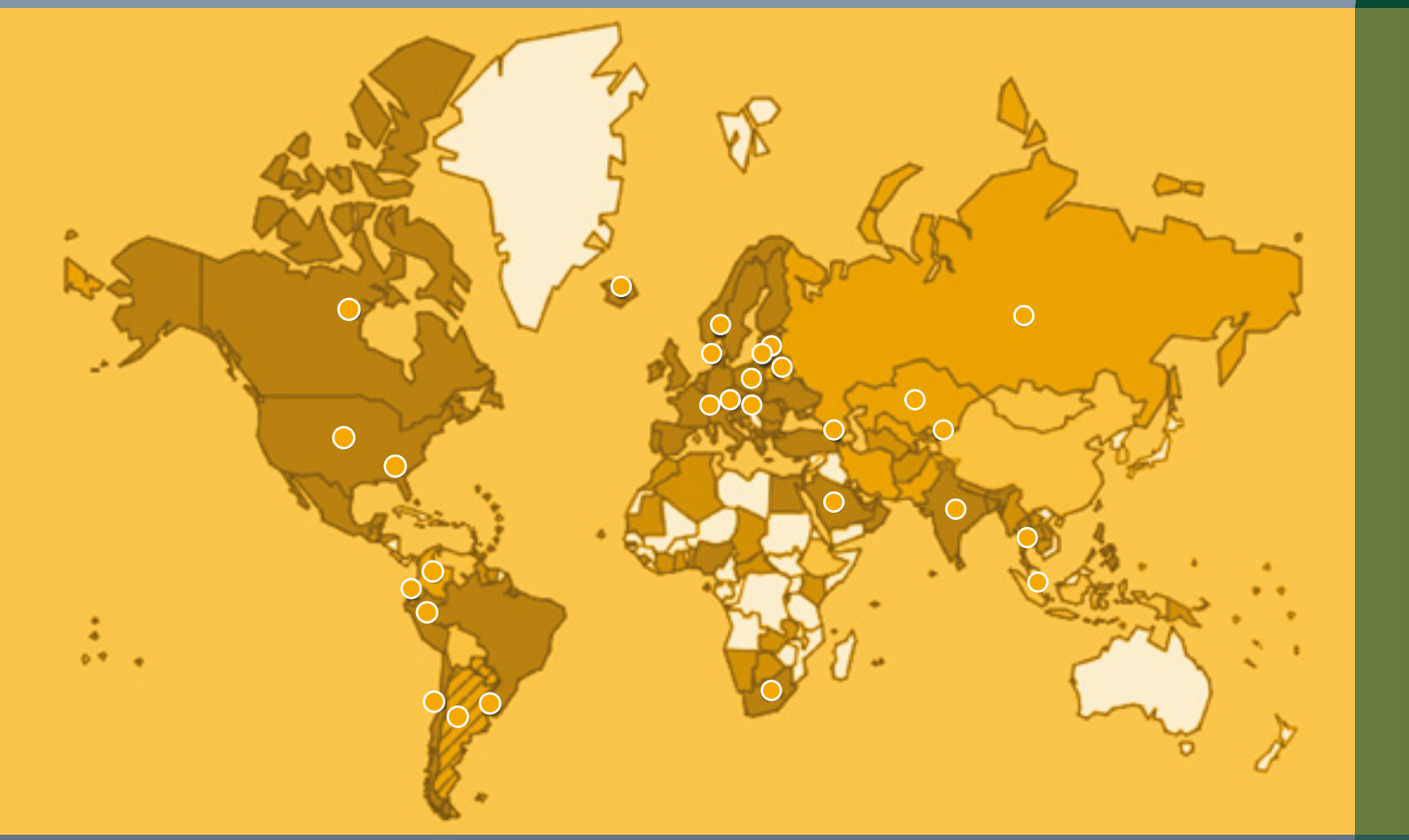
# Countdown to 2023

## WHO 5-year milestone report on global trans fat elimination 2023



World Health Organization

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Countdown to 2023: WHO 5-year milestone report on global trans fat elimination 2023

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# Foreword

The global initiative on eliminating industrial trans fat is one of the first and most successful efforts to completely remove a risk factor for noncommunicable diseases from the global food supply. I am greatly encouraged and impressed by the leadership and tenacity of the many countries that have responded to this lifesaving call to action. Together, we have made dramatic progress. After just five years, countries accounting for almost half of the world's population have introduced policies to protect their populations from the harms of trans fat.

The countries that have taken on this great challenge have demonstrated just how winnable and how necessary this battle is. These policies are preventing hundreds of thousands of unnecessary deaths each year, and generations to come will never know the burden of trans fats or the tragedy of a preventable heart attack from trans fat consumption.

Several major international food companies have committed to following WHO recommendations for the maximum limit for industrially produced trans fat in fats and oils. This demonstrates that it is feasible for food companies to switch from trans fats to healthier oils. I commend their efforts and call on small and medium-sized businesses to follow their lead.

Most deaths caused by trans fat are concentrated in just a few countries. In fact, introducing best-practice policies in the eight countries with the most deaths would prevent 90% of the world's deaths associated with this harmful ingredient.

One of the major challenges in this landmark campaign is making sure that when trans fat is removed, it is not replaced with other fats that are also linked to an increased risk of cardiovascular disease, such as those high in saturated fat. Unfortunately, those are often the cheapest and most accessible options. This issue has led to delays in trans fat elimination in some countries.

WHO remains committed to supporting countries to eliminate trans fat. The WHO validation programme for trans fat elimination recognizes countries who have not only introduced policies on trans fat elimination but are also actively monitoring and enforcing them. In 2024, WHO recognized the first five countries to receive this validation - Denmark, Lithuania, Poland, Saudi Arabia, and Thailand. I encourage these countries to share their experiences and know-how with other countries that are trying to implement their own elimination programmes.

Trans fat has no known health benefits and carries huge health risks. This report shows that together, we can eliminate this invisible killer from the world's food supply forever.

**Dr Tedros Adhanom Ghebreyesus**
Director-General
World Health Organization

# Acknowledgements

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Acknowledgement is also made of WHO regional and country office colleagues in making tremendous efforts to validate country data and information on the status of policies relating to *trans*-fatty acids (TFA).

Special thanks are due to Member States for their commitments and concrete actions towards the global target of TFA elimination by 2023.

# Abbreviations

| | |
|---|---|
| **ASEAN** | Association of Southeast Asian Nations |
| **CARICOM** | Caribbean Community |
| **CHD** | coronary heart disease |
| **EAC** | East African Community |
| **EAEU** | Eurasian Economic Union |
| **ECOWAS** | Economic Community of West African States |
| **EU** | European Union |
| **FAME** | fatty acid methyl ester |
| **GCC** | Gulf Cooperation Council |
| **IFBA** | International Food and Beverage Alliance |
| **NCD** | noncommunicable disease |
| **PAHO** | Pan American Health Organization |
| **PHO** | partially hydrogenated oils |
| **SICA** | Central American Integration System |
| **TFA** | *trans*-fatty acids |
| **TFATAG** | Trans Fat Elimination Technical Advisory Group |
| **T-MEC** | Tratado entre México, Estados Unidos y Canadá |
| **WHO** | World Health Organization |

Sorin Gheorghita @Unplash

# Executive summary

This milestone report summarizes progress over the past 5 years towards the global elimination of industrially produced *trans*-fatty acids (TFA), highlighting impacts on public health.

Industrially produced TFA is a harmful compound used in many processed foods. It causes heart disease and death, and has no nutritional benefits. Estimated to cause more than 278 000 deaths a year from coronary heart disease (CHD) (Institute for Health Metrics and Evaluation, unpublished data, [2019]), TFA has no place in the food supply.

In 2018, WHO set the ambitious target to eliminate TFA from the global food supply by the end of 2023, and established TFA elimination as a priority target of the Thirteenth General Programme of Work. At the same time, WHO released the REPLACE action framework with recommended best-practice policies and implementation modules to support Member States in eliminating TFA from their national food supplies and replacing them with healthier oils and fats.

## Progress to date

Immense advances have been made. In 2023 alone, new best-practice policies became effective in seven countries (Egypt, Mexico, Nigeria, North Macedonia, Philippines, Republic of Moldova and Ukraine). At the end of 2023, WHO-recommended best-practice policies were in effect in 53 countries, covering 3.7 billion people or 46% of the world's population, as compared to 6% just 5 years ago. Current best-practice policies could prevent approximately 66% of the total deaths originally estimated to be caused by TFA intake annually — equivalent to almost 183 000 lives saved each year; a victory for public health.

Still, coverage in some regions is lagging. Both the Western Pacific and the African regions currently cover less than one quarter of their regional TFA burdens with best-practice policies.

WHO initiated the WHO Validation Programme for Trans Fat Elimination to further drive policy progress and recognize country achievement. During the initial country application cycle in 2023, several countries applied to receive the WHO Validation Certificate for TFA elimination, demonstrating commitment to the elimination target and public health. Denmark, Lithuania, Poland, Saudi Arabia and Thailand became the first five countries to be awarded the TFA Validation Certificate.

Challenges persist around the lack of prioritization by countries to pass policies and limited enforcement once policies are passed.

National regulations have been complemented by commitments and action from a small number of global companies, reinforcing that reformulation and replacement of harmful TFA in food products is feasible and highlighting the need for action by all manufacturers of TFA-containing products around the world.

## The way forward: roadmap to complete and sustained global elimination

Despite the progress to date, the world fell short of reaching the global elimination target within the time frame initially proposed. Completing the job of global elimination will ensure that people in all countries are protected from the harms of TFA. Virtual elimination of TFA globally is feasible.

By the end of 2025, WHO calls for best-practice policies in countries that together account for at least 90% of the total global TFA burden and at least 70% of the total TFA burden within each region.

Additional policies in just eight countries (Azerbaijan, China, Indonesia, the Islamic Republic of Iran, Japan, Morocco, Pakistan and Russian Federation) would eliminate 90% of the global TFA burden, representing a unique opportunity to accelerate progress towards a world free from deaths attributable to TFA. WHO will continue to support all countries in complete

and sustained elimination. To prevent companies shifting the sale of their TFA-containing products to unregulated markets, all countries must act to eliminate TFA.

To eliminate TFA globally, WHO recommends:

- All countries should enact best-practice policies, especially those with the highest estimated remaining burden of disease attributable to TFA intake.
- All countries should strongly enforce best-practice policies. Countries should strive to receive the WHO Validation Certificate by applying to the Validation Programme, which audits national monitoring and enforcement systems and recognizes countries for effective policy implementation.
- Subregional bodies should pass mandatory TFA elimination policies that are directly binding on member states (where possible).
- Fats, oils and food manufacturers should comply with regulations and increase the healthfulness of alternative fats in use. Even where regulations are not yet in place, companies should eliminate TFA in product lines and supply chains.

Even a single preventable death from TFA consumption is unacceptable. The past 5 years have demonstrated that eliminating TFA is achievable, affordable and life-saving; we now have the advantage of drawing on the experiences of dozens of countries that have successfully acted. Achieving global elimination is within reach, and there is a clear roadmap for getting to a TFA-free world.

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# 1. Introduction

Industrially produced *trans*-fatty acids (TFA) are harmful compounds used in many processed foods. TFA is one of the main risk factors for diet-related noncommunicable diseases (NCDs) and increased TFA intake (>1% of total energy intake) is associated with coronary heart disease (CHD) events and mortality (WHO, 2023c). TFA has been estimated to cause more than 278 000 deaths a year from CHD, the world's biggest killer (Institute for Health Metrics and Evaluation, unpublished data, [2019]). Replacing TFA with healthier fats and oils saves lives, prevents illness and reduces health care costs (WHO, 2017).

In 2018, the World Health Organization (WHO) set a bold target for global elimination of TFA by the end of 2023, calling on all countries to pass and implement best-practice policies.[1] Elimination of TFA is a priority target of the Thirteenth General Programme of Work, WHO's 2019–2023 strategic plan (formally extended to 2025 because of the COVID-19 pandemic) (WHO, 2019a). In 2018, WHO released the REPLACE action framework for TFA elimination (WHO, 2018), followed in 2019 by its six modules to support Member States to eliminate industrially produced TFA from their national food supplies released in 2019.[2] The package calls for policy actions to replace TFA with healthier fats and oils, while establishing solid monitoring systems and creating awareness among policy-makers, industry and the public. WHO also called on industry to eliminate TFA from all global product lines by 2023 (WHO, 2019b).

WHO has several initiatives that monitor global progress towards the target of eliminating TFA. The TFA Country Score Card[3] is a policy map that scores and tracks national TFA policies. The number of countries with WHO best-practice policies for TFA elimination is an indicator of progress in WHO's Triple Billion initiative, an ambitious drive to improve the health of billions of people by 2023 (WHO, 2020c). The WHO Validation Programme for Trans Fat Elimination[4] recognizes countries for having a normative framework in effect to eliminate TFA from their national food supplies (WHO, 2020d). Each year since the launch of REPLACE in 2018, WHO has published reports to monitor progress and identify priority actions towards meeting the 2023 target.

This report summarizes the progress over the 5 years since WHO's call for global elimination. With a focus on public health impact, it summarizes progress towards the global target, highlights progress by WHO region, and describes the remaining challenges and the way forward to complete and sustain elimination.

Ashwini-Chaudhary-Monty @Unplash

[1] WHO recommends that countries adopt one of two best-practice policy options for eliminating industrially produced TFA from the food supply: 1) limit industrially produced TFA to 2 g per 100 g of total fat in all fats, oils and foods, or 2) ban the production and use of partially hydrogenated oils (PHO).

