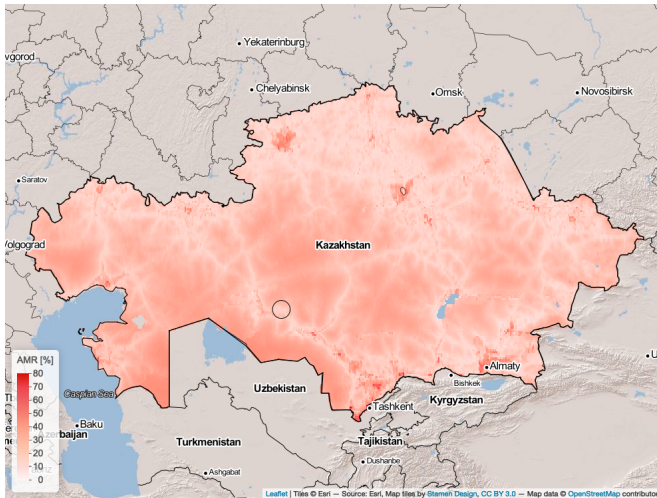
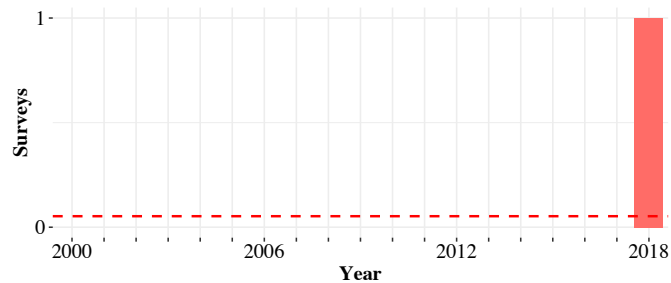
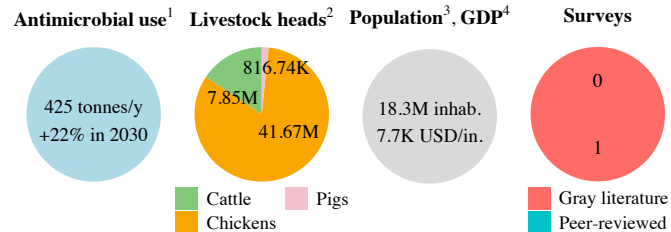


# Antimicrobial resistance in animals in Kazakhstan

[resistancebank.org](https://resistancebank.org)

