Tobacco control as a public health and economic imperative in the Eastern Mediterranean Region

Sophia El-Gohary[1], Chisomo Kasinja[1], Roy Small[2], Dudley Tarlton[3], Fatimah El-Awa[1] and Asmus Hammerich[4]

[1]Tobacco Free Initiative, Department of Noncommunicable Diseases and Mental Health, WHO Office for the Eastern Mediterranean Region, Cairo, Egypt (Correspondence to Sophia El-Gohary: elgoharys@who.int). [2]Health and NCDs, United Nations Development Programme, New York, United States. [3]United Nations Development Programme, Pristina, Kosovo. [4]Department of Noncommunicable Diseases and Mental Health, WHO Office for the Eastern Mediterranean Region, Cairo, Egypt.

Abstract

Background: Tobacco use is a major contributor to noncommunicable diseases in the Eastern Mediterranean Region, resulting in substantial health care costs and economic losses.

Aim: To review investment cases for tobacco control in selected countries of the WHO Eastern Mediterranean Region and estimate the economic benefits of implementing the WHO Framework Convention on Tobacco Control (WHO FCTC) measures.

Methods: Using scenario modelling, we compared the WHO-UNDP investment cases for Egypt, Islamic Republic of Iran, Jordan, Lebanon, Pakistan, and Tunisia with implementation of the WHO FCTC measures. We estimated the tobacco-related deaths and economic costs and projected the returns on investing in tobacco control over a 15-year period.

Results: Tobacco-related economic losses in the region ranged from US$ 139 million in Lebanon to over US$ 5 billion in Egypt, driven mainly by health care costs and productivity losses. Projected returns on investment in control measures were highest with tax increases (up to 1547:1 in Jordan), followed by smoke-free laws, mass media campaigns and graphic warnings. In countries with available data, lower-income populations had the highest projected health and financial gains.

Conclusion: Implementing the WHO FCTC in the WHO Eastern Mediterranean Region offers substantial health and economic benefits. Comprehensive, multisectoral actions should be prioritised to reduce tobacco use, particularly among vulnerable populations, in the region.

Keywords: tobacco control, noncommunicable disease, WHO FCTC, health care cost, economic loss, returns on investment, Eastern Mediterranean

Citation: El-Gohary S, Kasinja C, Small R, Tarlton D, El-Awa F, Hammerich A. Tobacco control as a public health and economic imperative in the Eastern Mediterranean Region. East Mediterr Health J. 2025;31(8):516–522. https://doi.org/10.26719/2025.31.8.516.

Received: 23/10/2024; Accepted: 11/02/2025

Introduction

With the continuous epidemiological transition, noncommunicable diseases (NCDs) continue to have an increasingly significant impact on mortality and morbidity globally. As one of the regions with the highest NCD prevalence, the Eastern Mediterranean Region (EMR) bears a particularly heavy burden, with NCDs accounting for an estimated 63% of total deaths (*1*). In 13 of the 22 EMR countries, deaths due to NCDs ranged between 75% and 89% of total mortality (*2*). Many of these deaths are premature, with 23% of all NCD-related deaths in the region occurring between the ages of 30 and 70 years (*1*). This highlights the burden of NCDs not only in terms of overall mortality but also in the loss of productive years of life, which exacerbates social and economic challenges in the region.

Tobacco use is one of the major risk factors for NCDs, including cardiovascular diseases, diabetes, cancer, and chronic respiratory diseases. In the EMR, tobacco use caused an estimated 13% of NCD deaths and nearly 12 million disability-adjusted life years (DALYs) due to NCDs in 2021 (*3*). Beyond its health burden, tobacco use also imposes a significant economic, social and environmental burden on countries (*4*). In 2022, tobacco-related social and economic losses were estimated at US$ 1.7 trillion worldwide, equivalent to 1.7% of global Gross Domestic Product (GDP) (*5*).