[2] https://www.who.int/teams/nutrition-and-food-safety/replace-trans-fat

[3] https://gifna.who.int/summary/TFA

[4] https://www.who.int/teams/nutrition-and-food-safety/replace-trans-fat/validation-programme-for-trans-fat-elimination

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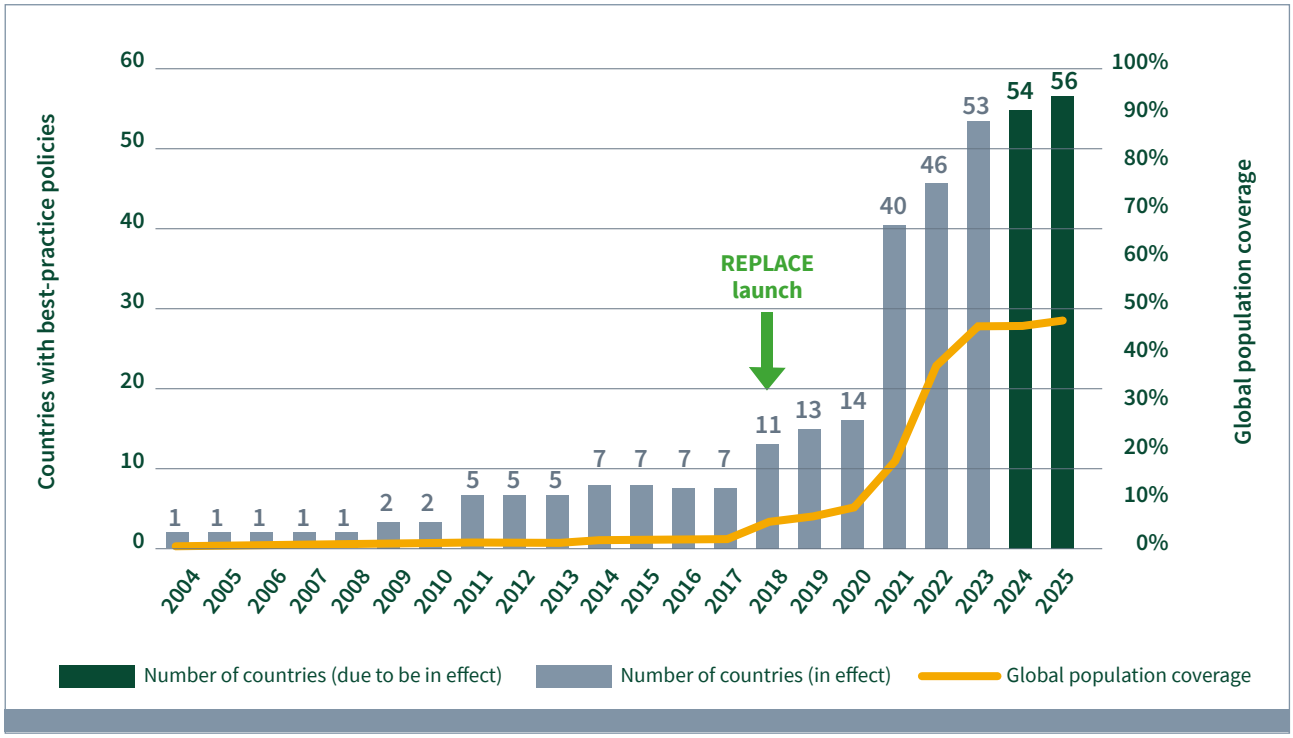
# 2. Global progress

## 2.1 Country action

Over the past 5 years, national governments have responded to WHO's call and championed TFA elimination. In 2023 alone, new best-practice policies became effective in seven countries (Egypt, Mexico, Nigeria, North Macedonia, Philippines, Republic of Moldova, and Ukraine). At the start of the REPLACE initiative in 2018, 11 countries had best-practice elimination policies in effect, covering 6% of the global population.[1] Since the launch of REPLACE, 42 additional countries now have best-practice policies in effect. Today, 53 countries have best-practice policies in effect covering 46% of the global population (or 3.7 billion people). Another three countries (Argentina, Paraguay and Sri Lanka), representing 1% of the world population, have passed best-practice policies that will soon come into effect, meaning that approximately 47% (or 3.8 billion people) could be covered by best-practice policies by 2025 (Fig. 1). Overall, mandatory policies (including best-practice policies and less restrictive policies) are currently in effect for 69 countries, covering 4.4 billion people (or 55% of the global population) (UN DESA, 2022).

**Fig. 1. Number of countries with best-practice TFA policies in effect and global population coverage, by year**



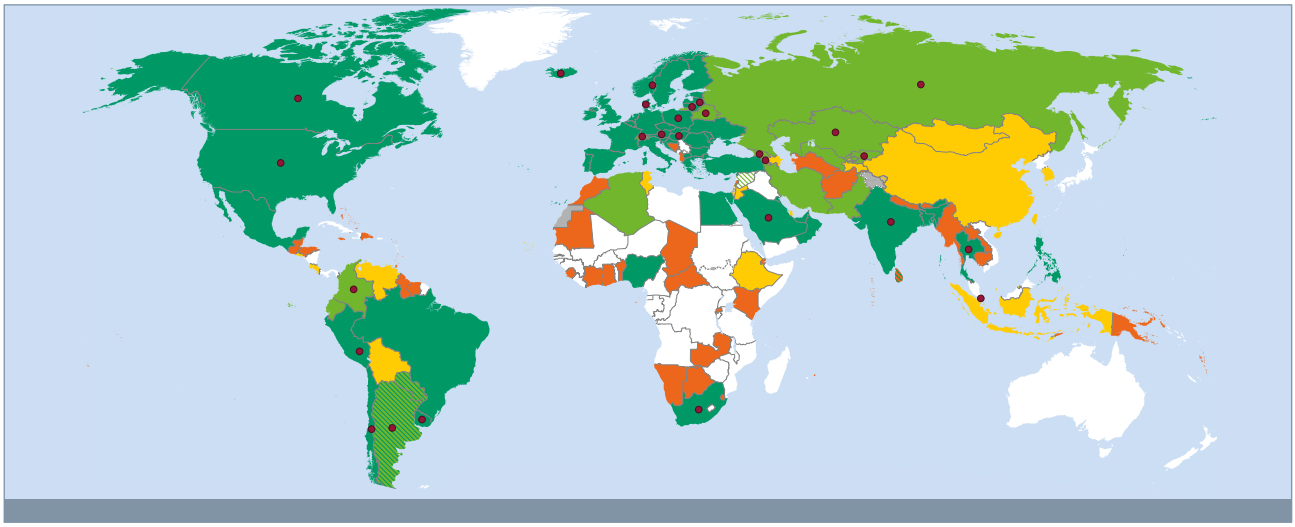

Importantly, there have been significant policy advances in every region of the world. Prior to 2018, most policies were in high-income countries and in the regions of the Americas and Europe; no countries in the Eastern Mediterranean Region, South-East Asia Region or Western Pacific Region had best-practice policies. Since May 2018, two countries in the African Region (Nigeria and South Africa), four in the South-

[1] Previous reports have indicated 7% global population coverage, based on policies in effect or passed while the present report focuses on those in effect as of December 2023.

East Asia Region (Bangladesh, India, Sri Lanka and Thailand), six in the Eastern Mediterranean Region (Bahrain, Egypt, Kuwait, Oman, Saudi Arabia and United Arab Emirates), and two in the Western Pacific Region (Philippines and Singapore) have passed best-practice policies. The implementation status of TFA policies and measures around the world is shown in Fig. 2. Annex 1 provides country-by-country information on the CHD burden attributable to TFA intake, and the status of TFA policies – both those in effect and those that will shortly come into effect. The estimates on CHD burden in the Annex are provided by the Institute for Health Metrics and Evaluation and are based on data from the Global Burden of Disease study in 2019 (Institute for Health Metrics and Evaluation, unpublished data, [2019]). The methodologies used for the analysis in that study are summarized in Annex 2 of this report and described in detail in Annex 2 of the progress report for 2020 (WHO, 2020a). Countries that were estimated to have the high proportions of CHD deaths caused by high TFA intake (defined as higher than 0.5% of total energy intake) include both countries with a TFA best-practice policy implemented and those without such a policy.

Regional action has been a major contributor to global policy progress, with mandatory regional regulations having demonstrated the greatest effect in providing policy cover (Fig. 2). For instance, the European Union (EU) best-practice regulations became effective in April 2021, protecting approximately 480 million people in 22 countries that did not already have policies in effect.[1] Voluntary standards set by regional bodies, such as those in effect in the Gulf Cooperation Council (GCC), can also help align a region around TFA elimination: all but one of the six GCC member states have adopted the standard in line with the WHO best-practice policy.[2] The Eurasian Economic Union (EAEU) has also implemented a mandatory regional approach

**Fig. 2: Global TFA elimination policies and measures as of December 2023**



1. National policy commitment to eliminate TFA: National policies, strategies or action plans that express a commitment to reduce industrially produced TFA in the food supply

2. Other complementary measures: Legislative or other measures that encourage consumers to make healthier choices about industrially produced TFA in foods in specific settings

3. Less restrictive TFA limits: Legislative or regulatory measures that limit industrially produced TFA in foods in all settings, but are less restrictive than the recommended approach

4. Best-practice TFA policy: Legislative or regulatory measures that limit industrially produced TFA in foods in all settings, and are in line with the recommended approach

Best-practice TFA policy passed but not yet in effect

Less restrictive TFA policy passed but not yet in effect

Monitoring mechanism for mandatory TFA limits

Data not available

Not applicable

[1] EU member states newly protected with the 2021 regional regulations are: Belgium, Bulgaria, Croatia, Cyprus, Czechia, Estonia, Finland, France, Germany, Greece, Ireland, Italy, Luxembourg, Malta, Netherlands (Kingdom of the), Poland, Portugal, Romania, Slovakia, Spain, Sweden and United Kingdom. The following EU member states had best-practice policies in effect prior to the regional regulations: Austria, Denmark, Hungary, Latvia, Lithuania, Norway and Slovenia.

[2] The GCC comprises Bahrain, Kuwait, Oman, Qatar, Saudi Arabia and the United Arab Emirates. All but Qatar have adopted mandatory restrictions best-practice policy.

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to TFA restriction. In January 2015, EAEU limited TFA to 20% of the fat content in foods; this restriction was directly applicable in all member states.[1] From January 2018, the TFA limit was reduced to 2% in oils and fats for all member states. While the EAEU was the first regional body to take policy action, the limits fall short of best-practice because they do not apply to all foods, and a lack of laboratory capacity has impeded implementation. By strengthening the current TFA limits to apply to all foods, and implementing effective enforcement strategies, EAEU countries can achieve complete elimination of industrially produced TFA.

Country commitments to TFA-free regions provide a roadmap for national action. In 2019, all Member States of the Pan American Health Organization (PAHO) endorsed a Plan of Action for the Elimination of Industrially Produced *Trans*-Fatty Acids 2020–2025[2] which promotes best-practice TFA policies. Since the adoption of the plan, three additional countries in the region passed best-practice policies and several other countries have initiated policy development.[3] No other regions have yet sought member state endorsements of plans for TFA-free regions, though this could be a model to consider.

Beyond formal regional plans of action, clear harmonization occurs within a region when policy momentum begins to build within individual countries. When one country passes a policy, neighbouring countries or countries with close relations tend to align policies, as this can facilitate bilateral or regional trade. For example, with the Mercosur (Mercado Común del Sur [Southern Common Market]) bloc, Argentina was the only member state without a best-practice policy; in 2023, Argentina strengthened its existing TFA regulation to align with the other members states (Brazil, Paraguay and Uruguay). Additionally, in 2023, Mexico aligned its policy with that of the US and Canada, its partners in the 'Tratado entre México, Estados Unidos y Canadá (T-MEC)' free trade agreement. After the EU passed its policy, Türkiye and Ukraine both followed suit. After India passed its policy, Bangladesh did the same. These examples demonstrate how policies in one country or one region can have a domino effect beyond their borders. It also reinforces the importance of large countries that have not yet passed policies doing so.

Together, these best-practice policies could help prevent approximately 66% or almost 183 000 of the annual deaths due to TFA intake globally (Institute for Health Metrics and Evaluation, unpublished data, [2019]) (Fig. 3, Table 1). Two regions account for the greatest best-practice policy coverage in TFA burden,[4] namely South-East Asia and the Americas, each representing 28% and 20% of estimated global TFA burden covered respectively (covering more than 77 000 and 56 000 deaths). Important contributions have also been made by the Eastern Mediterranean and European regions, where best-practice policies currently cover 6% and 10% of the global TFA burden, respectively. Still, coverage in some regions is lagging. The Western Pacific has the lowest regional TFA burden coverage (with only 7% of annual regional TFA-attributable deaths covered by best-practice policies). More progress is also needed in Africa where currently 24% of the regional TFA burden is covered by best-practice policies.

[1] The EAEU comprises Armenia, Belarus, Kazakhstan, Kyrgyzstan and the Russian Federation.
[2] https://iris.paho.org/handle/10665.2/51965
[3] Paraguay passed a best-practice policy in 2020 and Argentina and Mexico passed best-practice policies in 2023.
[4] TFA burden refers to the proportion of CHD deaths caused by high TFA intake (>0.5% of total energy intake). Details on the methodology for estimating TFA burden can be found in Annex 2.

**Fig. 3: Estimated number and proportion of annual TFA-related deaths averted by countries with best-practice TFA policies in effect, by region**