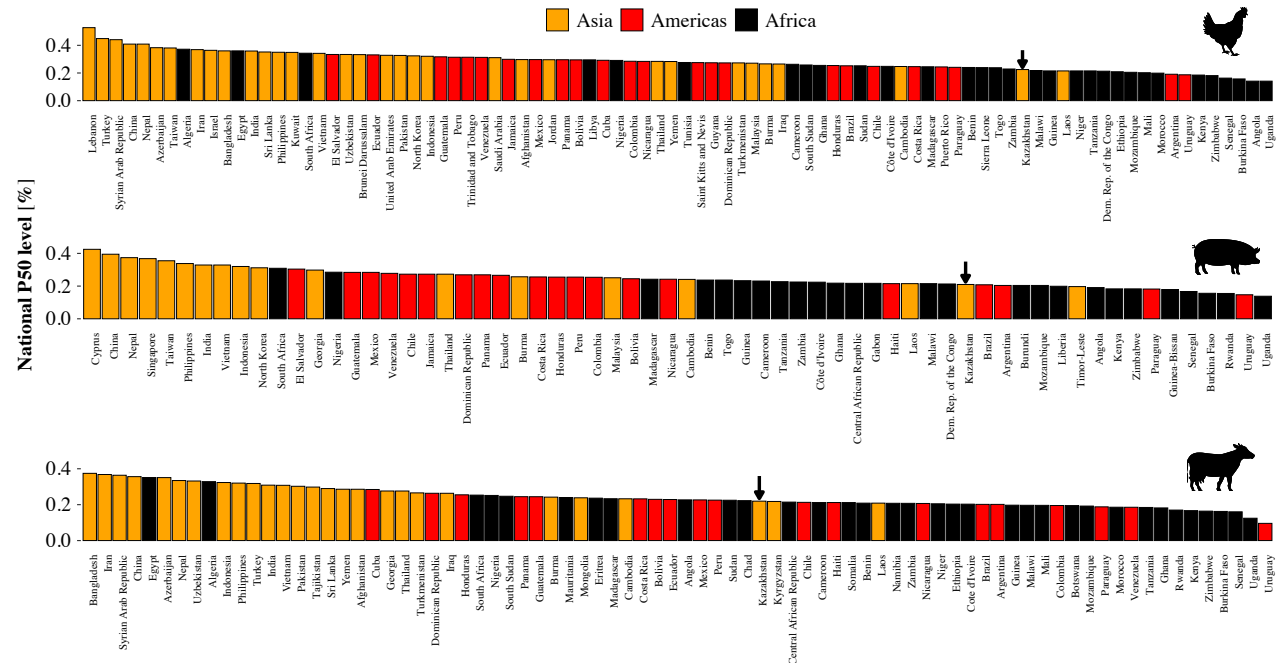


**Figure 1.** Hotspots. Percentage of antimicrobial drugs with resistance higher than 50%. For the methodology used for countries in South America, Africa, and Asia see [Van Boeckel & Pires \(2019\)](#), while for the methodology used for countries in Europe see [Mulchandani et al. \(2024\)](#).

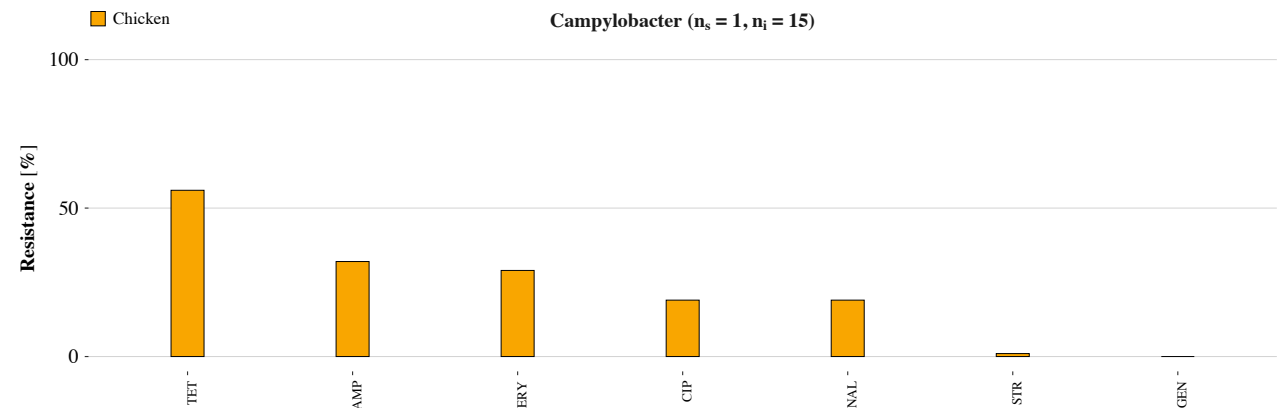


**Figure 2.** Number of peer-reviewed surveys and gray literature reports, and average number of point-prevalence surveys per year (red line).

- <sup>1</sup>Data updated to 2020. Source: [Mulchandani et al., Global trends in antimicrobial use in food-producing animals: 2020 to 2030. PLOS Global Public Health 3 \(2023\)](#)
- <sup>2</sup>Data updated to 2022. Source: [FAOSTAT](#)
- <sup>3</sup>Data updated to 2018. Source: [World Development Indicators](#)
- <sup>4</sup>Data updated to 2016. Source: [World Bank Group](#)



**Figure 3.** Relative country-level exposure to antimicrobial resistance in chickens, pigs and cattle. This metric quantifies the exposure levels of the animal populations. The analysis was restricted to countries with at least 10 million chicken, 250,000 pigs, and 500,000 cattle heads.



**Figure 4.** Resistance rates, number of surveys ( $n_s$ ) and total number of isolates tested ( $n_i$ ) by bacteria listed by the [AGISAR consortium](#). See protocol S1 in [Van Boeckel & Pires, Science 365, \(2019\)](#).

## Disclaimer

The information in this country-report result from the aggregation, and extrapolation of data from surveys conducted by independent scientists. It does not reflect the official positions of the country's veterinary authorities on antimicrobial resistance levels in animals in Kazakhstan. The detailed methodology and data source for this country-report are presented in [Van Boeckel & Pires, 2019](#).