To combat the globalisation of the tobacco epidemic and the massive burdens it places on countries, the World Health Organization Framework Convention on Tobacco Control (WHO FCTC) was adopted unanimously by WHO Member States as a comprehensive framework for tobacco control policies. This treaty provides guidance for countries to implement effective tobacco control measures. Building on the foundation established by the WHO FCTC, WHO subsequently introduced the corresponding MPOWER measures, a tool consisting of six evidence-based, high-impact demand reduction strategies, as an entry point for the full implementation of the Convention (*6*). These measures include: (M) monitoring tobacco use and prevention policies; (P) protecting people from tobacco smoke; (O) offering help to quit tobacco use; (W) warning about the dangers of tobacco; (E) enforcing bans on tobacco advertising, promotion and sponsorship; and (R) raising taxes on tobacco.

To set a tangible agenda for reducing tobacco consumption, the WHO Global Action Plan for the Prevention

and Control of Noncommunicable Diseases (2013–2030) includes a target 30% reduction in tobacco use globally by 2025 relative to 2010. However, the 2023 WHO report on the global tobacco epidemic (GTCR) projects that the EMR will achieve only a 20% relative reduction in tobacco use (Figure 1) (7). This trend reflects major challenges that continue to hinder substantial progress in tobacco control globally and regionally, highlighting the need for renewed and strengthened political commitment by relevant stakeholders and decision-makers.

Background

The WHO FCTC Secretariat launched the FCTC 2030 project in 2016 to provide technical assistance and support to governments in low- and middle-income countries seeking to implement evidence-based tobacco control measures in line with the WHO FCTC (8).

A key component of this support was the development of country-led and country-owned investment cases, in collaboration with the WHO FCTC Secretariat, the United Nations Development Programme (UNDP) and WHO. These cases examined the health and economic costs of tobacco use, and modelled the projected benefits of implementing MPOWER measures in each country. They offered a strong, evidence-based rationale for policymakers to enact and enforce tobacco control policies (9).

The investment cases compared a baseline scenario reflecting current tobacco-attributable costs with an intervention scenario that modelled the implementation of selected evidence-based tobacco control measures. Across 33 countries – including 6 in the EMR – the results consistently showed that the long-term economic benefits of robust policy implementation outweighed the associated costs (5).

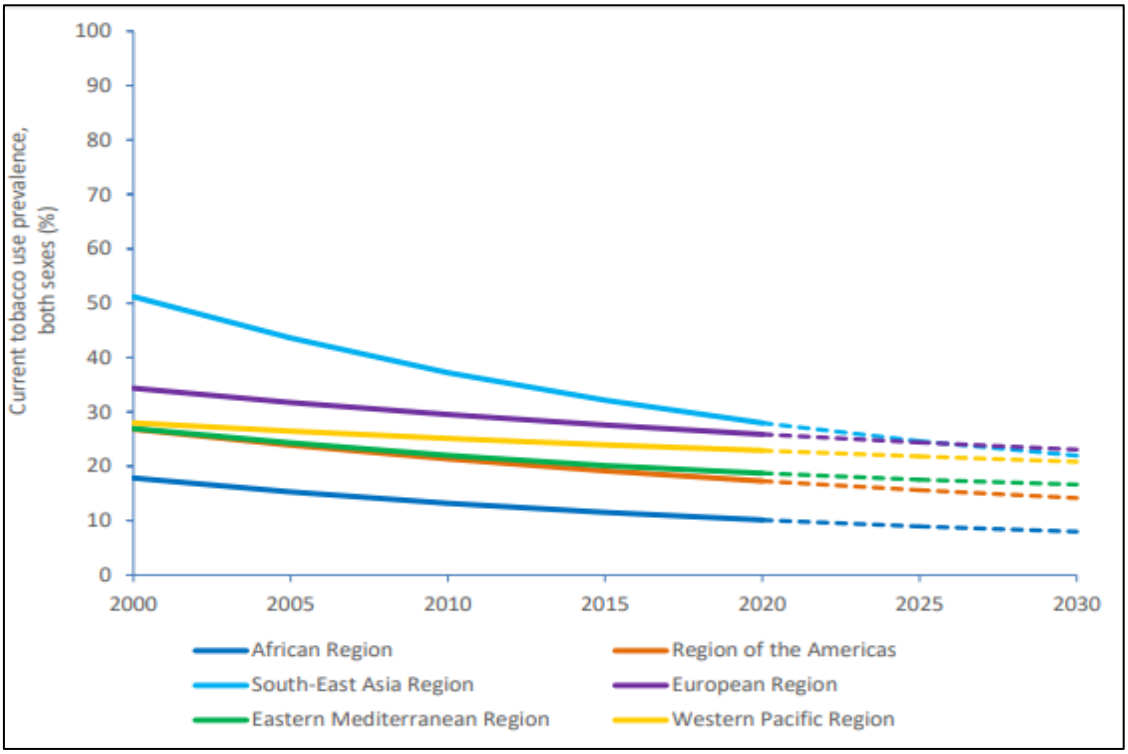
This study examines findings from the investment cases conducted in EMR countries and discusses their outcomes, uses, and policy implications.

