and pepper.</p>                            |    | <p>NOVA</p>    |  <p><b>Ultra-processed product to limit</b><br/>6 ultra-processed ingredients, important levels of salt, medium levels of fat, good levels of sugar, additives (E392 &amp; E471)</p>  | <p>No label to be affixed</p>   |
| <p>Vegetarian burger</p>                             | <p><b>Ingredients:</b><br/>Rehydrated Soy protein 47,8% (water, concentrated Soy protein 20,2%), water, vegetable oils (rapeseed, coconut), alcohol vinegar, flavourings, stabilizer (methyl cellulose), corn starch, fruit, and plant concentrates (apple, beet, carrot, hibiscus), salt, barley malt extract.</p> |   | <p>NOVA</p>   |  <p><b>Ultra-processed product to limit</b><br/>5 ultra-processed ingredients, medium levels of fat &amp; salt, additive (E461)</p>  | <p>No label to be affixed</p>   |
| <p>Apple compote</p>                                | <p><b>Ingredients:</b><br/>Apple 99,7% (mashed and concentrated), natural apple flavour, concentrated lemon juice, antioxidant: ascorbic acid.</p>  |  | <p>NOVA</p>  |  <p><b>Balanced Ultra-processed</b><br/>1 ultra-processed ingredient and one risk-free additive (e300)</p>  |  |

| Product (name & FOP)  | Ingredient list and nutritional values (per 100 grams)  | Nutri-Score   | NOVA score               | SIGA score  | Food Warning Label(s) using Mexican standards   |
|---|---|---|--------------------------|---|---|
| <p><b>Bolognese sauce</b></p>  | <p><b>Ingredients:</b><br/>Tomato pulp and tomato paste (56%), meat 17,5% (beef 9%, pork 8,5%), water, vegetables 9% (carrots, onions 3%), salt, sugar, processed corn starch, parsley, sunflower oil, flavours, garlic.</p>  |    | <p>NOVA<br/><b>4</b></p> |  <p><u>Ultra-processed product to limit</u><br/>3 ultra-processed ingredients</p>  | <br>    |
| <p><b>Mixed salad</b></p>      | <p><b>Ingredients:</b><br/>Mixed salad 82%: cooked conchiglie (water, durum wheat semolina, egg, salt, turmeric), egg, salad 12%, chicken meat, carrots, tomatoes 7%, cheese, lemon juice, vegetable oils, water, manioc starch, wheat dextrose, ferments, preservative: E1105, salt, natural flavour. Balsamic vinaigrette sauce 8%: rapeseed oil, virgin olive oil, wine vinegar (sulphites), grape must, salt.</p>   |    | <p>NOVA<br/><b>4</b></p> |  <p><u>Ultra-processed product to limit</u><br/>9 ultra-processed ingredients and 2 high-risk additives (E220, E450)</p> | <p>No label to be affixed</p>   |
| <p><b>Frozen pizza</b></p>   | <p><b>Ingredients:</b><br/>Wheat flour 31%, water, burger sauce 12,3%, sugar, caper paste (capers, alcohol vinegar, salt, water), onions, sunflower oil, modified potato starch, garlic pulp, alcohol vinegar, spices and herbs, cooked beef 10,3%, fried onions, mozzarella 4,9%, cherry tomatoes 3,2%, sunflower oil, tomato puree, wheat gluten, yeast, sugar, raising agents: potassium tartrate, sodium bicarbonate; cream, dehydrated sourdough, pickles, salt, hard wheat flour, wheat semolina, caper paste, spices and herbs, onions, garlic pulp, modified potato starch, colour: plain caramel; flour treatment agents: alpha-amylase, xylanase.</p> |  | <p>NOVA<br/><b>4</b></p> |  <p><u>Ultra-processed product to limit</u><br/>10 ultra-processed ingredients and 1 high-risk additives</p>            | <br> |

### 3. Assessing Nutri-Score applicability to EU legal framework

The Farm to Fork Strategy for a fair, healthy, and environmentally friendly food system launched by the European Commission in May 2020 includes several initiatives to improve food information to consumers, among which the proposal for a FOP nutrition labelling (key action nr. 20) to help consumers in making informed and healthy choices. To achieve these goals, it is essential that the Commission comes forward with a proposal able to display all food components and product characteristics in a clear and understandable way.

