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Reinventing the wheel? The convergence between the SDGs and the UN documents for non-communicable diseases risk factors

Reinventando a roda? A convergência entre os ODS e os documentos da ONU para fatores de risco de doenças crônicas não transmissíveis

Abstract

Non-communicable diseases (NCDs) are one of the main challenges to the development and wellbeing of populations. Based on the documents issued by the United Nations system (FAO, ECOSOC, UNGA, and WHO), it is argued that the 2030 Agenda is partially converged with the recommendations of these organizations. This partial harmonization is explained through political coherence by illustrating explanatory vectors from 2005 to 2019 for products associated with NCDs risk factors: alcohol, pesticides, ultra-processed foods, and tobacco.

Resumo

As doenças crônicas não transmissíveis (DCNT) constituem um dos principais desafios ao desenvolvimento e ao bem-estar das populações. A partir das normativas emitidas pelo sistema da Organização das Nações Unidas (FAO, ECOSOC, AGNU e OMS), argumenta-se que a Agenda 2030 está parcialmente convergente com as recomendações desses organismos. Explica-se essa harmonização parcial pela via da coerência política, ilustrando vetores explicativos no período de 2005 a 2019 para produtos associados a fatores de risco de DCNT: álcool, agrotóxicos, alimentos ultra processados e tabaco.

Keywords: Sustainable Development Goals. Non-communicable diseases. Policy convergence.

Palavras-chave: Objetivos do Desenvolvimento Sustentável; Doenças crônicas não transmissíveis; Convergência política.

Introduction

Non-communicable diseases (NCDs), such as cardiovascular diseases, cancers, chronic respiratory diseases, and diabetes, have been internationally recognized as global issues. This recognition

can be found in their inclusion in the agenda of the United Nations General Assembly (UNGA) high-level meetings on NCDs prevention and control (2011, 2014, and 2018) and also in the 2030 Agenda through specific Sustainable Development Goals (SDGs) targets: "3.4 by 2030 reduce by one-third premature mortality from non-communicable diseases through prevention and treatment, and promote mental health and wellbeing;" "3.5 Strengthen the prevention and treatment of substance abuse, including narcotic drug abuse and harmful use of alcohol" and "3. A Strengthen the implementation of the World Health Organization Framework Convention on Tobacco Control in all countries, as appropriate" (UN, 2015).

Further, the 2030 Agenda catalyzes a global effort for the reduction of the NCDs burden. Accordingly, NCDs prevention and control overlaps at least eight SGDs (1, 2, 4, 5, 8, 10, 11, and 12) and benefit most from the SDGs' indivisibility and integrality. In this regard, several goals coupled the NCDs with the SDGs: 3.4 (about synergy developmental approaches); SDG 1 (unveils a reciprocal relation: poverty exposes people to products associated to NCDs risk factors and, which, by their turn, could lead to poverty); SDG 4 (vulnerable groups are in high risk of NCDs); SDG 5 and 10 (to create systems and structures to lessen the burden of NCDs and to make their workforce healthier, according to the SDGs 8 and 9), and SDG 12 about responsible consumption and production.

Since NCDs risks factors are modifiable and require a structural approach, rather than biomedical that circumscribe NCDs' distribution and their risk factors in the whole society, and are concentrated in smoking, physical inactivity, unhealthier diets, and drinking; it is inescapable to assess the cost-effective regulation actions for products related to these risks factors: tobacco, alcohol, ultra-processed foods, and pesticides. These products, termed "unhealthy commodities" (Moodie et al., 2013), are the industrial epidemic's cornerstones. While we acknowledge that physical inactivity and air pollution are also associated with NCDs, our analytical effort surrounds the commercial products (i.e., tradeable) that can be regulated. Similarly, despite the assumption that changes in lifestyle can have a significant impact on the lessen of NCD burden of disease, people are somehow unable to make healthier choices due to, in a broad way, lack of a healthy environment and because of deregulation measures adopted by their governments (i.e., the dismantling of existing regulations or their lax enforcement towards public health issues).

The inclusion of NCDs in the 2030 Agenda exhibits that they constitute both health and development topics due to its linkage to poverty and inequity within and across countries and regions. Yet, before the SDGs, several other global mechanisms, international recommendations, and regulations to tackle NCDs were established as roadmaps to reduce the NCDs burden. To move forward, we must understand the extent to which the 2030 Agenda considered these former global mechanisms and how they are integrated into the SDGs' agenda.

Hence, our effort shows how the SDGs converge with the current international mechanisms to tackle products associated with NCDs risk factors. Then, what are the main challenges that hinder a full convergence? In this sense, policy convergence can be understood as moving from different positions toward some common political point of acceptable bounds of regulatory policies (Drezner, 2001). Policy convergence means moving from different positions toward some common political

end of acceptable limits of regulatory policies (Drezner, 2001) and has five elements: 1) convergence of policy goals; 2) match of policy content; 3) conjunction on policy instruments; 4) convergence on policy outcomes; 5) convergence of policy style (Bennett, 2009). Since policy convergence has structural and procedural variables, our focus is on procedural variables because we are interested in the policy outcomes that emerged from policy inputs (i.e., the 2030 Agenda and the multilateral documents issued by the UN system).

