

**TEPAV Tobacco Control Policy Research Team<sup>1</sup>****WHO SMOKES? A WORLDWIDE PERSPECTIVE<sup>2</sup>**

Our report and earlier notes highlighted the importance of tobacco control policies that target specific groups to reduce smoking prevalence in Turkey.<sup>3</sup> In this note, we summarize the demographics of tobacco users and look into the country and gender breakdown of smoking prevalence.

When studying tobacco control policies in Turkey, investigating global trends reveals some crucial findings that need to be considered. These findings are:

- Even though the worldwide smoking prevalence rate is decreasing, more than 1 billion people are still smoking globally.
- Currently, despite the decrease in the global prevalence rate, the world is still not on the desired path in its fight against tobacco addiction.
- In contrast to some countries where smoking prevalence is already at low levels of 4 percent, Turkey and countries in its vicinity possess noticeably higher prevalence rates.
- Brazil, Germany, Japan, the Philippines, and Russia are countries that have succeeded in reducing smoking prevalence rates, whereas Turkey does not offer a “best-case study.”
- While men have been historically more likely to smoke, the gender gap in prevalence rates has narrowed down in more economically developed regions.
- The prevalence rate for women is increasing more rapidly in Turkey compared to men.

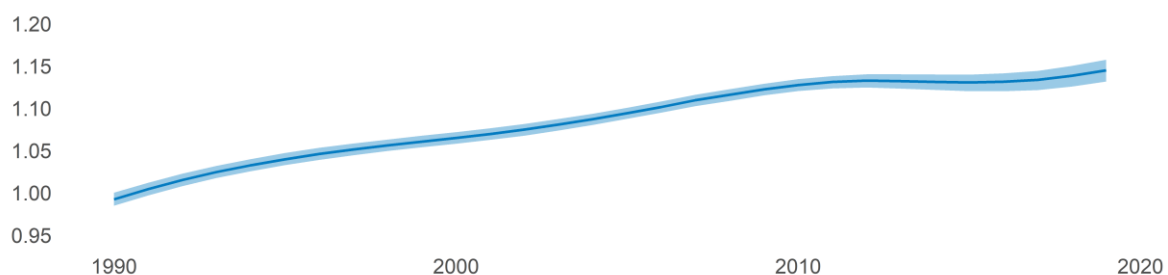
<sup>1</sup> This note was prepared by the TEPAV Tobacco Control Policy Research Team. Team members include Asena Caner, Sibel Güven, Ayşegül Taşöz Düşündere, Taylan Kurt, Egecan Alan Fay, and Bihter Erbaş.

<sup>2</sup> This policy note reiterates findings and updates figures and statistics, when possible, from the report titled, “The Economics of Curbing Smoking in Turkey: A Scoping Review Supply, Demand, Health, and Public Policy Aspects.” The report and note were funded with a grant from the Foundation for a Smoke-Free World, a U.S.-based nonprofit 501(c)(3) private foundation with a mission to end smoking during this generation. The Foundation accepts charitable gifts from PMI Global Services Inc. (PMI); under the Foundation’s Bylaws and Pledge Agreement with PMI, the Foundation is independent from PMI and the tobacco industry. The contents, selection, and presentation of facts, as well as any opinions expressed are the sole responsibility of the authors and under no circumstances shall be regarded as reflecting the positions of the Foundation for a Smoke-Free World, Inc. and TEPAV.

<sup>3</sup> TEPAV, “The Economics of Curbing Smoking in Turkey: A Scoping Review Supply, Demand, Health, and Public Policy Aspects”; TEPAV, “Why Study Turkey’s Tobacco Control Policies?”

**Even though the worldwide smoking prevalence rate is decreasing, more than 1 billion people are still smoking globally.** The primary source of information on the consumption of tobacco products is national-level household surveys. Yet, many countries do not conduct household surveys regularly and, when they do, they may use different survey protocols.<sup>4</sup> Therefore, various statistical methods are employed to combine these distinct surveys to assess the overall trend of tobacco use in the world. Accordingly, one of the recent global estimates released on May 27<sup>th</sup>, 2021, by the Global Burden of Disease Collaborative Network assesses that there were 1.1 billion adult smokers in 2019, with a 152 million incremental increase in the last three decades (see Figure 1).<sup>5</sup> Yet, the overall smoking prevalence among adults is estimated to be declining globally, from 27.8 percent of the world adult population in 1990 to 19.6 percent in 2019, considering the rise in the total world population.<sup>6</sup>

**Figure 1 - Worldwide number of smoker estimates, billion adults, 1990-2019**



**Source:** IHME, TEPAV calculations

Note: Light blue shadow indicates 95 percent confidence interval with respective lower and upper bounds.