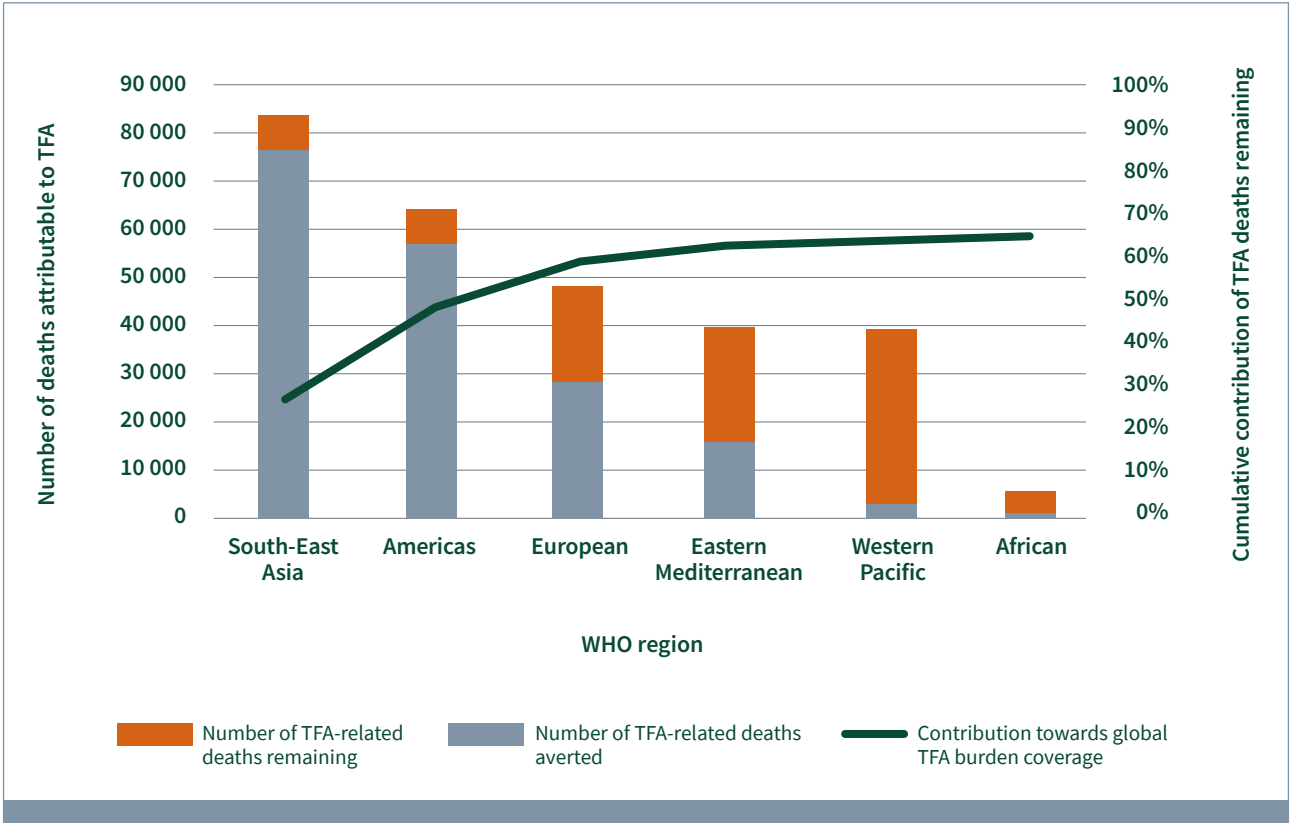



**Table 1. Countries with best-practice TFA policies in effect or passed**

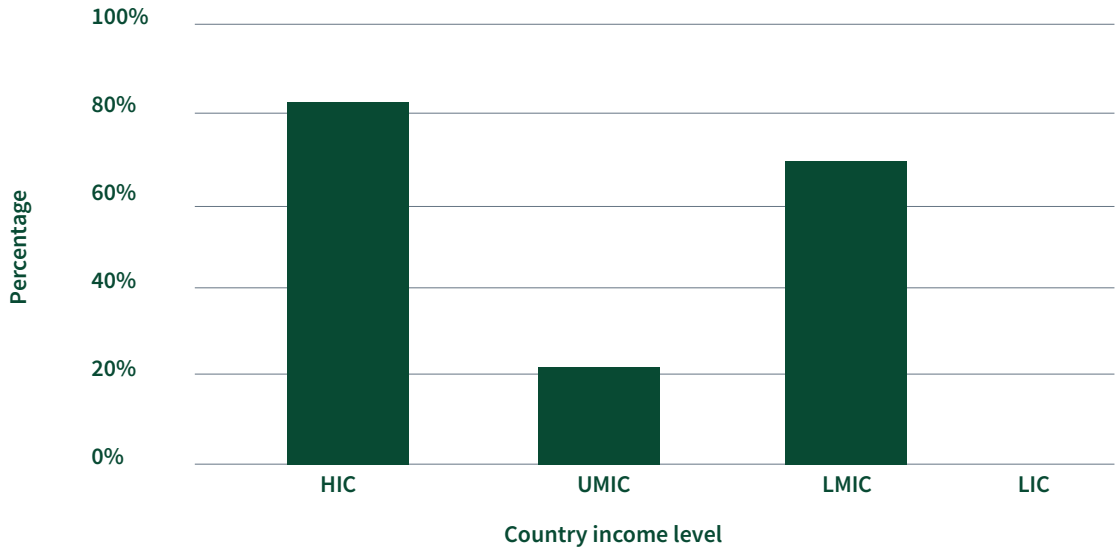
| WHO Region | Country | Proportion of the global TFA burden covered by policies in effect |
|---|---|---|
| African | Nigeria, South Africa | 1% |
| Americas | Argentina[a], Brazil, Canada, Chile, Mexico, Paraguay[a], Peru, United States, Uruguay | 20% |
| Eastern Mediterranean | Bahrain[a], Egypt, Kuwait, Oman, Saudi Arabia, United Arab Emirates | 6% |
| European | Austria, Belgium, Bulgaria, Croatia, Cyprus, Czechia, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands (Kingdom of the), North Macedonia, Norway, Poland, Portugal, Republic of Moldova, Romania, Slovakia, Slovenia, Spain, Sweden, Türkiye, Ukraine, United Kingdom | 10% |
| South-East Asia | Bangladesh, India, Sri Lanka[a], Thailand | 28% |
| Western Pacific | Philippines, Singapore | 1% |
| Total | | 66% |

[a] Countries that have passed best-practice policies that are not yet in effect as of December 2023.

**Today, WHO-recommended best-practice policies are in effect in 53 countries, protecting 3.7 billion people (or 46% of the global population) (Fig. 1).**

There has also been a shift towards lower-middle-income countries leading the charge on TFA elimination. Prior to 2018, only two upper-middle-income countries had passed best-practice policies (South Africa and Peru). Since 2018, nine additional upper-middle-income countries passed policies (Argentina, Brazil, Bulgaria, Mexico, North Macedonia, Paraguay, Republic of Moldova, Thailand and Türkiye), as did seven lower-middle-income countries (Bangladesh, Egypt, India, Nigeria, Philippines, Sri Lanka and Ukraine). To date, no low-income country has taken action (Fig. 4).

**Fig. 4. Percentage of population with best-practice policies in effect or passed, by country income level**




HIC: high-income countries; LIC: low-income countries; LMIC: lower-middle-income countries; UMIC: upper-middle-income countries (using World Bank country classifications by income level, 2022–2023; https://datahelpdesk.worldbank.org/knowledgebase/articles/906519-world-bank-country-and-lending-groups).

Monitoring and enforcing compliance with policies is critical to ensuring that the health benefits of TFA elimination are maximized and sustained. WHO launched the Validation Programme for Trans Fat Elimination in 2020, the first programme of its type to recognize the elimination of an NCD risk factor. During the initial country application cycle in 2023, several countries applied to receive the WHO Validation Certificate for TFA elimination, demonstrating commitment to the elimination target and public health. Based on the evaluation of country applications by the WHO Trans Fat Elimination Technical Advisory Group (TFATAG), Denmark, Lithuania, Poland, Saudi Arabia and Thailand became the first five countries to be awarded the TFA Validation Certificate (WHO, 2023b).

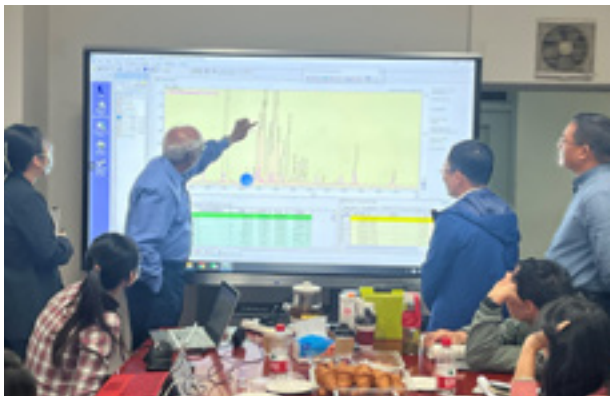
## 2.2 Industry action

Private sector companies, including food and beverage manufacturers and fats and oils suppliers, have also acted to eliminate industrially produced TFA from product lines. In response to the April 2019 call for action by Dr Tedros Adhanom Ghebreyesus, Director-General of WHO, the member companies of the International Food & Beverage Alliance (IFBA) committed to not exceeding 2 grams of TFA per 100 grams of oils and fats in their products worldwide by 2023. IFBA member companies further indicated that they would seek, wherever possible, to ensure that reformulation efforts to meet this commitment would not result in increases in the content of saturated fat (IFBA, 2019). WHO's independent evaluation found that the assessed IFBA companies seemed to have made progress towards reducing TFA content in products to levels in line with the WHO recommendation, reinforcing that reformulation and replacement of harmful TFA in food products is feasible. Of the total number of food and beverage products assessed, 53% of products contained some form of TFA probably from ruminant sources, while 24% did not contain any TFA[1]. However, there was a significant amount of missing data, making the findings of the evaluation less conclusive. There is still room for improvement in comprehensiveness, consistency and transparency in reporting and sharing of data by companies (WHO, 2023a).

Commitments and follow-through from the fats and oils industry could have an even greater downstream impact on TFA global product supply. In December 2021, Cargill became the first – and to date only – ingredients company to commit to elimination. Pending an independent evaluation, the company has reported that as of January 1, 2024, it has achieved this goal, making it the first global supplier to fully align its entire worldwide edible oils portfolio with WHO best-practice standards on industrially produced TFA (Cargill, 2024). As the world continues to move away from TFA, industry will have less incentive to manufacture TFA-containing fats, oils and foods. Monitoring the product lines of multinational companies that manufacture TFA-containing fats and oils is an important area of focus going forward.

## 2.3 Support and resources for elimination

WHO is committed to supporting member states with TFA policy development and implementation. In addition to the policy and implementation guidance in the REPLACE framework and modules, WHO has developed technical guidance around global surveillance, laboratory protocols and other resources to enable countries to conduct TFA laboratory assessment;[2] country case studies;[3] advocacy and communications tools for building awareness of the harms of TFA and generating the necessary political support[4]; and workshops to build regulatory and legal capacity for developing and implementing regulations. The first regulatory workshop was held for countries in the WHO Eastern Mediterranean Region in March 2019.[5] Since then, several workshops have been conducted for countries in the WHO African, European, South-East Asia and Western Pacific regions, and the Region of the Americas.



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[1] Insufficient information was available to estimate the TFA content of the remaining 23% of products.
[2] https://www.who.int/teams/nutrition-and-food-safety/replace-trans-fat/trans-fat-laboratory-analysis
[3] Country case studies are in the WHO annual progress reports, available from https://www.who.int/teams/nutrition-and-food-safety/replace-trans-fat.
[4] https://cdn.who.int/media/docs/default-source/nutritionlibrary/replace-transfat/trans-fat-elimination-communications-toolkit.pdf?sfvrsn=3ab93e24_4&download=true
[5] https://www.emro.who.int/emhj-volume-25-2019/volume-25-issue-11/regional-workshop-on-healthy-diet-with-a-focus-on-trans-fatty-acid-elimination.html

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Most recently, a laboratory capacity-building workshop was held in China in October 2023.

The WHO guideline on saturated fatty acid and TFA (WHO, 2023c) provides up-to-date, evidence-informed guidance on the intake of saturated fatty acids and TFA to reduce the risk of diet-related NCDs in adults and children, particularly cardiovascular diseases. WHO is also developing guidelines on the consumption of tropical oils (see section 3 for more information) and on nutrition labelling.

Global partners, including Resolve to Save Lives, Global Health Advocacy Incubator and NCD Alliance, have been a catalysing force for policy processes in countries and regions. These groups have prioritized and invested in TFA elimination by partnering with governments, convening advocacy coalitions, leveraging success stories and champions, conducting research to spur policy dialogue and development, launching media and communications campaigns, and providing technical support to governments on policy development and implementation, including drafting of regulations. Countries that passed best-practice policies with the strong support of these global civil society partners and their in-country coalitions include Argentina, Bangladesh, Brazil, India, Mexico, Nigeria, Philippines and Türkiye.


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# 3. The way forward for complete and sustained global TFA elimination

## 3.1 Global TFA elimination target

Despite the progress to date, the world fell short of reaching the global elimination target within the time frame initially proposed. Completing the job of global elimination will ensure that people in all countries are protected from the harms of TFA. While countries should continue to strive for total elimination of TFA, based on what has been achieved in the 5 years since the global call for elimination, WHO proposes a revised target: virtual elimination of TFA globally by 2025 whereby:

1. best-practice elimination policies are passed in countries that account for at least 90% of the total global TFA burden;
2. best-practice policies are passed in countries that account for at least 70% of the total burden within regions.

Introducing best-practice mandatory TFA restrictions in countries that account for at least 90% of the global TFA burden will not only significantly reduce global TFA burden but will likely also have spillover effects in countries without best-practice policies. Currently, most of the deaths caused by TFA intake are concentrated in a few countries that have relatively large populations. The global food supply is interconnected; countries with the greatest TFA burden are also often major exporters of foods and ingredients to smaller countries. This will be a tipping point for industry: companies will need to eliminate TFA to sell products in major and medium-sized markets and it is not profitable to continue manufacturing TFA-containing products that can only be sold in a small fraction of the global market. Thus, best-practice policies in just eight additional countries (Azerbaijan, China, Indonesia, the Islamic Republic of Iran, Japan, Morocco, Pakistan and Russian Federation) would eliminate 90% of the global burden, accelerating progress towards ending all deaths from TFA.

Best-practice mandatory restrictions in countries that together account for at least 70% of the total TFA burden within regions will protect against potential domestic production of TFA-containing products, and against potential dumping of TFA products into unregulated markets.

Achieving these two metrics will ensure TFA is virtually eliminated and no longer causing death and disease globally.

Beyond this revised target, WHO will continue supporting all countries in achieving the elimination of TFA. While most people are likely to be protected in the coming years, closing gaps and loopholes will ensure that all countries are able to avoid further risk. Further policy actions by governments will contribute to efforts to reach the overall WHO target of 1 billion more people enjoying better health and well-being by 2025 (WHO, 2019a), as well as the Sustainable Development Goals that countries have committed to achieve by 2030.

## 3.2 Learning from country experiences

The first 5 years have demonstrated that eliminating TFA is achievable, affordable and life-saving; participating countries have generated a wealth of learning that can ease the way for others. These lessons from country experiences support continued momentum for policy passage and effective implementation around the world.

### 3.2.1 Laboratory measurements

Laboratory analysis of TFA in foods is complex, requiring resources and experienced analysts, and many countries have faced challenges establishing capacity. WHO supports countries to strengthen laboratory capacity through workshops, technical assistance and the WHO global (reference) laboratory protocol (WHO, 2020b). WHO also makes available other resources and tools such as video modules[1] and a fatty acids calculation spreadsheet that automatically calculates fat content and fatty acids composition.[2]

Although the WHO global (reference) protocol was successfully implemented in several laboratories worldwide, some laboratories, especially those operating with a limited budget, faced implementation challenges. These laboratories requested that the procedures be simplified, and suitable alternatives be included in the protocol so that it is easier to use and globally applicable. For example, WHO received feedback from laboratories in various countries that they experienced difficulties procuring certain consumables, particularly internal standards and reference standards, because of cost and availability issues. In response to the requests, a 2-day, virtual WHO expert consultation meeting was held in June 2022 to discuss simplified procedures and other suitable alternatives that enable laboratories operating with limited resources to conduct fatty acid methyl ester (FAME) analysis. Based on this expert consultation, in 2023 WHO published the simplified laboratory protocol (WHO, 2023d), a fit-for-purpose protocol providing alternatives for lower-resource settings.

Laboratories can choose to use either the WHO global (reference) protocol or the WHO simplified protocol, depending on which is the most suitable for the purpose of the analysis. WHO has organized laboratory capacity-building workshops to help laboratories implement the WHO protocols. Workshops held for countries in the WHO Eastern Mediterranean and South-East Asia regions, China, Indonesia, Nepal and Ukraine have helped improve lab performance.

Despite these efforts, laboratory capacity remains limited in many countries. Experience from the past 5 years suggests that it is challenging and in fact may not be necessary for all countries to rely on laboratory analysis. Although countries are recommended to conduct laboratory analysis to understand how much TFA is in the food supply, laboratory analysis may not be essential during the policy development process; other data sources can be used to identify key sources of TFA in the diet and the baseline situation in countries (e.g. mapping of national PHO markets). Furthermore, whether or not there is TFA in the food supply, countries need to enact a best-practice policy: if present, TFA needs to be removed, and, if not yet present, a best-practice policy is necessary to avoid introduction or dumping of TFA-containing products into national food supply. During policy compliance monitoring, laboratory analysis may be replaced with analysis of TFA labelling provided that the country already has a mandatory TFA declaration on nutrition labelling and that it is well implemented for both domestic and imported products. Countries could also conduct inspection of processing techniques at domestic oil/fat facilities, examination of documentation at domestic oil/fat and food facilities on ingredients and products, examination of documentation at ports of entry, and sampling and testing of products at ports of entry that are likely to have high levels of TFA.

WHO recognizes some countries may still seek to establish laboratories as part of their TFA policy monitoring systems and will continue to support laboratory capacity-building through workshops and individualized technical assistance. The technical criteria for monitoring and enforcement systems developed for the WHO validation programme provide guidance for countries designing their TFA strategies.[3] To further support countries, WHO will be releasing guidance on compliance monitoring approaches, including when to use laboratory testing.

### 3.2.2 Industry compliance

In general, industry opposition to policies to eliminate TFA has been lower than the opposition to other policies aimed at reducing diet-related NCDs. Still,

[1] The modules on the basic science of TFA and analysis and on visualization of the procedures described in the WHO global (reference) protocol are available at https://www.youtube.com/watch?v=bBKBA33kfMY and https://www.youtube.com/watch?v=J4j9BzxtFFE, respectively.

[2] https://cdn.who.int/media/docs/default-source/nutritionlibrary/replace-transfat/fatty-acids-calculation-spreadsheet.xlsx

[3] https://www.who.int/teams/nutrition-and-food-safety/replace-trans-fat/validation-programme-for-trans-fat-elimination

some countries have experienced pushback from domestic PHO manufacturers, claiming they need more time to change their processing techniques. This has caused delays with compliance in some countries, especially in southern Asia. To address this and ensure that policies are fully and promptly implemented according to compliance deadlines, WHO is supporting countries to work with local industries to understand the challenges and provide technical assessment and support so that industry can move away from partial hydrogenation and use healthier processing techniques.