The section below explains why the Nutri-Score does not fit the scope and purpose of the FIC Regulation and why it does not match the **objectives mentioned in the Farm to Fork Strategy**.

#### 3.1. The “FIC” Regulation (EU) 1169/2022: scope and purpose

The Food Information to Consumers (FIC) Regulation establishes the general principles, requirements and responsibilities governing food information, and in particular food labelling. It defines the means of ensuring consumers' right to information and the procedures by which food information is provided. It also considers the need to provide sufficient flexibility to meet future developments and information requirements.

The Regulation has two main objectives:

- It seeks to guarantee consumers their right to information by establishing the general principles, requirements, and responsibilities for the labelling of foodstuffs they consume.
- It provides sufficient flexibility to respond to future developments in the food sector.

#### 3.2. Legal reasoning for Nutri-Score incompatibility with Regulation (EU) 1169/2011

This report provided an overview of the economic, health and sustainability issues currently facing Europe while showing the efforts of national as well as European authorities to improve the situation. These efforts could be wasted if Nutri-Score is adopted as the next harmonized EU labelling system.

In this section, a legal analysis of the differences between the Nutri-Score system and the EU legal framework will be provided to highlight the disparities between what the Nutri-Score system can offer and what the EU legislation aims to achieve. The reasons are:

#### Nutri-Score does not fall within the scope of Article 35 of Regulation (EU) 1169/2011

The Nutri-Score system does not fall within the scope of Article 35, paragraph 1(a) (c)(d) and (f), of Reg. (EU) No. 1169/2011. In fact, the Regulation mentions set out the rules for additional forms of expression and presentation on food labels, requiring that all labels:

1. are based on sound and scientifically valid consumer research and do not mislead the consumer
2. aim to facilitate consumer understanding of the contribution or importance of the food to the energy and **all** nutrient content of a diet
3. are supported by scientifically valid evidence of understanding of such forms of expression or presentation by the average consumer
4. are objective and non-discriminatory

Most of these clauses of the Regulation are not respected by the Nutri-Score.

As stated in point one, to provide the consumer with all the necessary information in a simple form, the labelling system is required to consider the positive nutrients of Article 30 points 1 to 5 of Regulation (EU) 1169/11. These substances (monounsaturated and polyunsaturated fats, vitamins, minerals) are however not calculated by the Nutri-Score, which is in contradiction with the above-mentioned articles.

The Nutri-Score provides incorrect information about the nutritional properties of food products. Indeed, as explained in section 2.2.1 of this report, despite the changes made in July 2022. Consumers may therefore be misled, preventing them from making clear informed choices. This is contrary to Article 35(1)(c), which aims to protect the consumer against misleading information about the energy and **all** nutrient content of a diet.

The Nutri-Score is used in a different way to calculate a consumer's intake of a nutrient. Indeed, the system is used differently between single- and multi-ingredient foods, as stated in section 2.2.2 of this report. This different use discriminates between products without scientific evidence and is contrary to Article 35 (1) (f) and (g).

The Nutri-Score does not provide a scoring rate for a product's portion size either. This situation is the unfortunate result of a lack in the current European legislation. Indeed, the Commission has not published the implementing act provided for in article 30 (5) yet. The implementing act will be published before the adoption of the Commission proposal on forms of expression and presentation of supplementary nutrition information, but it is currently not possible to assess whether the Nutri-Score will comply with the Implementing Act requirements.

**The Nutri-Score follows rules of application that are unknown by consumers.** Their dissemination through consumer literacy is not achievable. Indeed, reaching all consumers is not feasible. It would be discriminatory against the poorest segments of the population, who has less access to education. The simple warning sentence on the package, recommended but not required by the Nutri-Score rules, is not sufficient to ensure that consumers are not misled. The use of these rules, unknown to the consumer, goes against the requirements provided for in Article 35 (1) (c) of the FIC Regulation. Such rules are not yet based on the consultation of a wide range of stakeholders either, against the requirements of Article 35 (1) (b).