**Currently, despite the decrease in the global prevalence rate, the world is still not on the desired path in its fight against tobacco addiction.** One of the targets on Noncommunicable Diseases (NCDs), set by the World Health Organization (WHO), is the tobacco-related Sustainable Development Goals (SDGs) indicator, which provides a “roadmap and menu of policy options” to reduce the prevalence of tobacco use. The target is a global reduction by 30 percent between 2010 and 2025 (for ages 15 or older).<sup>7</sup> Considering the realized decline between 2010 and 2019, as depicted in Figure 2 below, there will be a 17 percent relative reduction if the current trend continues instead of the targeted 30 percent.<sup>8</sup>

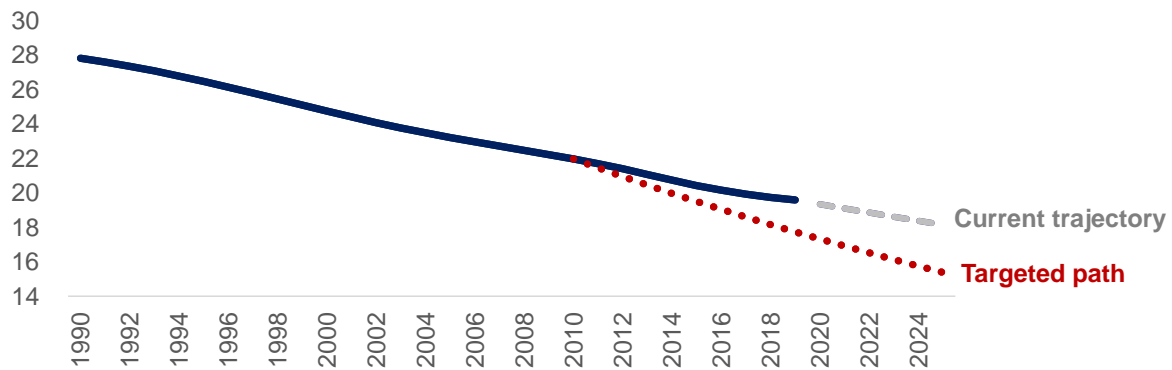
<sup>4</sup> World Health Organization (WHO), “WHO Global Report on Trends in Prevalence of Tobacco Use 2000-2025 Third Edition”.

<sup>5</sup> Institute for Health Metrics and Evaluation (IHME), “Global Burden of Disease Study 2019 (GBD 2019) Smoking Tobacco Use Prevalence 1990- 2019”; Institute for Health Metrics and Evaluation (IHME), “Global Burden of Disease Study 2019 (GBD 2019) Smoking Tobacco Use Prevalence 1990-2019 Data Release Information Sheet”.

<sup>6</sup> Ibid.

<sup>7</sup> World Health Organization (WHO), “Global Action Plan For The Prevention and Control of Noncommunicable Diseases 2013-2020”.

<sup>8</sup> Institute for Health Metrics and Evaluation (IHME), ‘Global Burden of Disease Study 2019 (GBD 2019) Smoking Tobacco Use Prevalence 1990- 2019’; World Health Organization, ‘Global Action Plan For The Prevention and Control of Noncommunicable Diseases 2013-2020’, TEPAV calculations

**Figure 2 - Worldwide age-standardized smoking prevalence estimates and projections, % of adults, 1990-2025<sup>9</sup>**

**Source:** IHME, WHO<sup>10</sup>, TEPAV calculations

Note: The estimation and trajectory data points provided for 2020 to 2025 were calculated assuming that the compound annual growth rate between 2010 and 2019 will remain constant for the upcoming years. The WHO's 30 percent reduction trajectory is visualized as the targeted path based on 2010 data points with a constant growth rate over the years.