Based on country experiences, an implementation period of 1 year after the time of policy passage is sufficient to inform and work with industry to comply with new rules. For example, in countries where PHO (the main source of TFA) are produced in a relatively small number of large factories, identifying, engaging and monitoring those sites is an effective approach to ensure compliance. WHO and partners will continue to work with governments and companies to understand challenges and develop feasible solutions and roadmaps for complying with regulations.

### 3.2.3 Implementation

Some countries have faced challenges designing and implementing adequate policy monitoring and enforcement systems (reflecting a broader issue encompassing capacity for regulation of foods) because of the challenges with laboratory capacity and industry compliance described above. WHO recommends that countries develop implementation roadmaps; this includes assessing current policy implementation systems, identifying opportunities for embedding monitoring and enforcement within existing food inspection and licensing schemes, and identifying areas for improvement. The WHO REPLACE Module 6 on TFA policy enforcement provides guidance on designing an enforcement strategy, including a simple checklist.[1]

Effective policy implementation is key for public health impact and will be a focus of WHO support going forward. WHO will continue to support countries to develop implementation roadmaps and share experiences, so that others can learn, maintain and improve monitoring and enforcement systems.

### 3.2.4 Replacement with healthier oils

Ensuring TFA is replaced with healthier oils (e.g. oils low in saturated fat and high in polyunsaturated fat or monounsaturated fat) will maximize the health benefits of TFA elimination. However, tropical oils high in saturated fat, such as palm oil, are often the most affordable and accessible options. This has caused delays in some countries' policy processes, because there are concerns that TFA elimination will increase the use of other fats and oils that are linked to increased risk of cardiovascular disease. While there is evidence from the United States of America and several European countries that healthy oils are used to replace TFA where possible (Stender, Astrup & Dyerberg, 2009), data is scarce elsewhere on the impact of TFA elimination policies in inducing the replacement of TFA with the healthiest possible oils; many fats, oils and food manufacturers are driven by low cost and not the health profile of replacement oils that are used.

WHO has been working with in-country partners to ensure that the evidence on the health effects of saturated fat and that the WHO guidelines on saturated fat and TFA intake are considered in policy discussions.[2] WHO and partners are offering technical support to help countries and industry stakeholders identify available and feasible replacement options and technologies.

To strengthen support in this area, WHO will publish a guideline on consumption of tropical oils. In advance of the guideline, rapid reviews of the systematic reviews on the consumption of palm oil and coconut oil are available that summarize existing evidence on the effects of palm oil and coconut oil intake on cardiovascular health. Additionally, WHO and partners will continue to support countries, identifying complementary policies or programmes that can incentivize replacement with healthier oils. Concern for the type of replacement oil to be used is never a reason to delay implementation of a WHO-recommended best-practice policy to eliminate TFA.

[1] The module is available at https://iris.who.int/handle/10665/324826 and the checklist is available at https://www.who.int/docs/default-source/documents/replace-transfats/e-enforcement-checklist.pdf.

[2] https://www.who.int/news/item/17-07-2023-who-updates-guidelines-on-fats-and-carbohydrates

## 3.3 Recommendations

To fully and sustainably eliminate TFA globally in the next 2 years, WHO has four key recommendations:

1. Member States must ensure that all people are protected by best-practice policies. Best-practice policy coverage in countries that account for at least 90% of the total global TFA burden and 70% of burden within regions by 2025 will virtually eliminate TFA globally. WHO calls on all countries to act, and especially those with the highest TFA burden. The most effective way for countries to ensure their people are protected from the harms of TFA is to implement a best-practice policy covering the major sources of TFA in their country. Countries that have taken measures that are not in the best-practice policy category should consider strengthening their legislations.
2. All Member States must implement and enforce regulations. Even best-practice policies are only effective if enforced. WHO has created the Validation Programme for Trans Fat Elimination for auditing and validating that countries have policy frameworks in place. WHO encourages countries to apply to join the five countries it has already recognized for their achievements in implementing and enforcing TFA elimination policies.
3. Subregional bodies must pass mandatory TFA elimination policies that are directly binding on member states (where possible), as they can facilitate trade and policy implementation, easing the burden of monitoring and enforcement on individual countries.
4. Companies must eliminate industrially produced TFA in product lines and increase the healthfulness of TFA replacements. Every product containing PHOs needs to be reformulated, ideally with the healthiest oils that meet the requirements of the product. Beyond compliance with national policies, WHO expects food manufacturers to voluntarily eliminate industrially produced TFA across their product portfolios. Ingredient manufacturers may play a particularly important role in making sure that suitable replacement alternatives are available and have a comparable price with the ingredients containing PHOs.

Parmanand Jagnandan @Unplash

# 4. Regional summaries: Progress and way forward

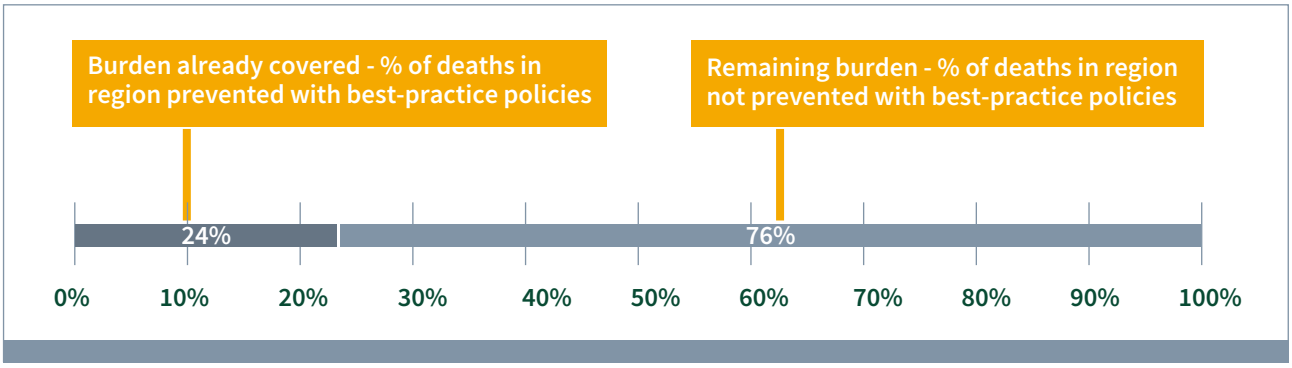
## 4.1 Africa

Two countries in the WHO African Region have best-practice policies in effect: Nigeria and South Africa. Mauritius has published a draft best-practice policy that, when implemented, could prevent thousands of unnecessary deaths in the country.[1] Effectively implemented, these policies could prevent 24% of the estimated deaths caused by TFA intake each year in Africa. The region is demonstrating a growing interest in TFA elimination, with seven countries developing plans to introduce best-practice policies. The adoption of best-practice policy by just nine further countries would eliminate just over 70% of estimated deaths attributable to TFA consumption. Table 2, Fig. 5 and Fig. 6 summarize the policy situation, progress towards preventing TFA-related deaths and the top countries in which action can accelerate progress towards a TFA-free African Region.

**Table 2. Summary of the TFA policy situation in the African Region**

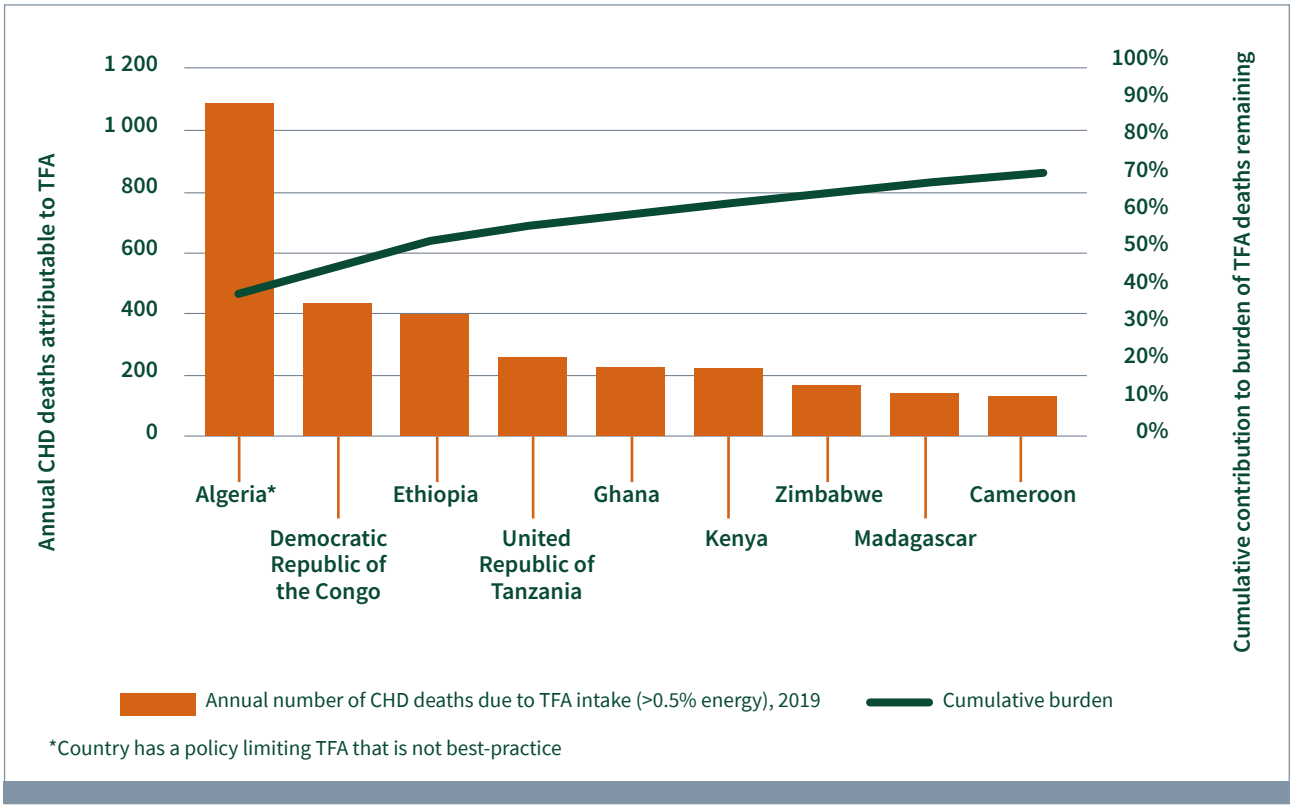
| National policy commitment | Other complementary measures | Less restrictive TFA limits | Best-practice TFA policy passed but not yet in effect (as of December 2023) | Best-practice TFA policy | Monitoring mechanism for mandatory TFA limits | WHO validation for TFA elimination |
|---|---|---|---|---|---|---|
| Benin, Botswana, Central African Republic, Chad, Côte d'Ivoire, Eswatini, Ghana, Kenya, Mauritania, Mauritius, Namibia, Rwanda, Sao Tome and Principe, Seychelles, Sierra Leone, Zambia | Cabo Verde, Ethiopia | Algeria | | Nigeria, South Africa | South Africa | |

**Fig. 5. Progress towards preventing the TFA-attributable deaths in Africa with best-practice policies**




[1] https://health.govmu.org/health/wp-content/uploads/2023/09/DRAFT-FOOD-REGULATIONS-2023-.pdf

**Fig. 6. Top TFA burden countries that can accelerate action towards a TFA-free Africa**




## Roadmap to elimination: Africa

The following actions will achieve a TFA-free Africa in which people no longer die preventable deaths because of TFA in their food.

1. Nigeria and South Africa monitor and enforce their existing policies and apply for the WHO Validation certificate.
2. All remaining countries in the region pass and implement best-practice policies. Seventy per cent of the total estimated burden in the region will be addressed if the following countries implement best-practice policies: Algeria, Cameroon, Democratic Republic of the Congo, Ethiopia, Ghana, Kenya, Madagascar, United Republic of Tanzania and Zimbabwe. Public awareness campaigns to educate consumers and drive market demand for healthier options and advocacy among policymakers will be key in this endeavor.
3. Trade blocs and sub-regional bodies, including the East African Community (EAC) and the Economic Community of West African States (ECOWAS), pass and implement TFA elimination policies.
4. Companies manufacturing and selling products in Africa comply with national policies and discontinue using TFA even where policies are not yet in effect, prioritizing replacement of TFA with the healthiest oils possible.
5. WHO and partners work to strengthen the capacity of regulatory bodies, improve laboratory capacities for food analysis, and enhance overall regulatory infrastructure.

## 4.2 Americas

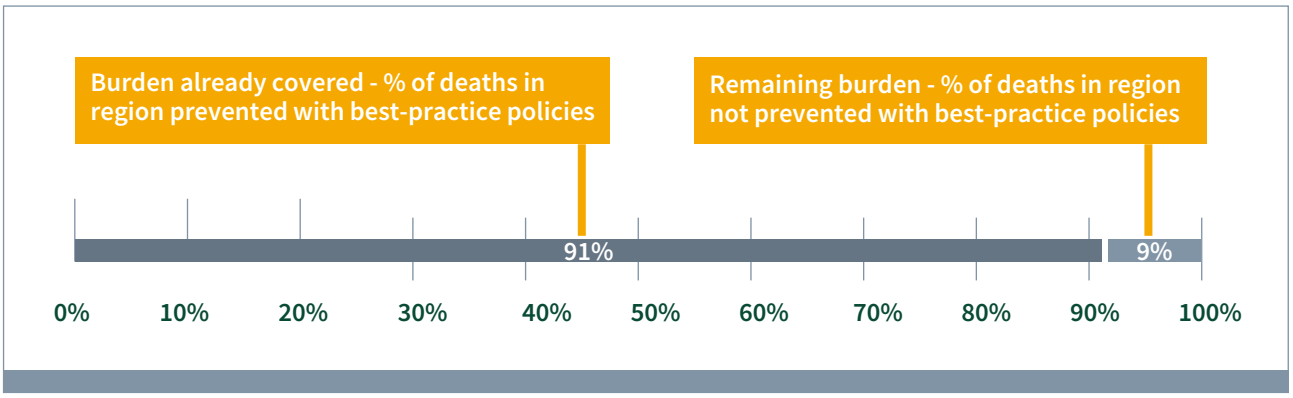
Nine countries in the Region of the Americas have best-practice policies in effect or passed: Argentina, Brazil, Canada, Chile, Mexico, Paraguay, Peru, United States of America and Uruguay. Effectively implemented, these policies could prevent 91% of the estimated deaths caused by TFA intake each year in the Americas. With best-practice policies in just 10 additional countries, 99% of deaths attributable to TFA consumption could be eliminated.

The United States alone accounts for just over two thirds of the regional TFA burden with its best-practice policy; to date, no countries in Central America or the Caribbean have best-practice policies in place. In 2023, Colombia published a draft best-practice policy that, when implemented, could prevent thousands of unnecessary deaths in the country each year.[1] Table 3, Fig. 7 and Fig. 8 summarize the policy situation, progress towards preventing TFA-related deaths and the top countries in which action can accelerate progress towards achieving a TFA-free Region of the Americas.