Nevertheless, this alignment is only partial, with a remainder of many health policy-driven challenges. We follow a methodological path of descriptive inference that dovetails 44 documents issued by the UN system from 2005 to 2019 (FAO, ECOSOC, ONU Environment, WHO, and UNGA) based on the dataset of the International Observatory on Regulation of NCD Risk Factors[1] (Oswaldo Cruz Foundation, Brazil). Upon this data set, we create a corpus (n=44) to run a correlation analysis among these documents (from 0 to 1) in R. International health agreements were chosen as a reference because they are indispensable sources for policymakers to develop national health policies. In this regard, international organizations can ensure policy convergence through harmonization because these organizations reduce the transaction costs of bargaining, promote enforcement, constrain behavior, and enable linkage-issues (Drezner, 2001).

Then, our purpose is to find common grounds among the global challenge of NCDs and how this challenge has been addressed by the SDGs, which has been considered a meaningful roadmap to cope with the main problems faced by the world in the 21st century. Similarly, the SDGs are a good policy outcome to avoid competing agendas, since they are an effort to put together multiple issues, denoting that the 2030 Agenda and other multilateral undertakings to NCDs coexist next to one another and, in many cases, even align and reinforce one another. Although not fully aligned with other multilateral mechanisms for NCDs, the SDGs do not present a competing framing.

Thus, international recommendations can serve "[…] as a blueprint that pushes a general idea onto the political agenda" (Bennett, 2009, p. 221). The harmonization realm implies a common problem as an independent variable that underlies the political response. The NCDs epidemic plays this role because it is considered one of the most severe health problems in modern society. Nevertheless, multiple multilateral frames are not always beneficial to the pursuit of global health goals because it can lead to issues of policy coherence or even contradictory policies (McInnes and Mahler, 2014). Different frames can also speak to the interests, values, and institutional mandates of other groups (McInnes and Mahler, 2014), making harmonization harder or impossible.

To what degree achieving SGD could be a crucial step towards the reduction of NCDs death tolls? Moving beyond strictly economic reasons (Nugent et al., 2018) or an effort to map interactions among SDGs, we offer a political analysis based on International Relations (neo)institutionalism, building knowledge bridges between IR and Global Health. Yet we do not include in this research the role of essential medicament policies, universal health coverage (UHC), and comparative analysis

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1   Available at: < https://bioeticaediplomacia.org/observatorio/>. Access 20 July 2020.

between SDGs and the Millennium Development Goals; these topics will be underlined in some policy entries described below. We argue that, despite the overlapping of NCDs prevention and control and the SGD agendas, the remaining challenges are rooted in the political structure of international and domestic politics in the wake of the epidemiological transition.

The first section explores the UN mechanisms to cope with the NCDs. The next section provides the convergence analysis among UN mechanisms and the SDGs. The third section offers explanatory elements for the partial convergence among the 44 UN mechanisms and the SGDs targets related to NCDs. Then, in the final section, we conclude.

UN mechanisms to tackle NCDs

Multilateral mechanisms for health policy evolved among the time and encompass both binding (e.g., Framework Convention on Tobacco Control) and non-binding agreements (e.g., Global strategy to reduce the harmful use of alcohol), highlighting the human right to health. Besides, NCDs have been a topic in political declarations (e.g., the Libreville Declaration on Health and Environment in Africa, 2008), action plans (e.g., 2008-2013 Action Plan for the Global Strategy for the Prevention and Control of NCDs), and global strategies (e.g., Global Strategy on Diet, Physical Activity and Health). Among the rationale behind these multilateral mechanisms are the threats that NCDs pose to countries' economies, understanding these mechanisms as regulatory politics that can alter their practical significance and domestic preferences. This section also presents our analytical corpus within the dataset employed to verify policy convergence between the UN documents and the 2030 Agenda.

In the early 2010s and before the 2030 Agenda, some UN declarations included NCDs as a significant global issue that must be addressed within multilateral gatherings (e.g., Resolution WHA71.2, in 2018). The 2011 Heads of State and Government (UN, 2011a) stated that NCDs constitute a considerable threat to economies, and governments have the primary role and responsibility to cope with them. In the same year, the Political Declaration (UN, 2011b) featured prevention as the base of the global response to NCDs. Notwithstanding some authors pointed that the 2030 Agenda provides an "unprecedented opportunity to explore linkages among the SDGs and advance NCD agenda as part of sustainable development" (Collins et al., 2017, 1), we must be aware that this opportunity is not free from political and economic constraints. Moreover, we understand that it would be impossible for the SDGs to encompass all the NCDs agenda, yet we highlight that some attributes of the NCDs Agenda remained outside the SDGs.

Among the wide range of international initiatives, the WHO Global NCD Action Plan (2013-2020) can be set as a roadmap and a menu of policy options to guide a world free of NCDs' avoidable burden. This Plan encompasses nine voluntary targets, six objectives, and 25 indicators. Four are related to consuming harmful products (e.g., salt/sodium intake; the prevalence of current tobacco; diabetes and obesity; harmful use of alcohol) (WHO, 2013).

Twelve documents targeted alcohol regulation. First, framing alcohol as a public health problem (WHA58.26) regarding the reduction of its harmful use (WHA61.4) through effective strategies and engaging social and economic groups. In 2010, the Global Strategy to Reduce the Harmful Use of Alcohol was issued (WHA63.13) to increase awareness about the harmful use of alcohol to increase coordination among stakeholders to improve monitoring and surveillance activities. In 2013, a Resolution about the prevention and control of NCDs mentioned the target to reduce 10%, in relative terms, the harmful use of alcohol and strengthen international cooperation around the issue. In 2017, the WHO (WHA70.11) raised concerns about politics' urgency to reduce alcohol consumption.