Methods

The methodology for conducting WHO FCTC investment cases is designed to quantify the impact of tobacco control measures. Drawing on data from the 2019 Global Burden of Disease Study, it began by estimating tobacco-attributable mortality and morbidity across 195 countries, including data on 37 diseases and conditions causally associated with tobacco use. Economic costs were assessed through direct calculations of health care expenditures related to smoking, using the smoking-attributable fraction (SAF) method. Indirect costs, including premature deaths and productivity losses, were estimated using the human capital approach and based on figures from methodology annexes of the investment cases (10–15).

Scenario analysis compared outcomes under current smoking prevalence ("status quo") with those expected from implementing WHO FCTC measures ("intervention"), including tax increases, public smoking bans, health warnings, plain packaging, advertising bans, and mass media campaigns. Health and economic outcomes were projected based on forecasted changes in smoking prevalence. Financial costs of implementing

Figure 1 Trends in tobacco use among people aged ≥15, by WHO region, 2000–2030



Source: WHO global report on trends in prevalence of tobacco use, 2000–2030 (7)

these measures were estimated using the WHO NCD costing tool, which covered the costs of surveillance, human resources, training, mass media campaigns, and equipment (*10*). The analysis also examined government-incurred costs for strengthening tobacco control policies, including administration and enforcement of tax and regulatory measures, and expenses related to cessation-based interventions (*10–15*).

The model calculated the return on investment (ROI) by assessing the monetary value of health gains against implementation costs over 5-and 15-year intervals. Additionally, some countries conducted equity analysis to examine the impact of cigarette taxation on different income groups, using average elasticities from low- and middle-income countries to predict changes in smoking prevalence across income quintiles. Overall, the model provided a comprehensive assessment of the projected health and economic benefits of WHO FCTC measures, highlighting their relevance to health and development across diverse socioeconomic contexts (*10–15*).

Results

Tobacco-attributable economic and health costs

Data from the investment cases showed significant economic and social losses attributed to tobacco use across 6 EMR countries (Table 1). Egypt recorded the highest total losses – nearly US$ 5.05 billion, with premature death accounting for 75% of this figure (*10*). Islamic Republic of Iran followed, with US$ 4.42 billion in total losses, where health care expenditures made up the largest share (*2*).

Although Jordan reported lower absolute losses (US$ 2.25 billion), its relative economic impact was the highest, equalling 6% of GDP (*11*). In Pakistan, tobacco-related losses amounted to US$ 3.00 billion, with premature death representing about half of the total, and productivity losses and health care expenditures each accounting for approximately one quarter of the total (*14*). Lebanon and Tunisia recorded the lowest absolute losses (US$ 139 million and US$ 727 million, respectively), (*12,13*). Although these constituted nearly 2% of their national GDP, it highlights the significance relative to the size of each country's economy.

The breakdown of losses varied across countries. Premature death was a major driver in all cases, making up between 25% (in Jordan) and 79% (in Tunisia). Losses in workplace productivity, through absenteeism, presenteeism and smoking breaks, also added to the economic burden. On average, tobacco-attributable health care expenditures accounted for 17% of the total annual losses caused by tobacco use.