As described in section 2.2.3. of this report, there are many concerns that children are not protected using a system such as Nutri-Score.

The Nutri-Score supports the promotion of ultra-processed products that may in turn lead to their consumption, even though such products are regularly being scrutinised by the international scientific community for potential health hazards linked with their consumption.

Last but not least, some companies<sup>68</sup> are now proposing services to change the Nutri-Score of products from red to green. However, this is really concerning as this improvement of the scoring can only be achieved by using more additives and chemical compounds. This would therefore lead to products even more ultra-processed.

### **Nutri-Score cannot be classified as nutritional claim**

It should also be noted that in case of a positive Nutri-Score ranking (A or B), the Commission has clarified that this should be qualified as a nutrition claim within the scope of Reg. No. 1924/2006 on nutrition and health claims made on foods, when it suggests that a food has beneficial nutritional properties.

The Nutri-Score is often described as a tool to help consumers compare food products in the same category. **Although the name suggests a system capable of ranking the nutritional value of products, the label has been presented as a comparative tool.** Given all the important nutritional profiles that the Nutri-Score wrongly ignores, treating it as a nutritional claim could seriously undermine consumers' health through their diets and purchasing choices, and could furthermore potentially lead to the avoidance of products with beneficial nutritional value.

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<sup>68</sup> <https://www.cargill.com/food-beverage/emea/cocoa-chocolate/get-your-nutri-score-out-of-the-red>).

# Conclusions

The current situation regarding non-communicable diseases in Europe and the increasing consumption of food poor in nutrients and fibres raise a serious question on the best way and most appropriate tools to handle these issues. The current revision of the FIC Regulation, among its several purposes, intends to help society shift towards healthier and more sustainable diets.

This report highlights critical issues observed following the use of a voluntary FOP labelling scheme implemented in several EU countries.

As consumers must be able to easily choose a healthy and balanced diets, the new European FOP system that will be chosen must take into serious consideration the following aspects:

- It must be based on the actual amount of food consumed, i.e., expression per portion or per consumption unit. To this end, the European legislator should refer to what is already required by the FIC regulation in its article 32(5), prior to the submission of the future legislative proposal.
- It should consider all the positive and negative elements provided for in Article 30(1) to (5). Indeed, considering only part of the elements to calculate the Nutri-Score is arbitrary. It is not scientifically proven that it can give correct nutritional information to the consumer. As a result, it may encourage consumers to buy cheaper but less nutritious products.
- It should be designed by clear rules, which would be easy-to-understand for the consumer, avoiding guidelines set arbitrarily and not scientifically based.
- Consumer studies on the degree of understanding of the Nutri-Score system are less valuable if they convey incorrect nutritional information. In fact, the developers of the Nutri-Score themselves have modified the algorithm several times, thus admitting its inefficiency. To this end, the Commission should consider that the new system needs to be subject to a period of review of its effectiveness of at least three years before its final adoption.
- It should provide the same rules for single and multi-ingredient products and should exclude any differentiation between products without a real scientific basis.
- It should take into consideration the recent scientific studies on ultra-processed products and propose specific labelling measures for this type of products. Food products containing high amounts of chemical synthetic additives should not be granted the same score as fresh natural food such as unprocessed fruits and vegetables.

This report also highlights the impact of the consumption of ultra-processed foods (UPF) on human health. This critical issue needs to be addressed urgently for the sake of public health. The important health risks of UPF have been clearly and scientifically proven. However, European consumers are neither aware nor educated on this matter. More research is needed on this topic. In addition, public awareness needs to be increased through public awareness campaigns to prevent serious health risks

and social consequences for European consumers, especially for children and disadvantaged populations.

Based on existing scientific data and evidence provided in this report, it has been shown that the Nutri-Score tool does not effectively support a distinction between healthy and unhealthy food products as it is based on incomplete and overly simplistic criteria. Relying on the Nutri-Score would only lead to inadequate information to consumers about their purchasing choices.

Furthermore, the third part of the report, which analyses legal inconsistencies, shows that Nutri-Score should not be suggested as the next harmonized FOP label at EU level. Nutri-Score does not meet some mandatory and fundamental requirements set in several articles of the FIC Regulation aiming to identify correct information to consumers.