Tobacco was targeted by six primary documents at the UN System from 2005 to 2019. Overall, most of the documents do not address tobacco directly yet supporting the Framework Convention on Tobacco Control (FCTC), a binding normative enacted in 2003. First, Resolution WHA58.22 addresses cancer prevention and control. Some years later, in 2010, the WHA discussed the relation between tobacco use and congenital disabilities (WHA63.17) and urge state members to promote programs and strategies to reduce tobacco consumption, especially among pregnant women. Resolution 2010/8 was issued by ECOSOC to boost awareness about tobacco's role in maternal and child health. Two years later, the Protocol to Eliminate Illicit Tobacco Products was released and underlined how illicit tobacco trade could be harmful. Moreover, Resolution, in 2017 (A/RES/71/313), punctuated the need to toughen the implementation of FCTC and the demand to standardize the prevalence age of smokers, which is in accordance to target 3.a.1 of the 2030 Agenda: "Age-standardized prevalence of current tobacco use among persons aged 15 years and older."

The FCTC is the cardinal normative document regarding tobacco regulation in the international environment, and it is expressly linked to the 2030 Agenda. Target 3.a indicates "strengthen the implementation of the World Health Organization Framework Convention on Tobacco Control in all countries, as appropriate." Emphasis should be added on FCTC's Article 5.3: the influence of commercial and other vested interests of the tobacco industry and its influential role in advertising (e.g., US tobacco firms spend US$ 1 million per hour on advertising). Further, the FCTC allows States to deal with a given issue progressively by establishing the regime's general architecture, naming basic principles, institutions, and obligations.

Sixteen UN resolutions covered Ultra-processed foods. In 2005, the WHO (WHA58.32) request action towards infant and young child nutrition. One year later, the WHA59.21 Resolution endorsed Global Strategy to Infant and Young Child Nutrition and urged that Member States follow these recommendations, also crystallized by the Resolution WHA61.20. Another essential document is the WHO Set of recommendations on marketing foods and non-alcoholic beverages to children (WHA63.14). The document recommended enacting policies to reduce salt, sugar, and saturated fats and eliminate industrially-produced trans-fats acids in foods while encouraging food security (UN, 2011). Thus, using more organic foods and healthy local agricultural products and foods are a quintessential two-fold source for reducing NCDs risks factors: 1) preventing the consumption of pesticides residues in foods and 2) limiting the consumption of ultra-processed foods (especially

by children, the group most targeted by food companies). Labeling requirements (e.g., information on sugars, salt, and fats) are also relevant tools to increase health information. In 2010, the WHO released a Resolution about food security (WHA63.23).

In 2011, a hallmark for NCDs was set: Resolution A/RES/66/2 (UNGA) adopted the Political Declaration of the General Assembly High-Level Meeting on Prevention and Control of Noncommunicable Diseases, which was enhanced by Resolution WHA66.10 (2013). In 2012, Resolution WHA65.6 laid out a comprehensive implementation plan on maternal, infant, and young child nutrition, which was reinforced by Resolution WHA69.9 regarding the end of marketing of unhealthy foods for the young child and infant nutrition. In the same line of action as the previous documents, Resolution WHA71.9 once again calls for States to act in the areas of infant breastfeeding, infant food advertising, and strengthening structures to carry out international guidelines, according to the national context, on child nutrition.

In 2016, Resolution WHA69.8 launched the United Nations Decade of Action on Nutrition (2016–2025). In 2017, the WHA issued Resolution WHA70.11 about preparing for the third High-Level Meeting of the General Assembly on NCD Prevention and Control. Additionally, a follow-up of the Second International Conference on Nutrition was included within Resolution WHA68.19 to recognize the nutrition issue's multidimensionality, with several variables that can produce malnutrition.

Beyond the WHO and the UNGA, FAO Committee of Food Security Resolution 2019/46/2 has the purpose of being a point of reference that provides evidence-based guidance for governments, specialized institutions, and other actors in effecting policies, investments, and institutional arrangements aimed at reducing malnutrition in all its forms. More recently, two resolutions adopted by the UNGA stressed the importance of malnutrition within the 2030 Agenda and the Addis Ababa Agenda for Action: UNGA A/70/259 declared the UN Decade of Action on Nutrition (2016-2025). One year later, UNGA A/73/2 enforced the political declaration of the third high-level meeting of the General Assembly on the prevention and control of NCDs.

Pesticides were targeted from ten UN documents. Two conventions are among them: Stockholm Convention (last updated in 2017) about Persistent Organic Pollutants to determine which chemicals must be prohibited around the world and the Rotterdam Convention (last updated in 2017) about the regulation of chemical products (including agricultural pesticides). The WHO enacted four resolutions: WHA59.15 about the management of chemical products which requires voluntary commitments; WHA63.26 about persistent pollutants and its adequate control; WHA68.19 on proper pesticide use to reduce its detrimental health effects; WHA69.4 about health risks posed by pesticides (e.g., self-poisoning).

The Resolution called "the future we want" (66/288) targets safe pesticide management throughout its lifecycle until 2020, and UNGA Resolution 70/186 brings forth labeling requirements. Additionally, ECOSOC enacted Resolution 2011/17 about sustainable production and sustainable agriculture. Finally, FAO and WHO adopted the International Code of Conduct on Pesticide Management in 2013, released in 2013 through FAO resolution 3/2013.