Return on investment from WHO FCTC implementation

Table 2 presents the projected ROI over 15 years for implementing specific tobacco control measures under the MPOWER framework in Egypt, Islamic Republic of Iran, Jordan, Lebanon, Pakistan, and Tunisia. Among individual policies, raising cigarette taxes yielded the highest projected ROI (311:1 to 1547:1). Other measures, such as smoke-free laws in public places (ROI ranging from 10:1 in Pakistan to 180:1 in Jordan), mass media campaigns (52:1 to 130:1) also demonstrated susbstantial economic returns. The overall ROI for each country underscores the economic benefits of adopting a comprehensive tobacco control package, with Jordan showing the highest total ROI (247:1), followed by Egypt (107:1) and Tunisia (63:1) (*10–15*).

Equity impact of tobacco taxation

The investment cases for Islamic Republic of Iran, Pakistan, Tunisia, Lebanon, and Egypt examined the effects of tobacco taxation across different income quintiles. The analysis revealed that increasing cigarette taxes disproportionately benefited lower-income populations, despite concerns about the potential financial burden on these groups. Overall, lower-income smokers were found to be more responsive to price increases, making them more likely to quit smoking. This, in turn, resulted in significant health gains, including

Table 1 Annual tobacco-attributable social and economic losses by country

Country	Social losses	Workplace productivity losses			Health system	Total losses (US$)	Loss as a % of GDP
	Premature mortality n (%)	Absenteeism n (%)	Presenteeism n (5)	Smoking breaks n (%)	Healthcare expenditures US$ (%)		
Egypt	3770 (75)	140 (3)	427 (8)	298 (6)	410 (8)	5045	2.1
Iran	1995 (45)	300 (7)	927 (21)	N/A**	1200 (27)	4422	0.5
Jordan	564 (25)	187 (8)	494 (22)	718 (32)	289 (13)	2252	6
Lebanon	70 (50)	11 (8)	27 (19)	N/A**	31 (23%)	139	1.9
Pakistan	1497 (50)	206 (7)	538 (18)	N/A**	762 (25)	3003	1
Tunisia	572 (79)	18 (2)	50 (7)	35 (5)	52 (7)	727	1.8

Source: Collated from WHO FCTC Investment cases in EMR countries (10–15)

**Figures were converted from local currencies to US dollars, using average annual exchange rates from the year of each investment case (16). **National authorities in some countries requested exclusion of smoking breaks from the analysis, as their frequency and duration were not assessed.*

Table 2 Projected 15-year return on investment, by selected tobacco control policy and country

MPOWER policy	WHO FCTC article/ guideline	Policy	Egypt (2019–2033)	Iran (2023–2037)	Jordan (2019–2033)	Lebanon (2023–2037)	Pakistan (2023–2037)	Tunisia (2021–2035)
P	8	Smoke-free public places	91:1	124:1	180:1	48:1	10:1	109:1
O	14	Brief cessation advice by trained health professionals		4:1		2:1	1:1	3:1
W	12	Mass media campaigns	76:1	52:1	130:1	113:1		130:1
	11	Graphic health warnings			324:1			163:1
	11 and 13	Plain packaging of tobacco products	68:1		164:1	378:1	42:1	55:1
E	13	Bans on advertising, promotion and sponsorship	137:1		423:1		147:1	178:1
R	6	Raising cigarette taxes	1076:1	467:1	1547:1	629:1	311:1	449:1
Total returns on investment			**107:1**	**41:1**	**247:1**	**86:1**	**27:1**	**63:1**

Source: Collated from WHO FCTC investment cases in EMR countries (10–15)

fewer tobacco-related deaths and reduced out-of-pocket health care expenditures.