**Table 3. Summary of the TFA policy situation in the Region of the Americas**

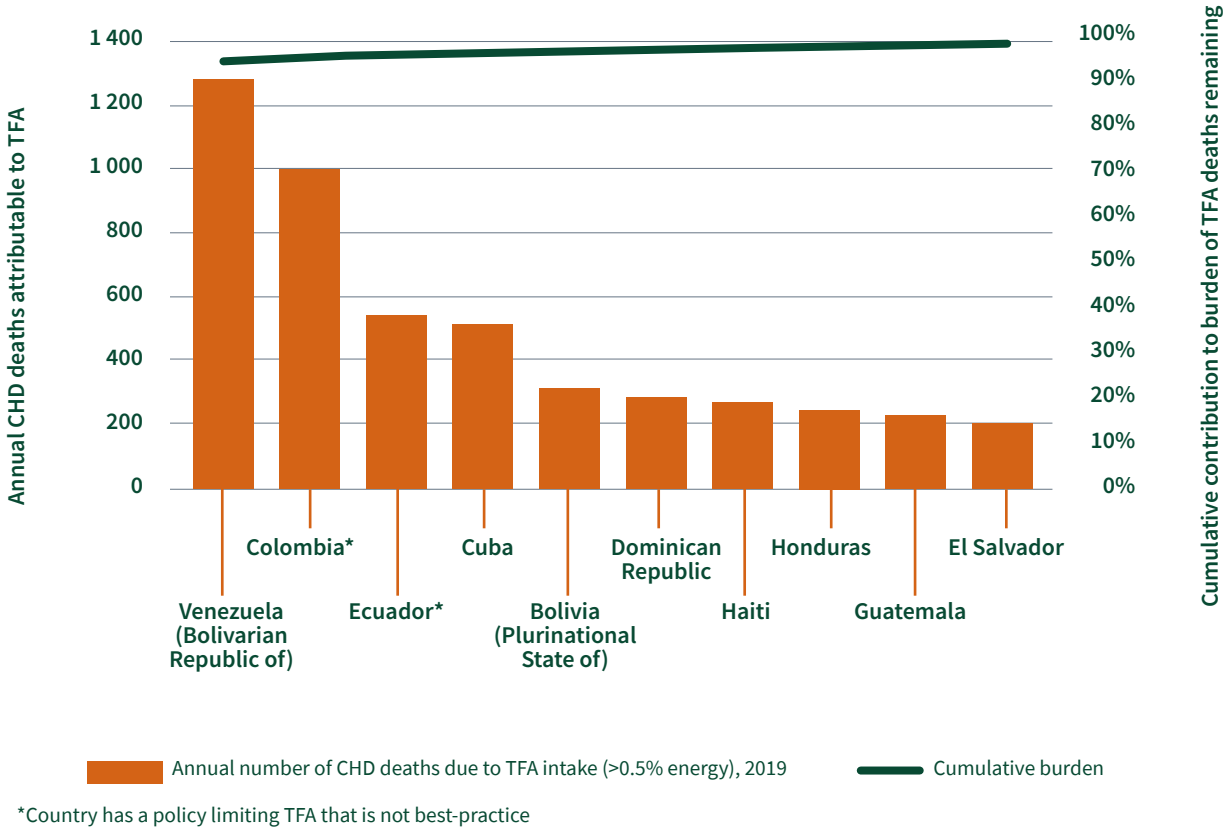
| National policy commitment | Other complementary measures | Less restrictive TFA limits | Best-practice TFA policy passed but not yet in effect (as of December 2023) | Best-practice TFA policy | Monitoring mechanism for mandatory TFA limits | WHO validation for TFA elimination |
|---|---|---|---|---|---|---|
| Antigua and Barbuda, Bahamas, Barbados, Belize, Dominican Republic, Grenada, Guatemala, Guyana, Jamaica, Saint Kitts and Nevis, Saint Lucia, Saint Vincent and the Grenadines, Suriname, Trinidad and Tobago | Bolivia (Plurinational State of), Costa Rica, El Salvador, Venezuela (Bolivarian Republic of) | Colombia, Ecuador | Argentina, Paraguay | Brazil, Canada, Chile, Mexico, Peru, United States of America, Uruguay | Argentina, Canada, Chile, Colombia, Peru, United States of America, Uruguay | |

**Fig. 7. Progress towards preventing the TFA-attributable deaths in the Americas with best-practice policies**




[1] https://www.minsalud.gov.co/Paginas/Norm_ProyectosRes.aspx

**Fig. 8. Top TFA burden countries that can accelerate action towards a TFA-free Americas**




*Country has a policy limiting TFA that is not best-practice

## Roadmap to elimination: Americas

The following actions will achieve a TFA-free Americas, in which people no longer die preventable deaths because of TFA in their food.

1. Countries with policies already in effect monitor and enforce those policies and apply for the WHO Validation Certificate: Argentina, Brazil, Canada, Chile, Mexico, Paraguay, Peru, United States of America and Uruguay.
2. All remaining countries in the region (especially in Central America, South America and the Caribbean, where policy progress has lagged) pass and implement best-practice policies.
3. Trade blocs and subregional bodies, including the Caribbean Community (CARICOM) and Central American Integration System (SICA), pass and implement TFA elimination policies.
4. Companies manufacturing and selling products in the Americas comply with national policies and discontinue using TFA even where policies are not yet in effect, prioritizing replacement of TFA with the healthiest oils possible.
5. WHO and partners work to strengthen the capacity of regulatory bodies, improve laboratory capacities for food analysis, and enhance overall regulatory infrastructure.

## 4.3 Eastern Mediterranean

Six countries in the Eastern Mediterranean Region have best-practice policies in effect or passed: Bahrain, Egypt, Kuwait, Oman, Saudi Arabia and United Arab Emirates. Effectively implemented, these policies could prevent 40% of the estimated deaths due to TFA intake each year in the Eastern Mediterranean. Best-practice policies in a further two countries (the Islamic Republic of Iran and Pakistan) could eliminate a total of 82% of deaths attributable to TFA consumption; action in an additional three countries (total five countries) could achieve just over 90% TFA burden coverage. The GCC best-practice standard has been passed in all but one GCC member state (Qatar). Table 4, Fig. 9 and Fig. 10 summarize the policy situation, progress towards preventing TFA-related deaths and the top countries in which action can accelerate progress towards a TFA-free Eastern Mediterranean Region.

**Table 4. Summary of the TFA policy situation in the Eastern Mediterranean Region**

| National policy commitment | Other complementary measures | Less restrictive TFA limits | Best-practice TFA policy passed but not yet in effect (as of December 2023) | Best-practice TFA policy | Monitoring mechanism for mandatory TFA limits | WHO validation for TFA elimination |
|---|---|---|---|---|---|---|
| Afghanistan, Djibouti, Lebanon, Morocco | Jordan, Qatar, Tunisia | Pakistan, Iran (Islamic Republic of) | Bahrain | Egypt, Kuwait, Oman, Saudi Arabia, United Arab Emirates | Saudi Arabia | Saudi Arabia |

**Fig. 9. Progress towards preventing the TFA-attributable deaths in the Eastern Mediterranean Region with best-practice policies**

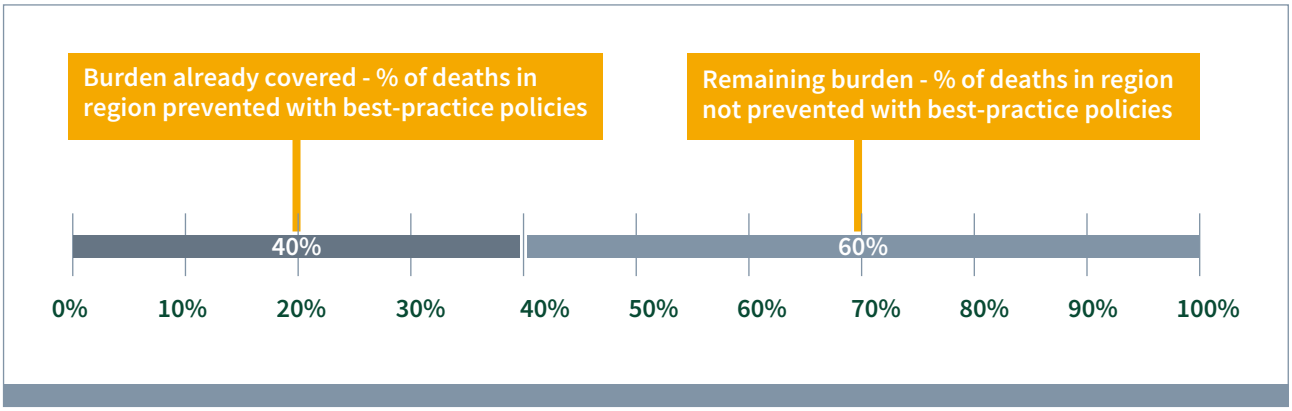
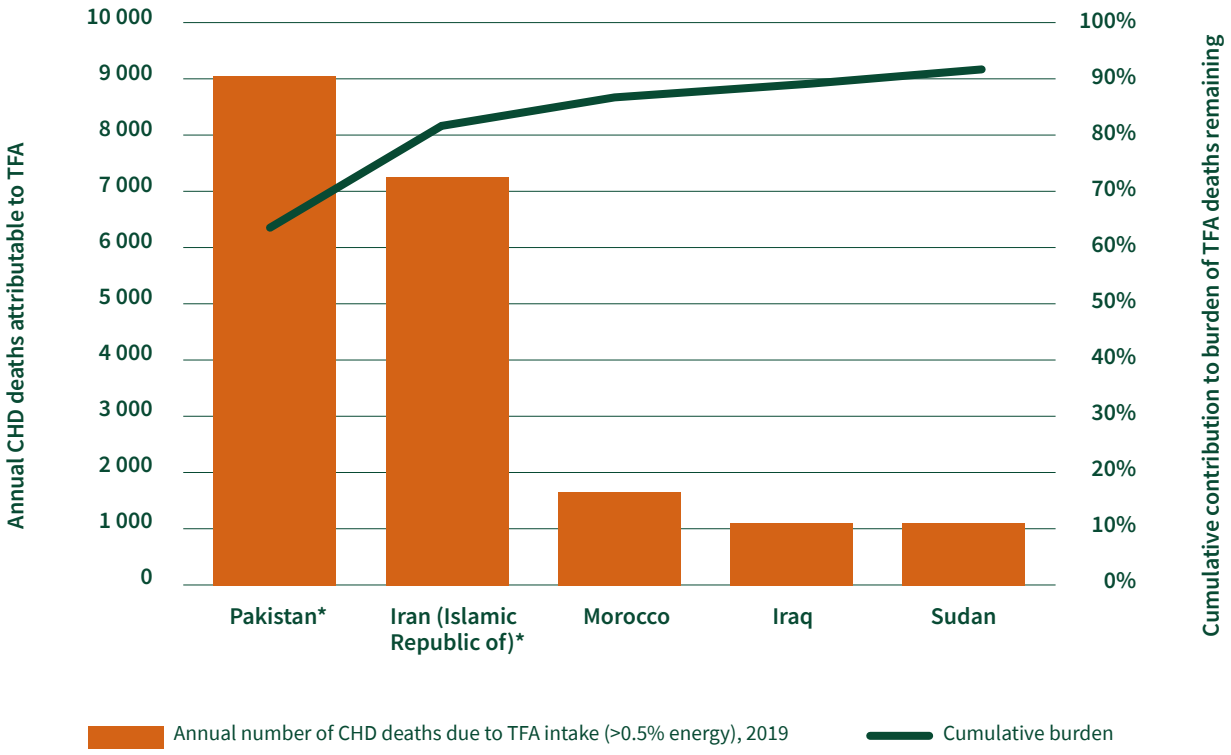


**Fig. 10. Top TFA burden countries that can accelerate action towards a TFA-free Eastern Mediterranean**




*Country has a policy limiting TFA that is not best-practice.

### Roadmap to elimination: Eastern Mediterranean

The following actions will achieve a TFA-free Eastern Mediterranean in which people no longer die preventable deaths because of TFA in their food.

1. Countries with policies already in effect monitor and enforce those policies and apply for the WHO Validation Certificate: Egypt, Kuwait, Oman and United Arab Emirates.
2. The country with the WHO Validation Certificate continues their commendable efforts in monitoring and enforcement: Saudi Arabia.
3. All remaining countries in the region pass and implement best-practice policies. The Islamic Republic of Iran and Pakistan, both countries with less restrictive TFA limits, should strengthen their policies to align with global best practices. With best-practice policies in these two countries, the region will reach 80% of the TFA burden covered.
4. Trade blocs and subregional bodies pass and implement TFA elimination policies.
5. Companies manufacturing and selling products in the Eastern Mediterranean comply with national policies and discontinue using TFA even where policies are not yet in effect, prioritizing replacement of TFA with the healthiest oils possible.
6. WHO and partners work to strengthen the capacity of regulatory bodies, improve laboratory capacities for food analysis, and enhance overall regulatory infrastructure.

## 4.4 Europe

Thirty-four countries in the European Region have best-practice policies in effect: Austria, Belgium, Bulgaria, Croatia, Cyprus, Czechia, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands (Kingdom of the), North Macedonia, Norway, Poland, Portugal, Republic of Moldova, Romania, Slovakia, Slovenia, Spain, Sweden, Türkiye, Ukraine and the United Kingdom of Great Britain and Northern Ireland. Effectively implemented, these policies could prevent 62% of the estimated deaths due to TFA intake each year in the European Region. Europe also pioneered the concept of regional TFA restrictions. The EAEU was the first regional body to take policy action to limit TFA applicable in all member states: Armenia, Belarus, Kazakhstan, Kyrgyzstan and the Russian Federation. By further strengthening the current TFA limits to apply to all foods, and implementing effective enforcement strategies, EAEU countries can achieve complete elimination of industrially produced TFA. Even the adoption of best-practice policies in three additional countries could accelerate coverage to more than 90% of the regional TFA burden (Azerbaijan, Belarus and Russian Federation). Table 5, Fig. 11 and Fig. 12 summarize the policy situation, progress towards preventing TFA-related deaths and the top countries in which action can accelerate progress towards a TFA-free European Region.