**In contrast to some countries where smoking prevalence is already at low levels of 4 percent, Turkey and countries in its vicinity possess noticeably higher prevalence rates.** The current world average smoking prevalence is estimated to be 19.6 percent of individuals aged 15 or older.<sup>11</sup> Figure 3 lays out smoking prevalence by country; the red color indicates prevalence above the global average, while the green color indicates below the global average. As seen in Figure 3, an above-average prevalence rate is observed in South-East Asia, Western Pacific, and Europe.<sup>12</sup> The lowest prevalence rates are observed in Africa and the Americas. While Nigeria, with a meager rate of 4 percent, is the country with the lowest prevalence, Micronesia has the highest rate at 49.4 percent.<sup>13</sup> It is noteworthy that Turkey and its immediate vicinity, including the Middle East, the Balkans, and Europe, all have smoking rates above the world average.<sup>14</sup>

<sup>9</sup> While crude prevalence rates account for the underlying population sizes, the age-standardized estimates take a standard population distribution across calculations.

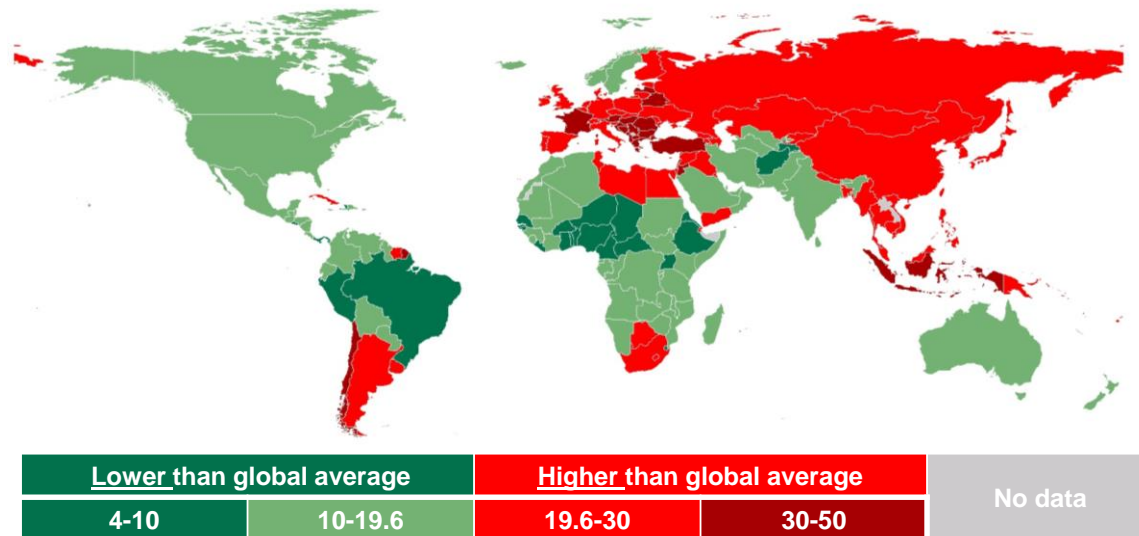
<sup>10</sup> World Health Organization (WHO), "Global Action Plan For The Prevention and Control of Noncommunicable Diseases 2013-2020".

<sup>11</sup> Institute for Health Metrics and Evaluation (IHME), "Global Burden of Disease Study 2019 (GBD 2019) Smoking Tobacco Use Prevalence 1990- 2019".

<sup>12</sup> Ibid.

<sup>13</sup> Ibid.

<sup>14</sup> Ibid.