Table 1. UN documents issued from 2005 to 2019 and included in the analysis (n = 44)

Alcohol	Pesticides	Tobacco	Ultra-processed foods
			WHA58.32
			WHA59.21
UNGA 66/2			WHA61.20
UNGA 70/1	Stockholm Convention		WHA63.14
UNGA 73/2	Rotterdam Convention		WHA63.23
WHA58.22	ECOSOC 2011/17	WHA58.22	WHA65.6
WHA58.26	FAO 3/2013	WHA63.17	WHA66.10
WHA61.4	WHA59.15	ECOSOC 2010/08	WHA68.19
WHA63.13	WHA63.23	UNGA 71/313	WHA69.8
WHA63.17	WHA68.19	FCTC	WHA69.9
WHA64.11	WHA69.4	Protocol FCTC	WHA70.11
WHA63.28	UNGA 66/288		WHA71.9
WHA66.10	UNGA 70/186		FAO 2019/46/2
WHA70.11			UNGA 66/2
			UNGA 70/259
			UNGA 73/2

Source: own elaboration.

Harmonizing the NCDs strategies within the SGD agenda

Firstly, the WHO Global NCD Action Plan (20013-2020) adopted, as one of its objectives, to raise the priority accorded to NCDs' prevention and control in the global agenda. The first objective related to NCDs and their products associated with risk factors is the relative reduction of 25% in the overall mortality from cardiovascular diseases, cancer, diabetes, or chronic respiratory diseases. This objective has one leading indicator: the unconditional probability of premature deaths (30-70 years) from these diseases. Fortunately, this indicator has a more ambitious overlapping in the SGDs: reduce the mortality rate by one third by 2030, and, hopefully, both hands reflect the seriousness status achieved by NCDs in the SDGs agenda.

A second SDG target requires a more detailed analysis: the harmful use of alcohol. The WHO target is to reduce, in relative terms, the harmful use of alcohol to at least 10%, within a national context. Target 3.5 mentions the necessity to strengthen substance abuse prevention and treatment, including narcotic drug abuse and harmful use of alcohol. Its indicator suggests the measurement of alcohol consumption per capita (aged 15 years and older) within a calendar year in pure alcohol liters. Yet these targets juxtapose and show a convergence – even if it is just a rhetoric one –, adolescents

aged 15 years or less are not included in the SDGs indicators. Additionally, the global strategy to reduce the harmful use of alcohol (2010) (enacted in the 63rd World Health Assembly, 2010) is not even mentioned in the SDGs, in opposition to the FCTC. This absence can be partially explained because the former has a hard law status, and the latter has a soft law status (i.e., recommendatory).

To understand the partial alignment in this issue, the SDGs also do not mention any of the five objectives set by the global strategy (2010): raised global awareness towards the harmful use of alcohol, strengthened knowledge base, and effective interventions to reduce the harmful use, increase national technical support, strengthened partnerships, and improve systems for monitoring and surveillance (UN, 2010). Yet, targets areas mentioned by the global strategy (2010) (e.g., availability of alcohol, pricing policies, and health services response, etc.) and by the WHO Action Plan on NCD (e.g., alcohol-related morbidity and mortality among adolescents and adults; the age-standardized prevalence of heavy episodic drinking among adolescents and adults) were left behind.

Moreover, through correlation analysis, we identified a strong correlation between alcohol and: harm (0.96), religi* (0.9), public health (0.89), problem (0.81), and profession (0.63). Notwithstanding these sound correlations, these topics were not associated with alcohol within SDGs because this agenda is compelled to reduce the harmful use of alcohol according to the national context. The strong correlation among the words "public health," "problem," and "harm" reflects the cornerstones of international alcohol regulation. Terms related to religi* (i.e., religion, religious, and religiosity) appear to indicate the historical relation between alcohol, culture, and religion, thus, suggesting it is a highly convoluted issue. Indeed, no mention of the Global Strategy to Reduce the Harmful Use of Alcohol is made in the 2030 Agenda.

Ultra-processed foods are an intrinsic element of unhealthy diets, and some studies have documented a direct association between ultra-processed products and obesity, hypertension, metabolic syndrome, and dyslipidaemias (Monteiro et al., 2017). These foods are related to unhealthy diets because their formulations use cheap industrial sources of dietary energy and many additives, using many processes that lead to energy-dense foods, high in unhealthy types of fat, refined starches, free sugars, and salt, and poor sources of protein, dietary fiber and micronutrients (Monteiro et al., 2017).

Yet we recognize the importance of state regulation to enable citizens to make healthier choices and avoid blaming the individuals for their choices, "food" word correlates strong with civil society (0.82) and private (0.80) rather than state-centered policy options (0.47). Similar to this path, correlation using the word "nutrition" reveals the following relationship with regulatory (0.53), plan (0.47), states (0.47), legislation (0.41) that suggest a minor role to be played by state regulatory mechanisms (i.e., legislation). Behavioral components, such as physic activity, are strongly correlated with diet (0.93). In contrast, obesity is correlated with overweight (0.90), poverty (0.70), undernourished (0.59), and anemia (0.53), distinguishing both development issues (e.g., poverty) and health situations (e.g., undernourishment and overweight). No strong correlation was identified between obesity and critical nutrients within UN documents employed in this analysis. One unique topic that deserves attention is self-regulation: many industries recall this kind of regulation – often voluntary – to minimize their commitment degree towards NCDs risk factors.