**Table 5. Summary of the TFA policy situation in the European Region**

| National policy commitment | Other complementary measures | Less restrictive TFA limits | Best-practice TFA policy passed but not yet in effect (as of December 2023) | Best-practice TFA policy | Monitoring mechanism for mandatory TFA limits | WHO validation for TFA elimination |
|---|---|---|---|---|---|---|
| Albania, Bosnia and Herzegovina, Turkmenistan | Azerbaijan, Israel, Tajikistan | Armenia, Belarus, Georgia, Kazakhstan, Kyrgyzstan, Russian Federation, Switzerland, Uzbekistan | | Austria, Belgium, Bulgaria, Croatia, Cyprus, Czechia, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands (Kingdom of the), North Macedonia, Norway, Poland, Portugal, Republic of Moldova, Romania, Slovakia, Slovenia, Spain, Sweden, Türkiye, Ukraine, United Kingdom | Armenia, Austria, Belarus, Denmark, Georgia, Hungary, Iceland, Kazakhstan, Kyrgyzstan, Latvia, Lithuania, Norway, Poland, Russian Federation, Switzerland | Denmark, Lithuania, Poland |

**Fig. 11. Progress towards preventing the TFA-attributable deaths in Europe with best-practice policies**

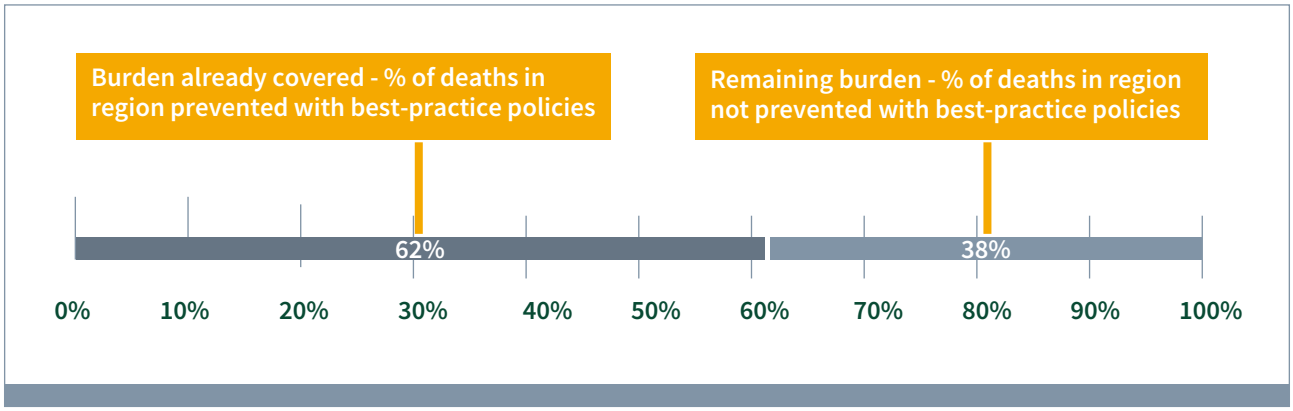
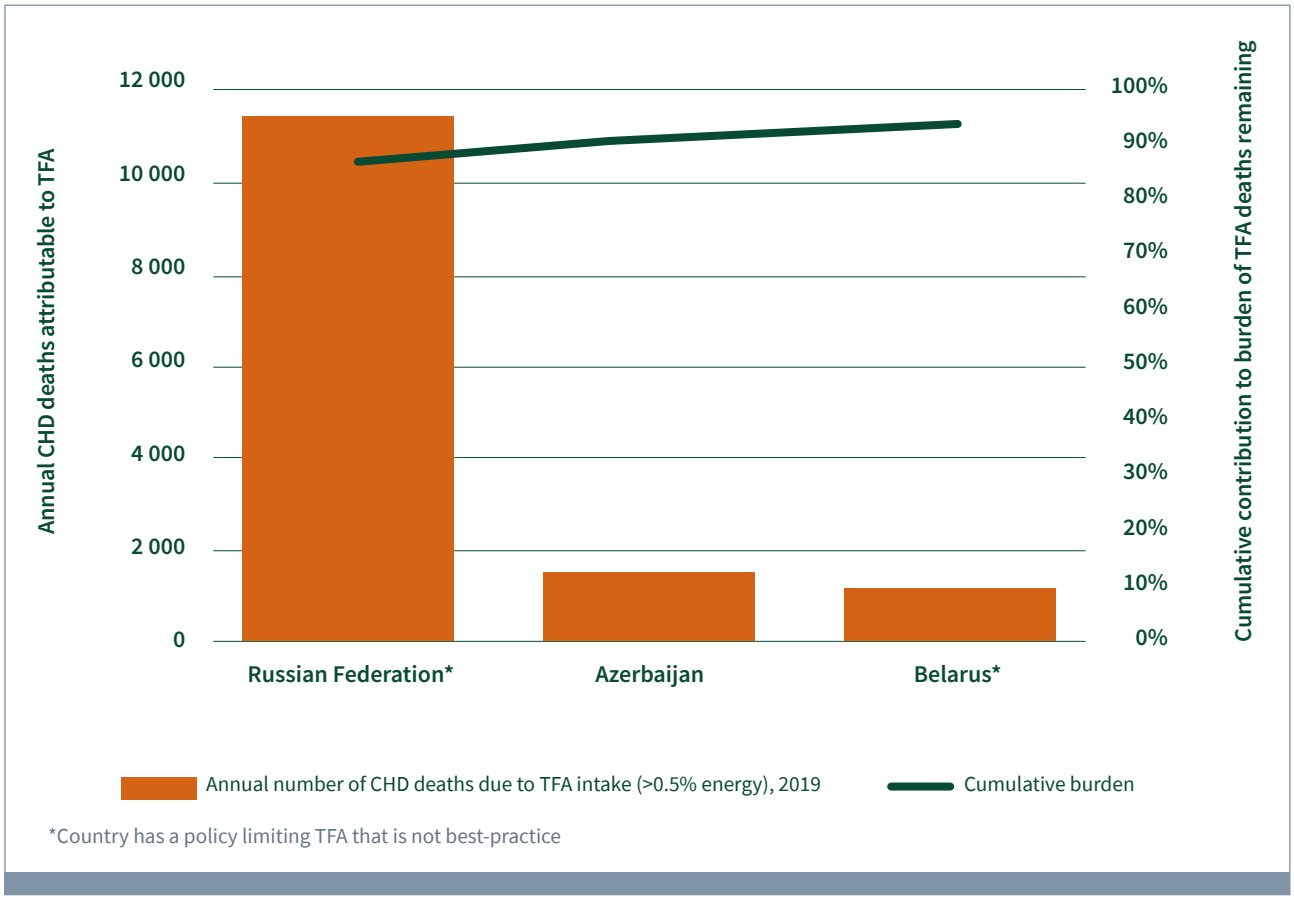



**Fig. 12. Top TFA burden countries that can accelerate action towards a TFA-free Europe**




*Country has a policy limiting TFA that is not best-practice

**Roadmap to elimination: Europe**

The following actions will lead to a TFA-free Europe where people no longer die preventable deaths because of TFA in their foods.

1. Countries with policies already in effect monitor and enforce their existing policies and apply for the WHO Validation Certificate: Austria, Belgium, Bulgaria, Croatia, Cyprus, Czechia, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Luxembourg, Malta, Netherlands (Kingdom of the), North Macedonia, Norway, Portugal, Republic of Moldova, Romania, Slovakia, Slovenia, Spain, Sweden, Türkiye, Ukraine and the United Kingdom of Great Britain and Northern Ireland.
2. Countries with the WHO Validation Certificate continue their commendable efforts in monitoring and enforcement: Denmark, Lithuania and Poland.
3. All remaining countries in the region pass and implement best-practice policies. Belarus and Russian Federation, both countries with less restrictive TFA limits, should strengthen their policies to align with global best practices. Together with Azerbaijan, best-practice policies in these three countries will cover more than 90% of the regional TFA burden.
4. Trade blocs and subregional bodies, including the Eurasian Economic Union (EAEU), pass and implement best-practice TFA elimination policies. Trade blocs in the European Region have been a powerful avenue for TFA protections with the European Union's (EU) best-practice policy and the EAEU's less restrictive policy. A high priority is for the EAEU to strengthen its existing regulations to align with best practices.
5. Companies manufacturing and selling products in Europe comply with national policies and discontinue using TFA even where policies are not yet in effect, prioritizing replacement of TFA with the healthiest oils possible.
6. WHO and partners work to strengthen the capacity of regulatory bodies, improve laboratory capacities for food analysis, and enhance overall regulatory infrastructure.

## 4.5 South-East Asia

Three countries in the South-East Asia Region have best-practice policies in effect: Bangladesh, India and Thailand. In addition, Sri Lanka has passed a best-practice policy which will come into effect on 1 January 2025. Effectively implemented, these policies could prevent 92% of the deaths due to TFA intake each year in South-East Asia. With best-practice policies in just 7 countries, 99% of deaths attributable to TFA consumption could be eliminated. It should be noted that 83% of the burden already covered is from India's policy. New policies in just two countries (Indonesia and Nepal) would achieve elimination of 98% of deaths attributable to TFA consumption in the region. Table 6, Fig. 13 and Fig. 14 summarize the policy situation, progress towards preventing TFA-related deaths and the top countries in which action can accelerate progress towards a TFA-free South-East Asia Region.

**Table 6. Summary of the TFA policy situation in the South-East Asia Region**

| National policy commitment | Other complementary measures | Less restrictive TFA limits | Best-practice TFA policy passed but not yet in effect (as of December 2023) | Best-practice TFA policy | Monitoring mechanism for mandatory TFA limits | WHO validation for TFA elimination |
|---|---|---|---|---|---|---|
| Bhutan, Maldives, Myanmar, Nepal, Timor-Leste | Indonesia | | Sri Lanka | Bangladesh, India, Thailand | India, Thailand | Thailand |

**Fig. 13. Progress towards preventing the TFA-attributable deaths in South-East Asia with best-practice policies**

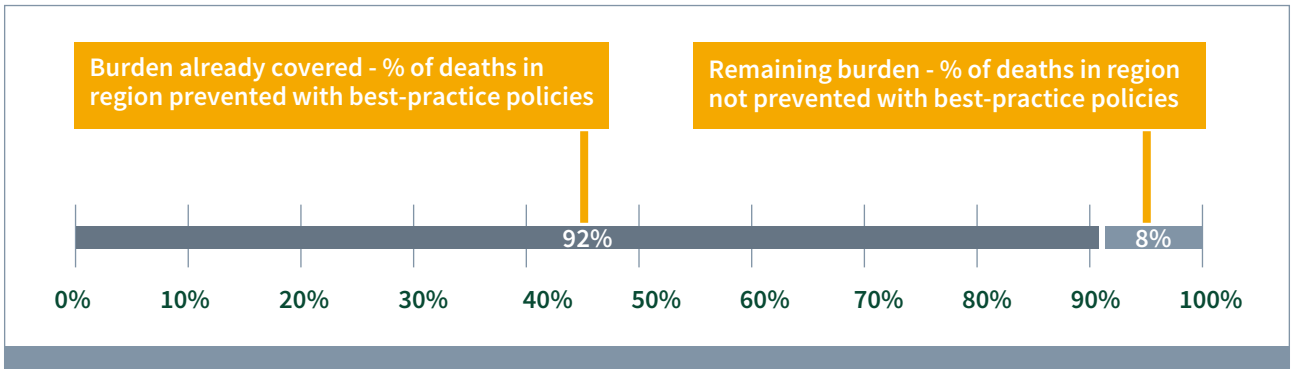
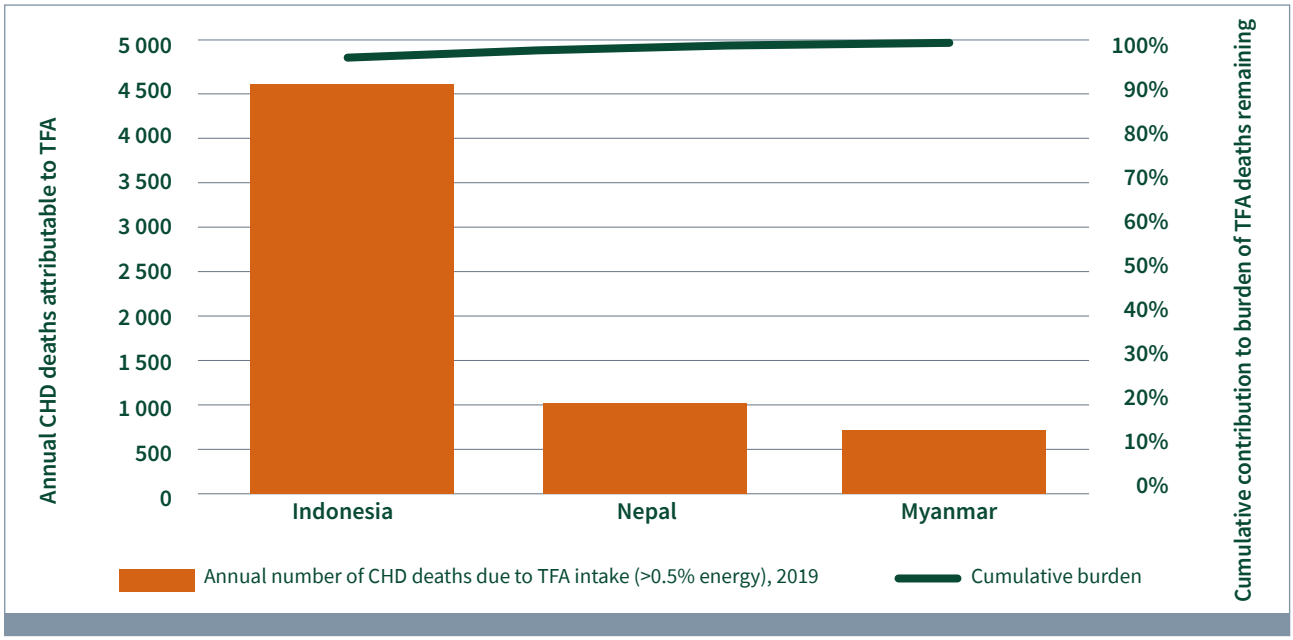



**Fig. 14. Top TFA burden countries that can accelerate action towards a TFA-free South-East Asia**




### Roadmap to elimination: South-East Asia

The following actions will lead to a TFA-free South-East Asia where people no longer die preventable deaths because of TFA in their foods.

1. Countries with policies already in effect monitor and enforce their existing policies and apply for the WHO Validation Certificate: Bangladesh, India and Sri Lanka.
2. The country with the WHO Validation Certificate continues their commendable efforts in monitoring and enforcement: Thailand.
3. All remaining countries in the region pass and implement best-practice policies.
4. Trade blocs and subregional bodies, such as the Association of Southeast Asian Nations (ASEAN), pass and implement TFA elimination policies.
5. Companies manufacturing and selling products in South-East Asia comply with national policies and discontinue using TFA even where policies are not yet in effect, prioritizing replacement of TFA with the healthiest oils possible.
6. WHO and partners work to strengthen the capacity of regulatory bodies, improve laboratory capacities for food analysis, and enhance overall regulatory infrastructure.

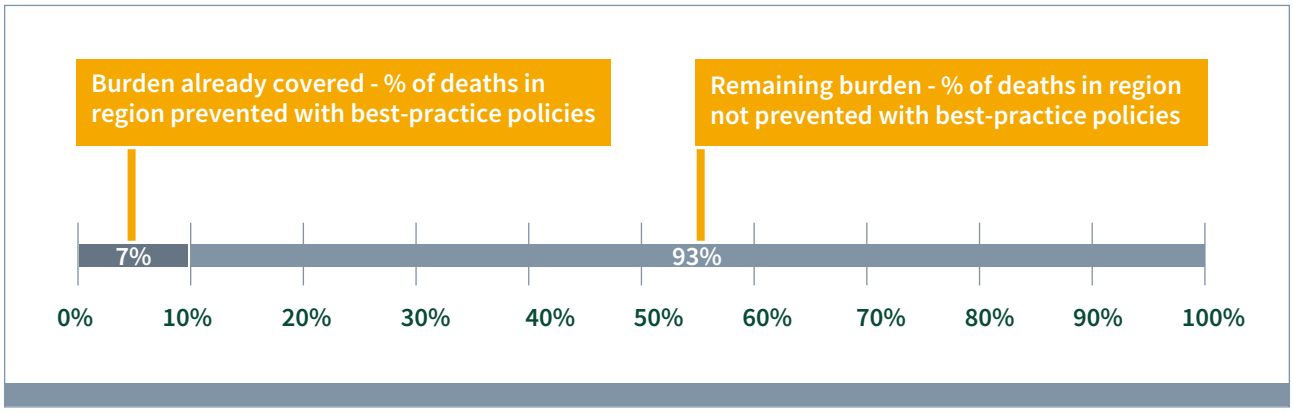
## 4.6 Western Pacific

Two countries in the Western Pacific Region have best-practice policies in effect: Philippines and Singapore. Effectively implemented, these policies could prevent 7% of the deaths due to TFA intake each year in the Western Pacific. New best-practice policies in just eight countries would achieve 99% burden coverage within the region. In 2023, Australia and New Zealand jointly published a draft best-practice policy that, when implemented, can prevent thousands of unnecessary deaths in those countries.[1] Table 7, Fig. 15 and Fig. 16 summarize the policy situation, progress towards preventing TFA-related deaths and the top countries that need to act to achieve a TFA-free Western Pacific Region.