In Islamic Republic of Iran, for example, a 75% increase in cigarette prices was projected to prevent over 17 000 cases of poverty, with 73% of averted catastrophic health expenditures occurring among the poorest income groups (*15*). In Lebanon, a 50% increase in prices was expected to prevent 26 800 instances of poverty, with 36% of total health care savings accruing to the poorest quintile (*12*). Similar trends were observed in Pakistan and Tunisia, where the largest reductions in smoking prevalence and tobacco-related disease burden were projected among the lowest income groups (*13,14*). In Egypt, while reductions in smoking prevalence were more evenly distributed across income quintiles, the poorest quintile experienced the greatest financial relief, saving 3.6% of household income due to reduced tobacco expenditure (*10*).

Discussion

Findings from the investment cases for tobacco control highlight the significant potential for public health and economic gains of comprehensively implementing the key measures outlined in the WHO FCTC. Across the 6 countries studied, the results demonstrated a high ROI, particularly for policies such as raising cigarette taxes, enforcing smoke-free laws, and conducting mass media campaigns. These policies yielded substantial financial returns through reduced health care costs and increased productivity, far outweighing implementation costs.

The study underscores the economic viability of tobacco control measures, particularly the striking ROI associated with taxation, with figures as high as 1547:1 in Jordan and 1076:1 in Egypt. These findings align with global evidence confirming that tobacco taxation is one of the most cost-effective strategies for reducing tobacco use and its associated burdens (*17*). Other measures, such as bans on tobacco advertising, promotion and sponsorship, graphic health warnings, plain packaging, and mass media campaigns, also demonstrated strong economic returns. The consistently high ROIs policy types and national contexts reinforce that tobacco control policies are most effective when implemented as an integrated package rather than in isolation.

From a public health perspective, the evidence is equally compelling. On average, GDP losses due to premature deaths and productivity decline across the region reached 2.2%, exceeding the global average of 1.9% observed across 33 investment cases conducted between 2017 and 2022 (*4*). Full implementation of WHO FCTC measures can significantly reduce tobacco-attributable mortality and morbidity, while also generating direct savings in health care costs (*18,19*). Particularly, the high returns from tobacco taxation reflects not only economic benefit, but also reductions in NCDs, thus alleviating pressure on national health systems and reducing the broader societal and public health burden of tobacco use.

The findings from the equity analysis further demonstrate that such policies can help address health and economic inequalities, disproportionately benefiting lower-income groups. These pro-poor effects contribute to advancing progress toward equity in public health by supporting inclusive and financially protective policies.

Policy implications and strategic priorities

These findings make a strong case for policymakers in Egypt, Islamic Republic of Iran, Jordan, Lebanon, Pakistan and Tunisia, as well as other EMR countries, to prioritise and strengthen tobacco control, leveraging the demonstrated public health benefits and economic returns observed across diverse national contexts. Second, the findings clearly demonstrate that implementing key WHO FCTC as an integrated package yields heightened net benefits. Countries should act on this evidence by supporting comprehensive FCTC implementation to maximise impact across public health, economic and equity outcomes.

Advancing tobacco control efforts in the Eastern Mediterranean Region requires a multi-sectoral, coordinated approach. First, raising awareness among the public and policymakers about the economic, social and health costs of tobacco use is critical. This includes highlighting not only the burden tobacco places on national health systems and economies but also the significant development gains to be achieved through comprehensive tobacco control. Public education campaigns and policy dialogues can play a pivotal role in engaging stakeholders and building sustained support for tobacco control initiatives.

Concurrently, efforts must focus on strengthening intersectoral coordination and planning among government entities, civil society organisations, and other relevant stakeholders to develop comprehensive, cohesive strategies. It is equally essential to ensure that the tobacco industry is effectively prevented from interfering in public health policymaking processes, in accordance with Article 5.3 of the WHO FCTC (*6*).

It is imperative that governments commit to comprehensive implementation of WHO FCTC measures, as these interventions have a synergistic effect, when applied together (*6*). Key actions include raising tobacco taxes; mandating graphic health warnings; banning tobacco advertising, promotion and sponsorship; and enforcing smoke-free laws in public places. These should be complemented with mass media campaigns to raise public awareness of the harms of tobacco use and ensuring accessible, government-supported cessation services, to strengthen the long-term effectiveness of tobacco control efforts.