Regarding ultra-processed foods, the SDGs were somewhat elusive. Considering the WHO Action Plan (2013-2020), there are some targets related to a) salt/sodium intake in its target (a 30% relative reduction in mean population intake of salt/sodium); b) policies to reduce the impact on children of marketing of foods and non-alcoholic beverages high in saturated fats, trans-fatty acids, free sugars, or salt (UN, 2013). Moreover, the document considers replacing trans fats with unsaturated fats and implement the WHO Global Strategy on Diet, Physical Activity, and Health. None of its voluntary targets support any market-regulation (e.g., labeling, advertising, and marketing of unhealthy foods). Yet the WHO Action Plan included indicators (e.g., halt the rise in diabetes and obesity, a 25% relative reduction in overall mortality from cardiovascular diseases, cancer, diabetes, or chronic respiratory diseases), the SDGs are entirely silent. Even in the SDGs 12 – ensure sustainable consumption and production patterns – and 2 – end hunger, achieve food security and improved nutrition and promote sustainable agriculture, there are no indicators. Besides the lack of indicators and specific goals about ultra-processed foods, the UN declared 2016 to 2025 as the Decade of Nutrition to support the SDGs.

Although not explicitly mentioned and called ultra-processed foods by the UN documents, these foods are also considered a topic of poor nutrition. According to the Global Panel on Agriculture and Food Systems for Nutrition (2017), poor nutrition can be associated with low education attainment, weak physical growth, and low labor productivity.

Physical inactivity and healthier diets (including pesticide-free and ultra-processed-free diets) are framed through SDG 11 (livable cities) and sustainable production and consumption (SDG 12). Moreover, as NCDs can affect women and men differently, gender equity concerning the right to health is a topic that deserves special attention to policymakers. Thus, tackling NCDs' death tolls implies reducing gender inequality too. Furthermore, the Global Coordination Mechanism on the Prevention and Control of NCDs was established in 2014. It is the first and only WHO instrument to facilitate multistakeholder engagement and cross-sectoral collaboration to prevent and control NCDs. This mechanism is central to the SDGs agenda since it works by engaging a whole-of-government and whole-of-society approach.

Target 3.A addresses the WHO FCTC to strengthen its effective implementation, establish and operationalize national mechanisms. The FCTC lies under the tobacco epidemics that kill more than six million people every year from cancer, stroke, emphysema, and many other NCDs (FCTC, 2015). Considering this convention's binding status and its amplitude, the 2030 Agenda seems to integrate tobacco control under its mandate completely. Likewise, the WHO denotes five effective interventions with cost-effectiveness analysis, which includes: increasing excise taxes and prices on tobacco products, implement plain/standardized packing and ample graphic health warnings, bans on tobacco advertising, promotion, and sponsorship, eliminate exposure to second-hand tobacco smoke in all indoor workplaces, public places, public transport and implement mass media campaigns that educate the public about the harms of smoking/tobacco use and second-hand smoke (WHO, 2017).

UN resolutions include topics under words, such as state, diseases, economy, and smoke. Our analysis shows that word "state" correlates with financial (0.98), regulation (0.97), standard (0.97), legislation (0.94), responsibility (0.92), monitor (0.78), control (0.71), and policies (0.61). These

correlations indicate a cluster of state actions towards tobacco. Nevertheless, we found correlation between "lifestyle" – which means an individual responsibility – and "harm" (0.87), "policies" (0.64), and "prevent" (0.63). We also identify a target group: girl (0.57 correlated with "tobacco").

First, tobacco is framed through legal lenses within UN documents with a strong emphasis on illicit and developing countries that are significant problems countries face today, especially the spillover of tobacco companies in Southeast Asia and country's litigation against companies (e.g., Uruguay and Australia). Second, the marked correlation between smoke and age standard is following the SDGs target and WHO commitments. Third, smoke is associated with behavior that can increase stigma; thus, it is necessary to overcome the concept of unhealthy behaviors and encompass the idea of unhealthy commodities that governments can effectively regulate to promote healthier national environments. Even if we assume that individuals can make rational choices about their health and consumption, such a choice happens within boundaries set by society, government, market, and organizations (Yang et al., 2018).

Although we can see policy convergence between the target 3, an (SDGs) and multilateral mechanisms (WHO Action Plan, WHO Monitor Framework), some interventions remain a convoluted topic: measures to minimize illicit trade in tobacco products, ban cross-border advertising, and provide a mobile phone-based tobacco cessation services, and the danger posed by e-cigarettes. Other SDGs also have a strong relation to tobacco use: Goal 1 (end poverty in all its forms everywhere: 15% of disposable income is spent on tobacco in the poorest households in the African continent), Goal 8 (promote sustained, inclusive, and sustainable economic growth, full and productive employment and decent work for all: global cigarette production is dominated by a few transnational companies, with profits mainly flowing to a few Northern countries) (FCTC, 2015).

Pesticides are partially and implicitly converged to the 2030 Agenda and more broadly to other goals than the SDG 3. First, we acknowledge that pesticides are intrinsically related to the planetary health domain in the sense that CO_2 concentrations and declines in animal pollinators can exacerbate micronutrient deficiencies and risks of NCDs (Pattanayak and Haines, 2017). Poor management practices may have contributed to these problems. Moreover, multilateral organizations have settled that pesticide management must fulfill the entire life cycle of pesticides: legislation and regulatory control from production to disposal. Indeed, our correlation analysis also shows these trends and reveal a high correlation among pesticides and "exposure" (0.93) and "throughout the life cycle" (0.93), describing how cardinal is the holistic approach for pesticide and health ties. Unfortunately, though Goal 2 states the promotion of sustainable agriculture, including doubling, by 2030, agricultural productivity, ensuring sustainable food production systems, implementing resilient farming practices, and eliminating agricultural export subsidies, there is no explicit mention of pesticides in the SDGs Resolution.