**Table 7. Summary of the TFA policy situation in the Western Pacific Region**

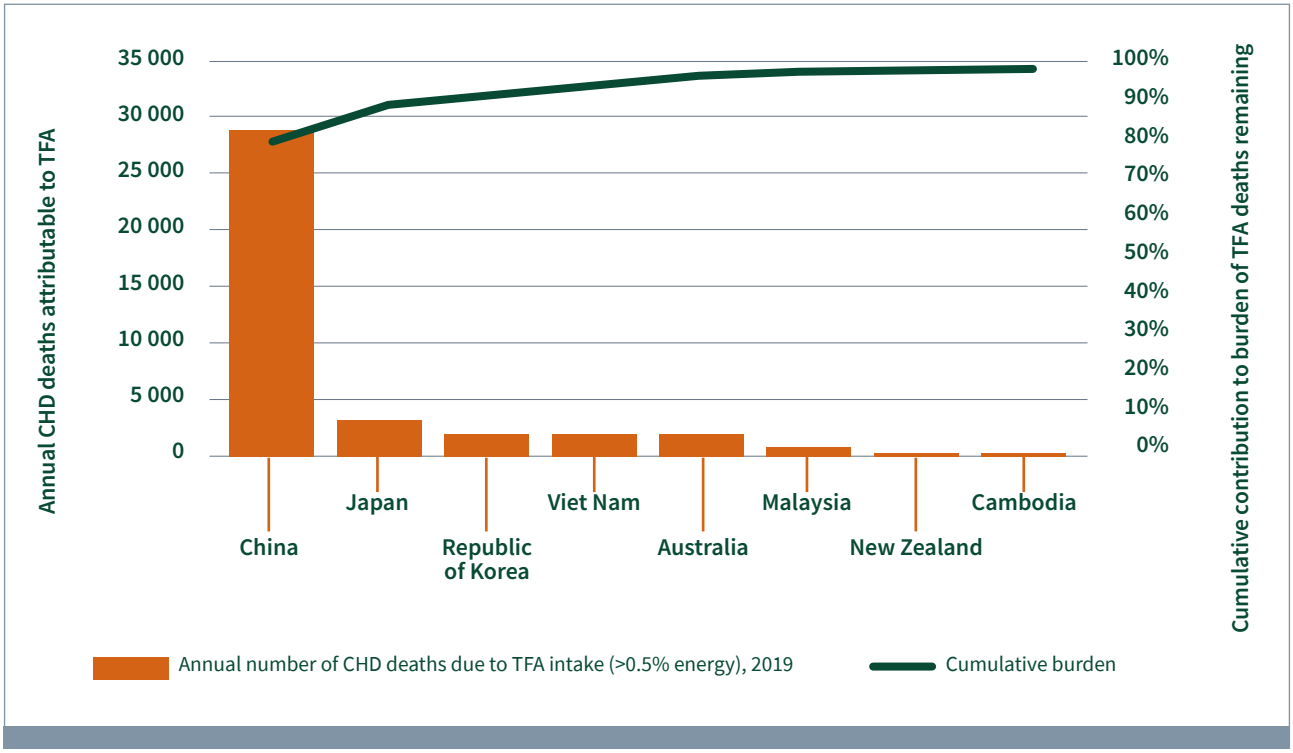
| National policy commitment | Other complementary measures | Less restrictive TFA limits | Best-practice TFA policy passed but not yet in effect (as of December 2023) | Best-practice TFA policy | Monitoring mechanism for mandatory TFA limits | WHO validation for TFA elimination |
|---|---|---|---|---|---|---|
| Cambodia, Lao People's Democratic Republic, Nauru, Papua New Guinea, Samoa, Vanuatu | Brunei Darussalam, China, Fiji, Mongolia, Republic of Korea | | | Philippines, Singapore | Singapore | |

**Fig. 15. Progress towards preventing the TFA-attributable deaths in the Western Pacific with best-practice policies**




[1] https://consultations.health.gov.au/chronic-disease-and-food-policy-branch/industrially-produced-trans-fats-in-processed-food/

**Fig. 16. Top TFA burden countries that can accelerate action towards a TFA-free Western Pacific**




### Roadmap to elimination: Western Pacific

The following actions will lead to a TFA-free Western Pacific in which people no longer die preventable deaths because of TFA in their food.

1. Countries with policies already in effect monitor and enforce their existing policies and apply for the WHO Validation Certificate: Philippines and Singapore.
2. All remaining countries in the region pass and implement best-practice policies. Countries with the greatest TFA burden within the region will be key to accelerating action towards ending deaths from high TFA intake.
3. Trade blocs and subregional bodies, such as the Association of Southeast Asian Nations (ASEAN), pass and implement TFA elimination policies.
4. Companies manufacturing and selling products in the Western Pacific comply with national policies and discontinue using TFA even where policies are not yet in effect, prioritizing replacement of TFA with the healthiest oils possible.
5. WHO and partners work to strengthen the capacity of regulatory bodies, improve laboratory capacities for food analysis, and enhance overall regulatory infrastructure.

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# Annex 1: TFA burden and status of TFA policies by country, ranked by proportion of coronary heart disease deaths due to TFA intake

| Country | Proportion of CHD deaths (%) due to TFA intake (>0.5% energy)[a] | Score[b] | Details of implemented policy | Notes |
|---|---|---|---|---|
| Egypt | 8.39 | 4 | Food establishment operators are prohibited from using PHO; mandatory national limit (iTFA <2 g/100 g total oils and fats in all foods) | |
| United States of America | 7.57 | 4 | Mandatory national ban on PHO | Monitoring mechanism for mandatory TFA limits |
| Iran (Islamic Republic of) | 6.96 | 3 | 2% TFA limit in oils and fats only | |
| Latvia | 6.14 | 4 | Mandatory national limit (iTFA <2 g/100 g total oils and fats in all foods) | Monitoring mechanism for mandatory TFA limits |
| Mexico | 5.82 | 4 | Mandatory national limit (iTFA <2 g/100 g total fat in all foods); mandatory national ban on PHO for edible oils and fats, as well as non-alcoholic foods and beverages; reformulation to reduce/eliminate TFA; front-of-pack labelling system that includes TFA | |
| Azerbaijan | 5.81 | 2 | Reformulation to reduce/eliminate TFA | |
| Canada | 5.65 | 4 | Mandatory national ban on PHO | Monitoring mechanism for mandatory TFA limits |
| Ecuador | 4.97 | 3 | 2% TFA limit in oils and fats only | Monitoring mechanism for mandatory TFA limits |
| Pakistan | 4.94 | 3 | 2% TFA limit in oils and fats only | |
| Republic of Korea | 4.76 | 2 | Reformulation to reduce/eliminate TFA | |
| India | 4.63 | 4 | Food products in which edible oils and fats are used as an ingredient shall not contain TFAs more than 2% by weight of the total oils/fats present in the product. | Monitoring mechanism for mandatory TFA limits |
| Slovenia | 4.56 | 4 | Mandatory national limit (iTFA <2 g/100 g total oils and fats in all foods) | |

| Country | Proportion of CHD deaths (%) due to TFA intake (>0.5% energy)[a] | Score[b] | Details of implemented policy | Notes |
|---|---|---|---|---|
| Bhutan | 4.45 | 1 | National policy commitment to eliminate TFA | |
| Bangladesh | 4.41 | 4 | Mandatory national limit (iTFA <2 g/100 g total oils and fats in all foods); mandatory declaration of TFA on nutrition labels | |
| Nepal | 4.38 | 1 | National policy commitment to eliminate TFA | Nepal is currently in the process of passing a best-practice TFA elimination policy. |
| Australia | 4.27 | – | – | A public consultation on potential TFA regulation was held in 2023. |
| Peru | 3.96 | 4 | Mandatory national ban on PHO; mandatory national limit (iTFA <2 g/100 g total oils and fats in all foods) | Monitoring mechanism for mandatory TFA limits |
| Bolivia (Plurinational State of) | 3.95 | 2 | Mandatory declaration of TFA on nutrition labels; reformulation to reduce/eliminate TFA | |
| Netherlands (Kingdom of the) | 3.81 | 4 | Mandatory national limit (iTFA <2 g/100 g total oils and fats in all foods) | |
| Estonia | 3.53 | 4 | Mandatory national limit (iTFA <2 g/100 g total oils and fats in all foods) | |
| Costa Rica | 3.52 | 2 | Mandatory limit of iTFA on foods in specific settings | |
| Venezuela (Bolivarian Republic of) | 3.51 | 2 | Front-of-pack labelling system that includes TFA | |
| Slovakia | 3.32 | 4 | Mandatory national limit (iTFA <2 g/100 g total oils and fats in all foods) | |
| New Zealand | 3.25 | – | – | A public consultation on potential TFA regulation was held in 2023. |
| El Salvador | 3.20 | 2 | Mandatory limit of iTFA on foods in specific settings | |
| Honduras | 3.15 | 1 | National policy commitment to eliminate TFA | |
| Lithuania | 3.12 | 4 | Mandatory national limit (iTFA <2 g/100 g total oils and fats in all foods) | Monitoring mechanism for mandatory TFA limits |
| Nicaragua | 3.12 | – | – | |
| Germany | 3.10 | 4 | Mandatory national limit (iTFA <2 g/100 g total oils and fats in all foods) | |

| Country | Proportion of CHD deaths (%) due to TFA intake (>0.5% energy)[a] | Score[b] | Details of implemented policy | Notes |
|---|---|---|---|---|
| Panama | 3.09 | – | – | |
| United Kingdom | 3.06 | 4 | Mandatory national limit (iTFA <2 g/100 g total oils and fats in all foods) | |
| Switzerland | 2.89 | 3 | 2% TFA limit in oils and fats only | Monitoring mechanism for mandatory TFA limits |
| Belgium | 2.77 | 4 | Mandatory national limit (iTFA <2 g/100 g total oils and fats in all foods) | |
| Georgia | 2.66 | 3 | 2% TFA limit in oils and fats only | Monitoring mechanism for mandatory TFA limits |
| Afghanistan | 2.64 | 1 | National policy commitment to eliminate TFA | |
| Philippines | 2.64 | 4 | Mandatory national ban on PHOs; 2% TFA limit in oils and fats only | |
| United Arab Emirates | 2.60 | 4 | Mandatory national ban of PHO in all foods | |
| Brazil | 2.58 | 4 | Mandatory national limit (iTFA <2 g/100 g total oils and fats in all foods) | |
| Paraguay | 2.57 | 3 | 2% TFA limit in oils and fats, and 5% limit in other foods | Best-practice TFA policy passed but not yet in effect |
| Libya | 2.55 | – | – | |
| Kuwait | 2.52 | 4 | Mandatory national ban on PHO in all foods | |
| Sudan | 2.51 | – | – | |
| Yemen | 2.51 | – | – | |
| Hungary | 2.50 | 4 | Mandatory national limit (iTFA <2 g/100 g total oils and fats in all foods) | Monitoring mechanism for mandatory TFA limits |
| Qatar | 2.47 | 2 | Mandatory limit of iTFA on foods in specific settings | |
| Oman | 2.46 | 4 | Mandatory national ban on PHO | |
| San Marino | 2.45 | – | – | |
| Bahrain | 2.43 | 3 | 2% TFA limit in oils and fats, and 5% limit in other foods | Best-practice TFA policy passed but not yet in effect |
| Monaco | 2.43 | – | – | |
| Iraq | 2.42 | – | – | |
| Jordan | 2.42 | 2 | Mandatory declaration of TFA on nutrition labels; reformulation to reduce/eliminate TFA | |
| Denmark | 2.41 | 4 | Mandatory national limit (iTFA <2 g/100 g total oils and fats in all foods) | Monitoring mechanism for mandatory TFA limits |

| Country | Proportion of CHD deaths (%) due to TFA intake (>0.5% energy)[a] | Score[b] | Details of implemented policy | Notes |
|---|---|---|---|---|
| Syrian Arab Republic | 2.41 | – | – | Less restrictive TFA policy passed but not yet in effect |
| Haiti | 2.40 | – | – | |
| Colombia | 2.39 | 3 | 2% TFA limit in oils and fats, and 5% limit in other foods | Monitoring mechanism for mandatory TFA limits |
| Morocco | 2.38 | 1 | National policy commitment to eliminate TFA | |
| Republic of Moldova | 2.33 | 4 | Mandatory national limit (iTFA <2 g/100 g total oils and fats in all foods) | |
| Guatemala | 2.32 | 1 | National policy commitment to eliminate TFA | |
| Jamaica | 2.31 | 1 | National policy commitment to eliminate TFA | |
| Belize | 2.30 | 1 | National policy commitment to eliminate TFA | |
| Bahamas | 2.29 | 1 | National policy commitment to eliminate TFA | |
| Brunei Darussalam | 2.29 | 2 | Front-of-pack labelling system that includes TFA; reformulation to reduce/eliminate TFA | |
| Guyana | 2.29 | 1 | National policy commitment to eliminate TFA | |
| Antigua and Barbuda | 2.27 | 1 | National policy commitment to eliminate TFA | |
| Suriname | 2.27 | 1 | National policy commitment to eliminate TFA | |
| Saint Vincent and the Grenadines | 2.26 | 1 | National policy commitment to eliminate TFA | |
| Trinidad and Tobago | 2.26 | 1 | National policy commitment to eliminate TFA | |
| Barbados | 2.24 | 1 | National policy commitment to eliminate TFA | |
| Grenada | 2.24 | 1 | National policy commitment to eliminate TFA | |
| Saint Lucia | 2.24 | 1 | National policy commitment to eliminate TFA | |
| Cuba | 2.23 | – | – | |
| Dominica | 2.23 | – | – | |
| Saint Kitts and Nevis | 2.16 | 1 | National policy commitment to eliminate TFA | |
| Czechia | 2.10 | 4 | Mandatory national limit (iTFA <2 g/100 g total oils and fats in all foods) | |
| Albania | 2.08 | 1 | National policy commitment to eliminate TFA | |
| Portugal | 2.08 | 4 | Mandatory national limit (iTFA <2 g/100 g total oils and fats in all foods) | |