Enhancing the implementation and enforcement of existing tobacco control legislation is equally crucial. Countries must ensure that all WHO FCTC obligations are met, with robust monitoring and accountability mechanisms at all levels. Legislative frameworks should also be updated to address the evolving tactics of the tobacco industry, including the marketing of emerging tobacco products. Legislative reform is necessary to close regulatory gaps and protect population health.

Finally, regional collaboration should be expanded. Countries in the EMR face similar challenges in curbing tobacco use, and sharing best practices, resources, and technical expertise could accelerate progress. Stronger political commitment and engagement from national governments, civil society and intergovernmental organisations will be key to scaling up efforts and achieving sustained reductions in tobacco use.

Study limitations

As this study compared tobacco control investment cases across 6 countries, certain limitations in terms of data availability, comparability and consistency of implementation should be acknowledged. The projected ROI data were obtained from modelled scenarios that rely on accurate input data and assumptions about future smoking prevalence, policy enforcement, and economic conditions.

In some countries, data gaps limit the investment case analysis, particularly where national tobacco surveillance systems are weak or fragmented. Countries had varied baseline levels of tobacco control and different combinations of modelled interventions, which complicates cross-country comparisons. The long-term impact of policies depends on enforcement capacity and public compliance, factors that were not directly addressed in this analysis (*4*).

Despite these limitations, the findings consistently highlight the heavy health, economic and social toll tobacco places on countries and their populations, diverting resources from productive investments – particularly in human and physical capital development. While the magnitude of ROI may vary by country, all 6 cases confirm that the financial costs of fully implementing WHO FCTC measures are significantly outweighed by the resulting health and economic benefits, when adopted as a comprehensive policy package.

Conclusion

The harms of tobacco use in the EMR extend far beyond health, imposing substantial social and economic burdens that hinder development and strain national economies. Implementing the evidence-based measures outlined in the WHO FCTC – including prevention strategies, cessation support, and regulatory reforms – can yield significant ROIs and make a compelling case for decisive policy action.

Coordinated national efforts to reduce tobacco use can lead to healthier populations and stronger economies, ultimately improving quality of life across health, economic, social and well-being dimensions.

Funding: None.

Conflict of interest: None declared.

Lutte antitabac : un impératif économique et de santé publique dans la Région de la Méditerranée orientale

Résumé

Contexte : La consommation de tabac constitue l'un des principaux facteurs des maladies non transmissibles dans la Région OMS de la Méditerranée orientale, ce qui entraîne des coûts substantiels en termes de soins de santé et des pertes économiques.

Objectifs : Examiner les argumentaires d'investissement en faveur de la lutte antitabac dans certains pays de la Région de la Méditerranée orientale et estimer les avantages économiques de la mise en œuvre des mesures de la Convention-cadre de l'OMS pour la lutte antitabac.

Méthodes : À l'aide d'une modélisation par scénarios, nous avons comparé les argumentaires d'investissement de l'OMS et du PNUD pour l'Égypte, la République islamique d'Iran, la Jordanie, le Liban, le Pakistan et la Tunisie avec la mise en œuvre des mesures de la Convention-cadre de l'OMS pour la lutte antitabac. Nous avons estimé les décès et les coûts économiques liés au tabac et effectué une projection pour le rendement de l'investissement dans la lutte antitabac sur une période de 15 ans.

Résultats : Dans la Région, les pertes économiques liées au tabac étaient comprises entre 139 millions de dollars US au Liban et plus de cinq milliards de dollars US en Égypte, principalement en raison des coûts de soins de santé et des pertes de productivité. Les projections montrent que les investissements dans les mesures de lutte antitabac génèrent les rendements les plus élevés lorsqu'il s'agit d'augmentations de taxes (jusqu'à 1547:1 en Jordanie), suivis par les lois antitabac, les campagnes médiatiques et les mises en garde illustrées. Dans les pays pour lesquels des données étaient disponibles, les populations à faible revenu enregistraient les gains les plus élevés aux niveaux sanitaire et financier selon les projections réalisées.