Additionally, according to the WHO, pesticide self-poisoning is one of the three most important means of global suicide. Among the measures to avoid this rate is the restriction of highly hazardous pesticide use in agriculture. Some countries, such as Sri Lanka present successful pesticide regulation: this country achieved a 70% reduction in the total suicide rate by improving its pesticide regulation

(Knipe et al., 2017). Pesticide contamination can be avoided by implementing water, sanitation, and hygiene (WASH) interventions, which overlaps and converges with the SDG target 6.1: to achieve universal and equitable access to safe and affordable drinking water for all. Central troubling elements of pesticides are large stockpiles of obsolete vector-control insecticides, empty pesticide containers, pesticide residues in foods.

Key-elements to explain partial harmonization

The first input that helps explain this partial harmonization is financial alignment, which is tough to pursue due to industry interference. We must acknowledge that financial alignment touts important goals in the prevention of NCDs. For example, every US$ 1 invested in the WHO Best Buys (2018) will yield a return of at least US$ 7 by 2030, and these best buys can generate US$ 350billion in economic growth in 10 years of implementation (WHO, 2018). WHO Best Buys interventions cover six topics, among them: financial alignment through tax measure is mandatory (e.g., increase excise taxes and prices on tobacco products, on alcoholic beverages, and unhealthy foods) because, as the Addis Ababa Action Agenda 2015 noted (A/RES/69/313; Orliange, 2020), tax measures can be an effective means to reduce the consumption of products associated with NCDs risk factors (e.g., raising cigarette excise by US$ 0.75 per pack in all countries would generate an extra US$ 141 billion revenue globally (Goodchild et al., 2016)).

However, these measures will require the Ministries of Finance to collect robust data to see the impact of price policies to minimize the myths spread by industry (WHO and UNDP, 2016). As preconized by the Addis Ababa Action Agenda (para. 66), governments should also foster innovative financial mechanisms through sugar, tobacco, and alcohol taxes (STAX). STAX "[…] not only [contributes] to improving health and saving lives, but they can also raise resources" (Marten et al., 2018, 1).[2] Indeed, taxing harmful products should consider the question of tax regressivity, bioethics elements, the associated health benefits, externalities, and health-care costs (Summers, 2018).

Also, financial alignment is challenging because NCDs receive little development assistance for health (DAH) relative to the burden: just 2% of total DAH in 2018 (US$778.3 million) was allocated to NCDs. Nevertheless, it matters to make four points:

1. The WHO spends much less on NCDs than US Non-governmental organizations (NGOs);
2. The UK bilateral investments outweigh those of UNICEF, UNFPA, UNAIDS, UNITAID, and PAHO combined;
3. Since 2013, other bilateral development agencies cut in one tier their DAH towards NCDs;
4. Regional development banks also cut their investments on NCDs since 2016 (IHME, 2019).

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2   "Thailand's Health Promotion Act of 2001 established a tax on tobacco and alcohol, which now contributes about US$120 million annually for domestic health promotion efforts. In 2012, the Philippines raised taxes on tobacco and alcohol and are using the revenues to supplement efforts towards universal health coverage (UHC). After 3 years of implementation $3·9 billion in additional revenues were collected, 80% of which was used to finance the extension of health insurance to the poorest 40% of Filipinos" (Marten et al., 2018, 1).

The importance of financial aid and alignment was underscored by Allen et al. (2020) by identifying that African countries that made valuable advances in global health gains (e.g., Nigeria, Botswana, and Rwanda) underperformed in NCDs prevention and control due to the lack of financial and technical support that override these countries.

A second point highlights information, health education, and health literacy: they are quintessential elements to inform people about what they are eating and consuming to control their consumption patterns and improve healthier choices effectively. Nevertheless, this topic presents a complex challenge to be addressed: closing the gap between knowledge and action. According to the WHO (2015), only 53% of countries have an operational, multisectoral national policy, strategy, or action plan that integrates NCDs and their risk factors. In this sense, creating a knowledge network can be a valid route to minimize information asymmetry and boost health education (e.g., information systems for health). Domestic agencies outside the government are powerful actors to promote healthier lifestyles through community-based programs, health promotion, and neighborhood and mass-media campaigns. Lastly, countries that invest in health care and education are more likely to invest in NCD prevention, as noted in a recent study published by Allen et al. (2020).

Also, giving voice for people and communities means involvement in activities to prevent and control NCDs through advocacy, planning, legislation, and evaluation (UN, 2013). Therefore, the idea concerning empowerment does not mean individual responsibility. Bearing in mind that detrimental behavior is linked to one's behavior, one should not solely attribute it to individuals. In many parts of the world, people face considerable barriers to making healthy choices and face compelling pressures to adopt unhealthy ones (Stuckler and Siegel, 2011). In this regard, laws and policies enacted by the state could be set as the cornerstones of preventing risk factors associated with NCDs. Accordingly, changes in the environment are mandatory to facilitate the individual making the appropriate healthy choice.