| Country | Proportion of CHD deaths (%) due to TFA intake (>0.5% energy)[a] | Score[b] | Details of implemented policy | Notes |
|---|---|---|---|---|
| France | 2.07 | 4 | Mandatory national limit (iTFA <2 g/100 g total oils and fats in all foods) | |
| Romania | 2.06 | 4 | Mandatory national limit (iTFA <2 g/100 g total oils and fats in all foods) | |
| Belarus | 2.05 | 3 | 2% TFA limit in oils and fats only | Monitoring mechanism for mandatory TFA limits |
| Montenegro | 2.04 | – | – | |
| Serbia | 2.04 | – | – | |
| Russian Federation | 2.03 | 3 | 2% TFA limit in oils and fats only | Monitoring mechanism for mandatory TFA limits |
| Bulgaria | 2.00 | 4 | Mandatory national limit (iTFA <2 g/100 g total oils and fats in all foods) | |
| Greece | 1.96 | 4 | Mandatory national limit (iTFA <2 g/100 g total oils and fats in all foods) | |
| Iceland | 1.95 | 4 | Mandatory national limit (iTFA <2 g/100 g total oils and fats in all foods) | Monitoring mechanism for mandatory TFA limits |
| Mongolia | 1.95 | 2 | Mandatory limit of iTFA on foods in specific settings | |
| Andorra | 1.92 | – | – | |
| Cyprus | 1.92 | 4 | Mandatory national limit (iTFA <2 g/100 g total oils and fats in all foods) | |
| Tajikistan | 1.90 | 2 | Reformulation to reduce/eliminate TFA | |
| Turkmenistan | 1.90 | 1 | National policy commitment to eliminate TFA | |
| Luxembourg | 1.88 | 4 | Mandatory national limit (iTFA <2 g/100 g total oils and fats in all foods) | |
| Ukraine | 1.87 | 4 | Mandatory national limit (iTFA <2 g/100 g total oils and fats in all foods) | |
| Finland | 1.86 | 4 | Mandatory national limit (iTFA <2 g/100 g total oils and fats in all foods) | |
| Indonesia | 1.86 | 2 | Mandatory declaration of TFA on nutrition labels | |
| Nauru | 1.86 | 1 | National policy commitment to eliminate TFA | |
| Solomon Islands | 1.86 | – | – | |
| Kyrgyzstan | 1.85 | 3 | 2% TFA limit in oils and fats only | Monitoring mechanism for mandatory TFA limits |
| Malta | 1.84 | 4 | Mandatory national limit (iTFA <2 g/100 g total oils and fats in all foods) | |
| Algeria | 1.83 | 3 | 2% TFA limit in oils and fats only | |
| Kiribati | 1.83 | – | – | |

| Country | Proportion of CHD deaths (%) due to TFA intake (>0.5% energy)[a] | Score[b] | Details of implemented policy | Notes |
|---|---|---|---|---|
| Thailand | 1.83 | 4 | Mandatory national ban on PHO | Monitoring mechanism for mandatory TFA limits |
| Japan | 1.82 | – | – | |
| Marshall Islands | 1.82 | – | – | |
| North Macedonia | 1.81 | 4 | Mandatory national limit (iTFA <2 g/100 g total oils and fats in all foods) | |
| Armenia | 1.80 | 3 | 2% TFA limit in oils and fats only | Monitoring mechanism for mandatory TFA limits |
| Dominican Republic | 1.80 | 1 | National policy commitment to eliminate TFA | |
| Zimbabwe | 1.80 | – | – | |
| Micronesia (Federated States of) | 1.79 | – | – | |
| Papua New Guinea | 1.79 | 1 | National policy commitment to eliminate TFA | |
| Samoa | 1.79 | 1 | National policy commitment to eliminate TFA | |
| Vanuatu | 1.79 | 1 | National policy commitment to eliminate TFA | |
| Tuvalu | 1.78 | – | – | |
| Botswana | 1.77 | 1 | National policy commitment to eliminate TFA | |
| Eswatini | 1.77 | 1 | National policy commitment to eliminate TFA | |
| Lao People's Democratic Republic | 1.77 | 1 | National policy commitment to eliminate TFA | |
| Lesotho | 1.77 | – | – | |
| Democratic People's Republic of Korea | 1.76 | – | – | |
| Cambodia | 1.75 | 1 | National policy commitment to eliminate TFA | |
| Palau | 1.75 | – | – | |
| Fiji | 1.74 | 2 | Mandatory declaration of TFA on nutrition labels | |
| Myanmar | 1.74 | 1 | National policy commitment to eliminate TFA | |
| Namibia | 1.73 | 1 | National policy commitment to eliminate TFA | |
| Norway | 1.72 | 4 | Mandatory national limit (iTFA <2 g/100 g total oils and fats in all foods) | Monitoring mechanism for mandatory TFA limits |

| Country | Proportion of CHD deaths (%) due to TFA intake (>0.5% energy)[a] | Score[b] | Details of implemented policy | Notes |
|---|---|---|---|---|
| Timor-Leste | 1.72 | 1 | National policy commitment to eliminate TFA | |
| Niue | 1.71 | – | – | |
| Tonga | 1.71 | – | – | |
| Maldives | 1.70 | 1 | National policy commitment to eliminate TFA | |
| Cook Islands | 1.69 | 1 | National policy commitment to eliminate TFA | |
| Croatia | 1.69 | 4 | Mandatory national limit (iTFA <2 g/100 g total oils and fats in all foods) | |
| Mauritius | 1.69 | 1 | National policy commitment to eliminate TFA | Draft best-practice policy to be discussed at National Assembly December 2023 |
| Seychelles | 1.69 | 1 | National policy commitment to eliminate TFA | |
| Sri Lanka | 1.68 | 1 | National policy commitment to eliminate TFA | Best-practice TFA policy passed but not yet in effect |
| Viet Nam | 1.67 | – | – | |
| South Africa | 1.62 | 4 | Mandatory national limit (iTFA <2 g/100 g total oils and fats in all foods) | Monitoring mechanism for mandatory TFA limits |
| China | 1.54 | 2[c] | Mandatory declaration of TFA on nutrition labels | |
| Kenya | 1.50 | 1 | National policy commitment to eliminate TFA | |
| Poland | 1.48 | 4 | Mandatory national limit (iTFA <2 g/100 g total oils and fats in all foods) | Monitoring mechanism for mandatory TFA limits |
| Uzbekistan | 1.48 | 3 | 4% TFA limit in all foods | |
| Nigeria | 1.45 | 4 | Mandatory national limit (iTFA <2 g/100 g total oils and fats in all foods); labelling policy including TFA | |
| Singapore | 1.45 | 4 | Mandatory national ban on PHO | Monitoring mechanism for mandatory TFA limits |
| Chile | 1.44 | 4 | Mandatory national limit (iTFA <2 g/100 g total oils and fats in all foods) | Monitoring mechanism for mandatory TFA limits |
| Ethiopia | 1.44 | 2 | Tax on food products with high levels of TFA | |
| Mali | 1.40 | – | – | |
| Liberia | 1.39 | – | – | |
| Congo | 1.38 | – | – | |

| Country | Proportion of CHD deaths (%) due to TFA intake (>0.5% energy)[a] | Score[b] | Details of implemented policy | Notes |
|---|---|---|---|---|
| Ghana | 1.38 | 1 | National policy commitment to eliminate TFA | |
| Guinea-Bissau | 1.38 | – | – | |
| Sierra Leone | 1.38 | 1 | National policy commitment to eliminate TFA | |
| Democratic Republic of the Congo | 1.37 | – | – | |
| Equatorial Guinea | 1.37 | – | – | |
| Madagascar | 1.37 | – | – | |
| Mauritania | 1.37 | 1 | National policy commitment to eliminate TFA | |
| Somalia | 1.37 | – | – | |
| Zambia | 1.37 | 1 | National policy commitment to eliminate TFA | |
| Argentina | 1.36 | 3 | 2% TFA limit in oils and fats, and 5% limit in other foods | Best-practice TFA policy passed but not yet in effect; monitoring mechanism for mandatory TFA limits |
| Benin | 1.36 | 1 | National policy commitment to eliminate TFA | |
| Central African Republic | 1.36 | 1 | National policy commitment to eliminate TFA | |
| Comoros | 1.36 | – | – | |
| Eritrea | 1.36 | – | – | |
| Guinea | 1.36 | – | – | |
| Niger | 1.36 | – | – | |
| Sao Tome and Principe | 1.36 | 1 | National policy commitment to eliminate TFA | |
| Angola | 1.35 | – | – | |
| Bosnia and Herzegovina | 1.35 | 1 | National policy commitment to eliminate TFA | |
| Burundi | 1.35 | – | – | |
| Cameroon | 1.35 | – | – | |
| Chad | 1.35 | 1 | National policy commitment to eliminate TFA | |
| Côte d'Ivoire | 1.35 | 1 | National policy commitment to eliminate TFA | |
| Gambia | 1.35 | – | – | |
| Rwanda | 1.35 | 1 | National policy commitment to eliminate TFA | |
| Senegal | 1.35 | – | – | |
| Togo | 1.35 | – | – | |

| Country | Proportion of CHD deaths (%) due to TFA intake (>0.5% energy)[a] | Score[b] | Details of implemented policy | Notes |
|---|---|---|---|---|
| Burkina Faso | 1.34 | – | – | |
| Djibouti | 1.34 | 1 | National policy commitment to eliminate TFA | |
| Malawi | 1.34 | – | – | |
| Uganda | 1.34 | – | – | |
| South Sudan | 1.33 | – | – | |
| Mozambique | 1.32 | – | – | |
| Saudi Arabia | 1.32 | 4 | Mandatory national ban on PHO | Monitoring mechanism for mandatory TFA limits |
| United Republic of Tanzania | 1.32 | – | – | |
| Cabo Verde | 1.31 | 2 | Mandatory limit of iTFA on foods in specific settings | |
| Gabon | 1.31 | – | – | |
| Malaysia | 1.25 | – | – | |
| Kazakhstan | 1.23 | 3 | 2% TFA limit in oils and fats only | Monitoring mechanism for mandatory TFA limits |
| Uruguay | 1.17 | 4 | Mandatory national limit (iTFA <2 g/100 g total oils and fats in all foods) | Monitoring mechanism for mandatory TFA limits |
| Sweden | 1.14 | 4 | Mandatory national limit (iTFA <2 g/100 g total oils and fats in all foods) | |
| Ireland | 1.13 | 4 | Mandatory national limit (iTFA <2 g/100 g total oils and fats in all foods) | |
| Lebanon | 1.02 | 1 | National policy commitment to eliminate TFA | |
| Austria | 1.00 | 4 | Mandatory national limit (iTFA <2 g/100 g total oils and fats in all foods) | Monitoring mechanism for mandatory TFA limits |
| Türkiye | 0.98 | 4 | Mandatory national limit (iTFA <2 g/100 g total oils and fats in all foods) | |
| Spain | 0.96 | 4 | Mandatory national limit (iTFA <2 g/100 g total oils and fats in all foods) | |
| Israel | 0.94 | 2 | Mandatory declaration of TFA on nutrition labels | |
| Tunisia | 0.93 | 2 | Reformulation to reduce/eliminate TFA | |
| Italy | 0.88 | 4 | Mandatory national limit (iTFA <2 g/100 g total oils and fats in all foods) | |

– missing data; iTFA: industrially produced TFA; PHO: partially hydrogenated oils; TFA: *trans*-fatty acids.

a Based on data from Global Burden of Disease 2019, (https://vizhub. healthdata.org/gbd-results/, accessed 16 January 2024).

b Score definition:

1 = "National policy commitment to eliminate TFA": National policies, strategies or action plans that express a commitment to reduce industrially produced TFA in the food supply.

2 = "Other complementary measures": Legislative or other measures that encourage consumers to make healthier choices about industrially produced TFA (e.g. mandatory declaration of TFA on nutrition labels; front-of-pack labelling system that includes TFA; reformulation) or mandatory limits on industrially produced TFA in foods in specific settings (e.g. public institutions).

3 = "Policies with less restrictive TFA limits": Legislative or regulatory measures that limit industrially produced TFA in foods in all settings, but are less restrictive than the recommended approach (e.g. 2% limit for industrially produced TFA in oils and fats only; 2% limit for industrially produced TFA in oils and fats, and 5% limit in other foods; 5% limit for industrially produced TFA in oils and fats).

4 = "Best-practice TFA policy": Legislative or regulatory measures that limit industrially produced TFA in foods in all settings and are in line with the recommended approach. The two best-practice policies for TFA elimination are 1) mandatory national limit of 2 g of industrially produced TFA per 100 g of total fat in all foods; and 2) mandatory national ban on the production or use of PHO as an ingredient in all foods.

c In Hong Kong Special Administrative Region (China), a best-practice PHO ban was passed by the Legislative Council in July 2021.

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# Annex 2: Methodology

## TFA Burden

The TFA burden in this report refers to the proportion of annual CHD deaths due to high TFA intake (i.e. intake above 0.5% of total energy intake), in line with previous editions of this report. The estimates of TFA burden by country, included in Annex 1 and also presented in previous editions of this report, formed the foundation for the analysis presented in this year's report. Briefly, the estimates of TFA burden were provided by the Institute for Health Metrics and Evaluation (IHME), based on data from the Global Burden of Disease (GBD) study 2019. The estimates of country TFA burden consider population TFA intake based on a systematic literature search for nationally or subnationally representative studies on dietary intake data and sales data. Further details on this analysis can be found in the 2020 edition of this report.[1] The country TFA burden estimates and publicly available data on country CHD mortality were used to calculate the annual number of CHD deaths attributable to TFA in each Member State (described by the formula below), and the proportion contribution of each Member State to the global TFA burden. The global TFA burden was derived by summing the number of CHD deaths attributable to TFA for all Member States (i.e. more than 278 000 deaths).

**Annual number of CHD deaths due to TFA intake = (Proportion of CHD deaths due to high TFA intake × Total number of CHD deaths)/100**

Although these estimates are currently the best available, they exhibit some limitations. For example, the CHD burdens attributable to TFA in this report are estimates based on modelling rather than actual measurements. Although an increasing number of countries now have data on TFA sales and consumption, there is still a data gap that needs to be filled by assumptions and extrapolations. In addition, some countries with larger populations are shown to contribute more to the total global TFA burden even if the country TFA burden estimate is lower. This is because the analysis performed focused on the number of global deaths that could be prevented with the aim of identifying areas for priority action and thus no adjustments were made for population size. Estimates presented in this report also differ from those presented in the GBD study 2019 as the latter applied different cut-offs to define high TFA intake (the IHME define high TFA intake as any TFA intake from all sources, PHO and ruminant (e.g. > 0% of total energy intake))[2].

## Policy implementation and coverage

Data on policy implementation were obtained from the WHO Global database on the Implementation of Food and Nutrition Action (GIFNA),[3] which provides a repository of policies, actions and mechanisms related to nutrition. GIFNA is an interactive platform for sharing standardized information on nutrition policies and action. The data available on GIFNA also informs the TFA Country Score Card[4], which informs this report. The Score Card shows countries that have best-practice TFA policies, less restrictive TFA limits, other complementary measures, or a national policy commitment to eliminate TFA. The Score Card also shows countries that have passed best-practice TFA policies that will come into effect at a later date, as well as the existence of monitoring mechanisms in countries with mandatory TFA limits. Population coverage for implemented policies (n = 53) was calculated using annual population estimates for all 194 Member States and global population estimates made publicly available under the United Nations Department of Economic and Social Affairs, 2022 revision.[5]

[1] https://iris.who.int/handle/10665/334170
[2] https://www.healthdata.org/results/gbd_summaries/2019/diet-high-trans-fatty-acids-level-3-risk
[3] https://gifna.who.int; GIFNA is an online database of validated information on countries' policies and programme interventions relating to fortification, food labelling, marketing of breast-milk substitutes and nutrition (including TFA).
[4] https://gifna.who.int/summary/TFA
[5] https://population.un.org/wpp/

Унайзат Юшаева @Pexels

For more information, please contact:

**Department of Nutrition and Food Safety**
World Health Organization
Avenue Appia 20, CH1211 Geneva 27, Switzerland

Fax: +41 22 791 4156
Email: nfs@who.int
https://www.who.int/teams/nutrition-and-food-safety