Conclusion : La mise en œuvre de la Convention-cadre de l'OMS pour la lutte antitabac dans la Région de la Méditerranée orientale offrira des avantages substantiels sur le plan sanitaire et économique. Des actions globales et multisectorielles devraient être privilégiées pour réduire la consommation de tabac, en particulier parmi les populations vulnérables dans la Région.

مكافحة التبغ بوصفها إحدى الضرورات في مجالَي الصحة العامة والاقتصاد في إقليم شرق المتوسط

صوفيا الجوهري، شيزومو كاسينيا، روي سمول، دادلي تارلتون، فاطمة العوا، أزموس همريتش

الخلاصة

الخلفية: يُعَدُّ تعاطي التبغ أحد العوامل الرئيسية التي تسهم في الأمراض غير السارية في إقليم شرق المتوسط، وهو ما يسفر عن تكاليف باهظة للحصول على الرعاية الصحية وخسائر اقتصادية كبيرة.

الأهداف: هدفت هذه الدراسة الى استعراض مبررات الاستثمار في مكافحة التبغ في بلدان مختارة في إقليم منظمة الصحة العالمية لشرق المتوسط، وتقدير المنافع الاقتصادية لتنفيذ تدابير اتفاقية منظمة الصحة العالمية الإطارية بشأن مكافحة التبغ.

طرق البحث: أجرينا مقارنة بين مبررات الاستثمار التي أعدَّتها منظمة الصحة العالمية وبرنامج الأمم المتحدة الإنمائي في مصر وجمهورية إيران الإسلامية والأردن ولبنان وباكستان وتونس، وذلك باستخدام نماذج السيناريوهات مع تنفيذ تدابير "الاتفاقية الإطارية بشأن مكافحة التبغ". وقدَّرنا الوفيات المرتبطة بالتبغ والتكاليف الاقتصادية، وتوقعنا عوائد الاستثمار في مكافحة التبغ على مدى 15 عامًا.

النتائج: تراوحت الخسائر الاقتصادية المتعلقة بالتبغ في الإقليم من 139 مليون دولار أمريكي في لبنان إلى أكثر من 5 مليارات دولار أمريكي في مصر، ويُعزى ذلك في المقام الأول إلى تكاليف الرعاية الصحية وخسائر الإنتاجية. وكانت العوائد المتوقعة على الاستثمار في تدابير المكافحة أعلى ما تكون مع الزيادات الضريبية (تصل إلى 1547:1 في الأردن)، تليها قوانين حظر التدخين، والحملات الإعلامية الجماهيرية، والتحذيرات المصوَّرة. وفي البلدان التي تتوافر فيها بيانات عن هذا الشأن، ترتبط أعلى المكاسب الصحية والمالية المتوقعة بالفئات السكانية المنخفضة الدخل.

الاستنتاجات: سيكون لتنفيذ "اتفاقية منظمة الصحة العالمية الإطارية بشأن مكافحة التبغ" في إقليم شرق المتوسط منافع صحية واقتصادية كبيرة.