**Figure 3 - Smoking prevalence by countries, 15+ population, age-standardized, %, 2019**

Source: IHME, TEPAV calculations

**Brazil, Germany, Japan, the Philippines, and Russia are countries that have succeeded in decreasing smoking prevalence rates, whereas Turkey does not offer a “best-case study.”** Global efforts to contain the tobacco pandemic were materialized in the WHO’s Framework Convention on Tobacco Control (FCTC) in 2005.<sup>15</sup> As such, many countries strengthened their efforts towards reducing the prevalence of tobacco use with the incorporation of FCTC measures. In Table 1, countries with the highest number of smokers in 1990, 2005, and 2019 are depicted in order to track the chronological change that took place with the introduction of the FCTC. In particular, Turkey was the 14<sup>th</sup> country with the highest number of smokers in 1990 and became the 10<sup>th</sup> in 2005.<sup>16</sup> Despite the successful incorporation of the FCTC measures into Turkish legislation, Turkey rose to 8<sup>th</sup> place in 2019.<sup>17</sup> As the total number of smokers increased in Turkey, a similar pattern was also seen in a number of other countries: Bangladesh, China, France, India, Indonesia, Mexico, the Philippines, and Vietnam.<sup>18</sup> On the other hand, with respect to the change in the overall prevalence rate, all listed countries have managed to decrease their smoking rates between 2005 and 2019.<sup>19</sup> Notably, Brazil, Germany, Japan, the Philippines, and Russia were countries with above-average smoking rates in 1990 but have substantially decreased their prevalence rates by 2019 (see Table 1). It is noteworthy that Turkey was able to reduce its prevalence rate in the medium term; however, this was a relatively negligible decrease compared to other countries and the global average (see Table 1).

<sup>15</sup> World Health Organization, ‘History of the WHO Framework Convention on Tobacco Control’, TEPAV calculations

<sup>16</sup> Institute for Health Metrics and Evaluation (IHME), “Global Burden of Disease Study 2019 (GBD 2019) Smoking Tobacco Use Prevalence 1990- 2019”.

<sup>17</sup> World Health Organization, *WHO Report on the Global Tobacco Epidemic, 2019: Offer Help to Quit Tobacco Use*; Institute for Health Metrics and Evaluation (IHME), ‘Global Burden of Disease Study 2019 (GBD 2019) Smoking Tobacco Use Prevalence 1990- 2019’, TEPAV calculations

<sup>18</sup> Institute for Health Metrics and Evaluation (IHME), ‘Global Burden of Disease Study 2019 (GBD 2019) Smoking Tobacco Use Prevalence 1990- 2019’, TEPAV calculations

<sup>19</sup> Ibid.

**Table 1 - Top 10 countries according to the number of smokers, 15+ population, 1990-2005-2019**

	Number of smokers				Prevalence					
	Million people			2005-2019 percentage change	%			2005-2019 percentage point change	2005-2019 percentage change	
	1990	2005	2019		1990	2005	2019			
<b>Brazil</b>	32.4	27.8	15.1	-46%	33.1	20.2	8.8	-11%	-56%	
<b>Japan</b>	35.6	31.3	21.9	-30%	35.1	29.5	21.9	-8%	-26%	
<b>Russia</b>	37.4	44.9	34.9	-22%	32.6	37.1	29.7	-7%	-20%	
<b>Philippines</b>	13.1	17.5	19.1	9%	35.3	31.5	24.7	-7%	-22%	
<b>USA</b>	51.9	50.8	45.1	-11%	26.6	22.5	17.6	-5%	-22%	
<b>India</b>	111.4	128.0	130.7	2%	22.5	17.8	13.2	-5%	-26%	
<b>Germany</b>	20.9	19.8	17.5	-12%	32.7	30.7	26.5	-4%	-13%	
<b>Global</b>	992.3	1,094.2	1,144.8	5%	27.8	23.2	19.6	-4%	-16%	
<b>Mexico</b>	16.5	15.6	16.5	6%	31.0	21.0	17.7	-3%	-16%	
<b>Viet Nam</b>	11.9	16.1	19.2	19%	29.4	26.5	24.3	-2%	-8%	
<b>Indonesia</b>	33.3	53.4	61.5	15%	28.5	33.1	31.0	-2%	-6%	
<b>Turkey</b>	14.1	17.8	20.5	15%	35.8	32.9	31.0	-2%	-6%	
<b>Bangladesh</b>	15.8	20.4	26.2	29%	28.1	24.6	23.1	-2%	-6%	
<b>China</b>	279.3	299.9	341.3	14%	33.4	27.2	26.9	0%	-1%	
<b>France</b>	16.6	15.7	16.3	4%	37.9	34.2	34.0	0%	0%	