Third, creating political coalitions and promote policy coherence. Responding to NCDs (especially within SDGs) requires a whole-government and whole-society effort. Townsend et al. (2019), for instance, argue that to advance in policy coherence between trade and health is necessary to disrupt the dominant assumption in trade policymaking to enable more considerable attention to social and public health objectives. Hence, policy coherence can be achieved in a scenario where the political and economic topics (e.g., health, agriculture, energy, education, environment, etc.) are synergetic, avoiding a mismatch. The case of tobacco is an emblematic point of policy incoherence. For example, tax increases were introduced in Canada, Sweden, and the UK to reduce the health burden and economic costs created by smoking (a similar proposal has been advocating by Brazilian NGO ACT *Promoção da Saúde*). Beyond these taxation efforts, measures regarding the illicit tobacco trade should be put in place under the FCTC Protocol on tobacco struggling.

Recent research in the UK revealed that yet health recommendations to sugar-sweetened beverages (content reformulation, price change, and change to sugar-sweetened beverages market share) led to uncertain responses from the industry, they can help to reduce dental caries, diabetes (type 2), and obesity rates (Briggs et al., 2017). As well, Moodie et al. (2013) show that unhealthy commodity

industries linked to tobacco, alcohol, and ultra-processed foods should have no role in the formation of national or international NCDs policies because there is no evidence of the effectiveness and safety of industries' self-regulation and public-private partnership. Similarly, Yang et al. (2018) underscore that once the dominant liberal international economy solidly supports transnational corporations, the regulation becomes tougher. Thus, public-private concerted efforts to tackle NCDs must be critically appraised beyond the evidence-based framework.

Evidence-based interventions should be based on the latest scientific evidence and best practices, cost-effectiveness, affordability, and public health principles. Yet evidence-based policies are essential to prevent and control NCDs; some authors acknowledge that they are not free from ideology, leading contestations over scientific data. Additionally, IR scholars see evidence-based policies as a knowledge manifestation that creates a basis for cooperation by "illuminating complex interconnections that were not previously understood" (Krasner, 1982, 203). Therefore, when critically analyzed and implemented, evidence-based policies can be an intervening variable for regimes and then, to the harmonization process of policy convergence.

Overlapping the 2030 Agenda and international mechanisms to NCDs could help overcome fragmentation problems, siloed implementation, and policy incoherence, moving towards a more interlinked strategy. From one side, actors can build a co-benefit network to achieve mutual benefits contingent upon coordination of action by providing catalytic support to meet international commitments (Collins et al., 2017). From the other side, we must assert that this coordination is not natural and automatic and should surpass institutional inertia and challenges due to resource allocations. In this sense, having convergent interests can help to integrate stakeholders, to alleviate different preferences among them, and to overcome institutional inertia challenges due to distributions focusing on a particular area of health (lifelong access to medicines), the lack of national capacities (technical, financial, human as well as policy expertise) (Collins et al., 2017).

Institutional inertia must be connected to institutional convergence because institutional mismatch is a demanding issue. Notwithstanding the WHO and FAO recommendations to regulate tobacco, alcohol, and pesticides, it is also necessary to combine these recommendations with the World Trade Organization (WTO) actions. The Technical Barriers to Trade Committee (TBT), for instance, raised concern about health warnings for alcoholic beverages in Thailand and the requirement to translate into Portuguese the alcoholic labels in Brazil in 2010. In these issues, the contestant countries did not litigate the legitimacy of public health objectives, yet they argued that the labeling requirements created unnecessary obstacles upon trade (WTO, 2010). Therefore, the blurred lines between public health protection and international trade must be aligned; otherwise, trade protectionism can potentially undermine coordinated international efforts to implement WHO Best Buys.

A more comprehensive and germane role of the legislative branch of government is an essential part of regulating products harmful to health. Prevention is vital to controlling NCDs, and enacting laws are crucial for achieving this goal, making long-term and systemic change (Magnusson and Patterson, 2014). Legal and regulatory measures will be required to make cost-effective NCD interventions come true to assess cost-effectiveness, affordability, implementation capacity, feasibility, and other non-

financial considerations (WHO, 2017). However, this is particularly burdensome in countries where public health laws are outdated. Corruption takes part in the country's political sphere (Magnusson and Patterson, 2014) or where private interests engulf public health.

Therefore, governments generally must choose to prioritize or not NCDs within the health budget because, in the face of the limited health budget, other health issues overshadow NCDs. Thus, clear-cut identification and characterization of NCDs challenges within the 2030 Agenda is crucial to define priorities and allocate scarce resources. An interesting way to finance NCDs prevention, control, and treatment is through tax collection from unhealthy commodities (e.g., STAX, as abovementioned). In 2012, 1.4 trillion (1.8% of global GDP) was spent by health systems to treat tobacco-related diseases (Goodchild et al., 2016), which can be solved through long-term health strategy. Thus, myopic, and shallow health planning will not solve the problem.

As noted by Margaret Chan, the former WHO general director, the interference by powerful economic operations (e.g., Big Soda, Big Alcohol, and Big Tobacco) is hampering the implementation of regulatory policies for alcohol, tobacco, ultra-processed foods, and pesticides (Chan, 2013). This interference was studied under the motto of "commercial determinants of health" and unveiled several mechanisms used by corporations to promote their products at the expense of public health (Townsend et al., 2019). Similarly, researches have evidenced the techniques employed by unhealthy industries to misled consumers: the alcohol industry disseminates misrepresentations of the evidence about the association between alcohol and cancer by using three main strategies: denial/omission, information distortion, and distraction (Petticrew et al., 2013).