References

1. World Health Organization. Noncommunicable Diseases Data Portal. https://ncdportal.org/#:~:text=Noncommunicable%20DisÐeases%20Data%20Portal.%20Noncommunicable%20diseases%20(NCDs)%20%E2%80%93
2. Global Health Development, Eastern Mediterranean Public Health Network. Addressing the burden of noncommunicable diseases in the Eastern Mediterranean Region. 2022. https://emphnet.net/media/lmma035r/policy-brief-addressing-the-burden-of-ncds-in-the-emr.pdf
3. Institute for Health Metrics and Evaluation (IHME). GBD Results Tool. Seattle: IHME, University of Washington; 2024. https://vizhub.healthdata.org/gbd-results/.
4. Hutchinson B, Brispat F, Calderón Pinzón LV, Sarmiento A, Solís E, Nugent R, et al. The case for investment in tobacco control: lessons from four countries in the Americas. Rev Panam Salud Publica. 2022;46:e174. doi:10.26633/RPSP.2022.174.
5. Secretariat of the WHO Framework Convention on Tobacco Control. The global case for investment in tobacco control. Geneva: World Health Organization; 2024. https://fctc.who.int/publications/m/item/the-global-case-for-investment-in-tobacco-control.
6. Secretariat of the WHO Framework Convention on Tobacco Control. The WHO Framework Convention on Tobacco Control: an overview. Geneva: World Health Organization; 2021. https://fctc.who.int/publications/m/item/the-who-framework-convention-on-tobacco-control-an-overview.
7. World Health Organization. WHO global report on trends in prevalence of tobacco use 2000–2030. Geneva: World Health Organization; 2024. https://iris.who.int/bitstream/handle/10665/348537/9789240039322-eng.pdf?sequence=1
8. Secretariat of the WHO Framework Convention on Tobacco Control. FCTC 2030. https://fctc.who.int/convention/development-assistance/fctc-2030 .
9. Secretariat of the WHO Framework Convention on Tobacco Control. Investment cases. Geneva: WHO FCTC; 2024. https://fctc.who.int/convention/development-assistance/investment-cases
10. UNDP, Secretariat of the WHO Framework Convention on Tobacco Control. Investment case for tobacco control in Egypt. Geneva: United Nations Development Programme and World Health Organization; 2024. Licence: https://iris.who.int/bitstream/handle/10665/376726/9789240092709-eng.pdf
11. Sturke R, Jordan A, Berman S, Shibuya K, et al. Investment case for tobacco control in Jordan. RTI International; Ministry of Health Jordan. 2019. https://www.undp.org/jordan/publications/jordan-tobacco-control-investment-case
12. UNDP, Secretariat of the WHO Framework Convention on Tobacco Control. Investment case for Tobacco control in Lebanon. Geneva: United Nations Development Programme and World Health Organization; 2024. https://www.undp.org/sites/g/files/zskgke326/files/2024-05/the_investment_case_for_tobacco_control_in_lebanon_-_english.pdf.
13. Ministry of Health Tunisia, RTI International, Kostova D, Drummond MF, Kontsevaya A, Berman S, Sturke R, et al. The case for Investing in WHO FCTC implementation in Tunisia; 2021. https://uniatf.who.int/docs/librariesprovider22/default-document-library/tunisia-tc-report.pdf?sfvrsn=4fd9b423_1
14. UNDP, Secretariat of the WHO Framework Convention on Tobacco Control. Investment case for tobacco control in Pakistan. Geneva: United Nations Development Programme and World Health Organization; 2024. https://uniatf.who.int/docs/librariesprovider22/default-document-library/pakistan-(1).pdf?sfvrsn=85919c8d_1.
15. United Nations Development Programme, Secretariat of the WHO Framework Convention on Tobacco Control. Investment case for tobacco control in the Islamic Republic of Iran. Geneva: United Nations Development Programme and World Health Organization; 2024. https://uniatf.who.int/docs/librariesprovider22/default-document-library/iran.pdf?sfvrsn=5693e47c_1
16. United Nations Treasury. Operational Rates of Exchange [Internet]. https://treasury.un.org/operationalrates/OperationalRates.php#L
17. World Health Organization. WHO technical manual on tobacco tax policy and administration. Geneva: World Health Organization; 2021. https://iris.who.int/bitstream/handle/10665/340659/9789240019188-eng.pdf?sequence=1
18. Chung-Hall J, Craig L, Gravely S, et al. Impact of the WHO FCTC over the first decade: a global evidence review prepared for the Impact Assessment Expert Group. Tob Control 2019;28:s119–s128. http://dx.doi.org/10.1136/tobaccocontrol-2018-054374
19. Hiscock, R., Bauld, L., Amos, A., Fidler, J. A., Munafò, M. Socioeconomic status and smoking: a review. Ann N Y Acad Sci. 2012;1248:107–123. doi:10.1111/j.1749-6632.2011.06202.x.