**Source:** IHME, TEPAV calculations

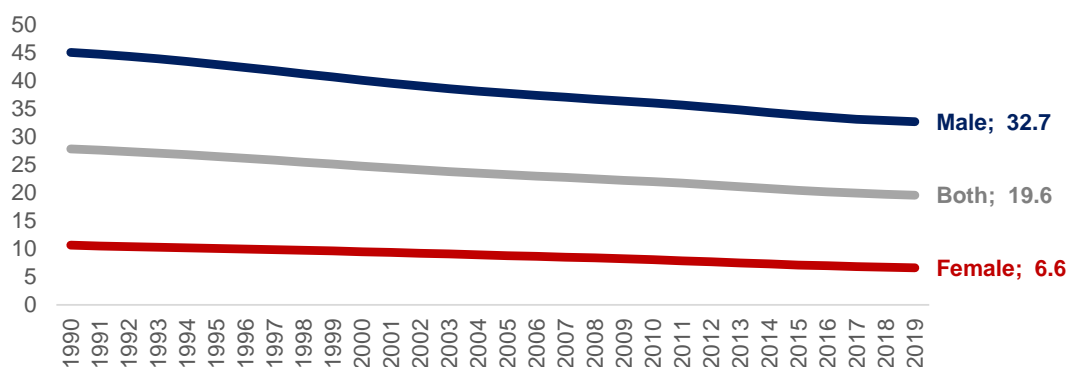
Note: The cells indicating an increase in percentage terms in “change” columns are shaded in red. The shade of color turns from red to green as the change becomes negative, indicating a decrease either in the number of smokers or the prevalence rates.

**While men have been historically more likely to smoke, women’s prevalence rates have converged to those of men in economically more developed regions.** For men, the average tobacco smoking rate is 32.7 percent globally, indicating that out of 1.1 billion tobacco smokers globally, about 951 million are men.<sup>20</sup> For women, on the other hand, the global average is relatively low at 6.6 percent, corresponding to approximately 194 million women tobacco users in the world in 2019.<sup>21</sup> Between 1990 and 2019, both genders have experienced a decline in their respective prevalence rates (see Figure 4). Furthermore, although the prevalence rates for women vary from one country to another, the rates are higher in more economically developed regions, as seen in Figure 5. In addition, the prevalence rates of men and women are converging into each other in many upper-middle and high-income countries, including Turkey (see Figure 5).

<sup>20</sup> Ibid.

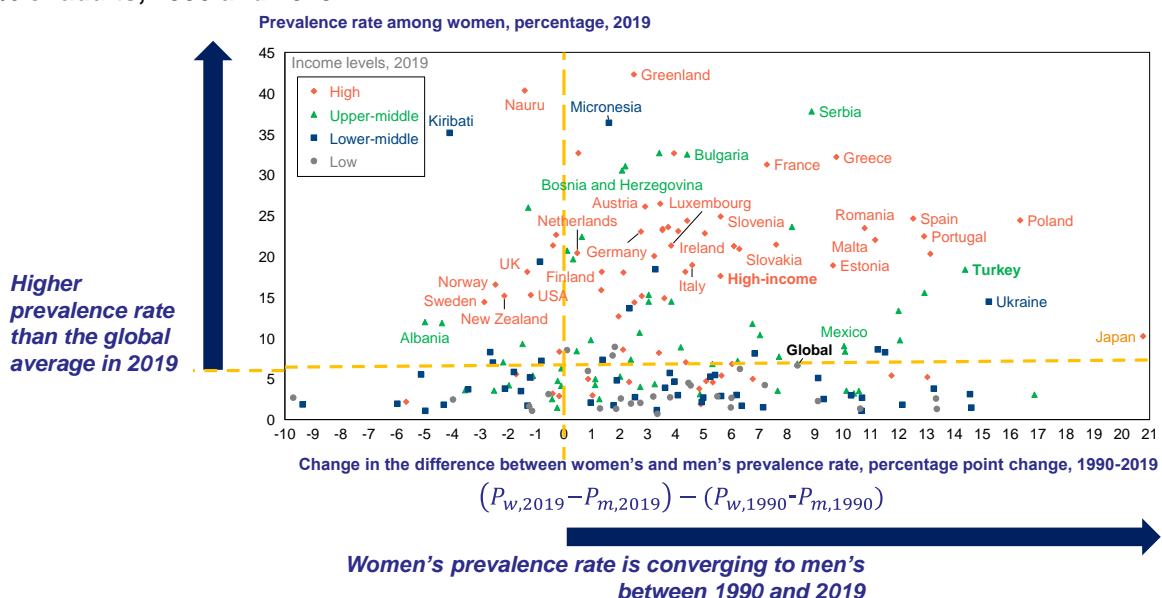
<sup>21</sup> Ibid.