Consequently, regarding the commercial determinants of health, one question remains: how the private sector is committed to NCDs prevention and control since many elements of this agenda go against these companies' for-profit profile? This way, keeping clear of conflict of interest, being aware of "rainbow washing" (i.e., when the SDGs and NCDs are purely used as a tool for marketing), avoiding conflict among national priorities, private interests, and the multilateral (mainly within the UN System) efforts are quintessential drivers to the proper engagement of the private sector in the development agenda of the NCDs. Indeed, these drivers are convergent with Addis Ababa Agenda for Action to safeguard "democratic institutions at the subnational, national and international levels as central to enabling the effective, efficient and transparent mobilization and use of resources." Accordingly, strengthening domestic and international institutions that enable a closer relationship between society and government, fostering the implementation of these actions (i.e., beyond rhetoric and towards comprehensive work regarding the population's needs) are required to provide the conditions for, inter alia, the SDG 16 (e.g., target 16.7 ensure responsive, inclusive, participatory and representative decision-making at all levels).

The private sector should also be engaged in the 2030 Agenda through, majorly, the SDG 17 (Partnerships for the goals). Nevertheless, the UN Global Compact, for instance, which strengthens the role of business collaboration with the UN, did not no mention the NCDs (risk factors and significant diseases) in the UN Global Compact for SDGs (UN Global Compact, 2019a). Hopefully, another report from this organization mentioned obesity, cardiovascular diseases, and products

associated with these diseases (e.g., sugar, pesticides) (UN Global Compact, 2019b). Notwithstanding this inclusion, the latter is silent about tobacco, salt intake, and alcohol. Accordingly, the strategy of "Health is Everyone's Business" from the UN Global Compact focuses chiefly on planetary health. A report from L'Oréal[3] and another from Nestlé[4] concentrate on issues of environmental sustainability and being silent about NCDs and their risk factors. Beyond the private sector, civil society's potentially decisive role is settled by the Sharjah Declaration on NCDs – Civil Society United Towards 2030 (2015).

International cooperation plays a prominent role in partial harmonization and sheds light on how the private sector can engage in NCDs within the 2030 Agenda. This kind of collaboration must be directed mainly by the support of national plans for preventing and controlling NCDs and the exchange of best practices in legislation, health systems, regulation, and measures to combat corruption in global health (UN, 2011). International cooperation can also be a crucial tool towards managing conflict of interests: when commercial concerns might take precedence over public health interests. For instance, Article 5.3 of the FCTC mentions that the lack of transparency in many countries dealing with the tobacco industry and the lack of sensitiveness of non-health government vulnerability to industry interference create tough challenges. To cope with these challenges, governments must resist tobacco industry interferences, promote a transparent political environment, increase the awareness of non-health departments, and endure legal procedures (Asunta, 2019).

Lastly, regulation and legislation throughout the entire life cycle of pesticides are hampered in several countries. Research show that 40% of countries lacked guidelines on the registration process; applicator exposure was poorly monitored. They also identified a lack of standard in pesticide transport and storage, especially in Africa, which can be harmful to people's health (van der Berg et al. 2015). Yet some multilateral mechanisms made efforts to introduce a globally harmonized system according to pesticide hazard; there is a clear gap among pesticides residues efforts (FAO), pesticides used to control plagues (WHO's Pesticides Evaluation Scheme), and their impact in soil contamination (UN Environment) and their monitoring policies in national levels. These shortcomings can be alleviated through leadership, multisectoral approaches, and integrating essential services. Multisectoral action was set in several UN documents and statements (e.g., the Alma Ata Declaration on Primary Health Care (1978), the Ottawa Charter for Health Promotion (1986), and the Helsinki Statement "Health in All Policies" (2013)). A multisectoral approach involves changes in macroeconomic politics, the structure of the labor market, and the trade and industry since these inputs affect economic growth, and "a healthy population is an engine for economic growth" (Yang et al., 2018, 6).

Conclusion

The SDGs display a point of reference for systemic change; thus, it is imperative to assess how they converged with previous UN mechanisms to cope with global development challenges. NCDs

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3   Available at: <https://bit.ly/2SLibvW>. Access 21 Feb. 2020

4   Available at: <https://bit.ly/2HVLgih>. Access 21 Feb. 2020

are a demanding issue to achieve the SDGs, especially the SDG 3 on human health and wellbeing. In this sense, more than identifying a partial convergence between the UN mechanisms issued from 2005-2019 and the 2030 Agenda, we offered some explanations for this partial convergence. Under those circumstances, this partiality is contingent upon tools that were left behind of the SDG formulation (e.g., alcohol policies to children; a clear-cut regulation on advertising, etc.), as the correlation analysis also demonstrated based on matching policy content and the convergence of policy instruments. We considered financial alignment, adequate information, health education, and literacy to explain this partiality, also suggesting an articulation of political coalitions towards policy coherence and to foster an ethical role played by the private sector to manage conflict of interest and overcoming institutional inertia. Similarly, it is required to improve international cooperation *vis-à-vis* national mechanisms that enhance democratic institutions' participation and support to safeguard an effective implementation of both the SDGs and the NCDs agendas.

The explanatory puzzle addressed here specified an apparent convergence in the tobacco case, but a diffuse – hence partial – convergence in ultra-processed foods and alcohol cases. Pesticides were left behind with little attention paid to them in the 2030 Agenda. Additionally, this analysis also sheds light on the consequences of inaction and the challenges posed by surveillance and high-level collaboration to reach the SDGs. Yet we did not include the internalization process of the UN mechanisms within the domestic context; we acknowledge that international standards on NCDs are of little relevance if not adopted and implemented by countries. Therefore, unless more research is done, we cannot assume that a causal link exists between policy convergence through harmonization and its real impact on states, especially by analyzing epidemiological data.

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