**Figure 4 - Worldwide age-standardized smoking prevalence estimates by gender, % of adults, 1990-2019**



Source: IHME, TEPAV calculations

**Figure 5 - Age-standardized smoking prevalence estimates in different countries by gender, % of adults, 1990 and 2019**



Source: IHME, World Bank<sup>22</sup>, TEPAV calculations

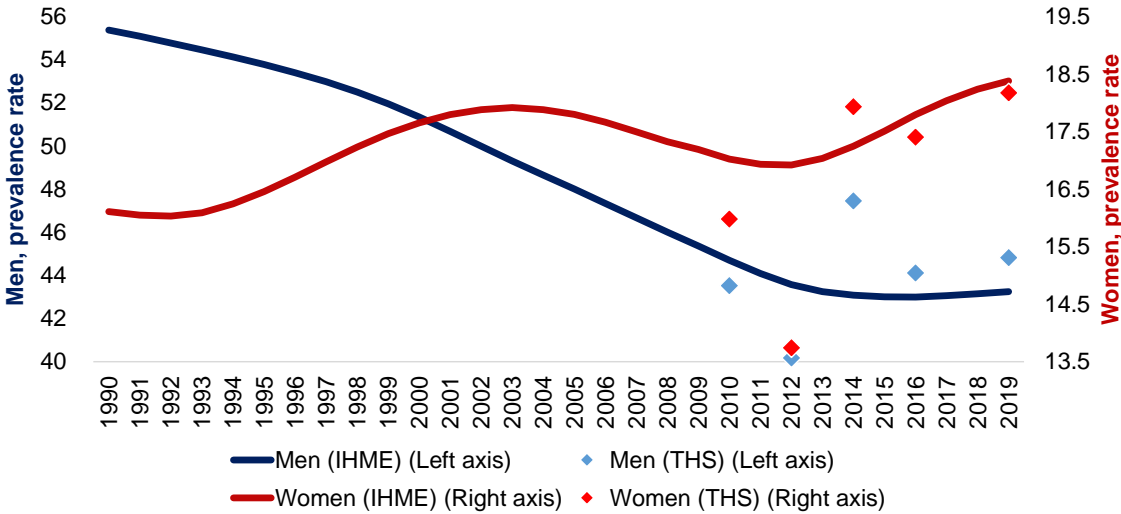
Note:  $P_w$  indicates the prevalence rate of women while  $P_m$  indicates the rate for men.

**The prevalence rate for women is increasing more rapidly in Turkey compared to men.** As seen in the global trends, a sizable gender gap in tobacco use prevalence rate is observed in Turkey.<sup>23</sup> Yet, both IHME and Turkey Health Surveys (THS) estimate that there has been a significant increase in women's smoking rate along with a decrease in men's smoking rate over the years (see Figure 6).

<sup>22</sup> World Bank, "World Bank Country and Lending Groups".

<sup>23</sup> Institute for Health Metrics and Evaluation (IHME), "Global Burden of Disease Study 2019 (GBD 2019) Smoking Tobacco Use Prevalence 1990- 2019".

**Figure 6 - Prevalence of daily and occasional tobacco smoking among adults in Turkey by gender, %, 1990-2019**



**Source:** IHME, TurkStat<sup>24</sup>, TEPAV calculations  
 Note: THS is the abbreviation for Turkey Health Survey. IHME data is provided as age-standardized rates assuming that the respective population had a standard age structure over the years.

**Conclusion**

While this note summarizes several facts regarding the demand aspect of global tobacco use, it also points out that women in Turkey have a persistently higher prevalence rate of smoking compared to women in many developing countries. The possible economic and cultural factors behind the observed pattern are still unknown and worth investigating in detail to predict the behavior in the future and design targeted policies to reduce the adverse health and economic consequences.

Furthermore, similar to global trends, women constitute a small share of total smokers in Turkey; in fact, just 27 percent of adult daily smokers are women in Turkey.<sup>25</sup> Yet, as our earlier notes and report have highlighted, Turkey needs country-specific tobacco control policies targeting certain groups to reduce smoking prevalence. Women should be one of these focus groups with diverging prevalence trends from men.

<sup>24</sup> TurkStat, "Turkey Health Survey".  
<sup>25</sup> TurkStat.

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