Unprecedented and rising levels of industrial animal farming are undermining the highest attainable standard of health that is WHO’s mandate. During the 2016 World Health Assembly, Director-General Margaret Chan highlighted climate change, antibiotic resistance, and chronic diseases as “slow-motion disasters.” However, their fundamental link to industrial animal farming has continued to be disregarded.

**Industrial animal farming: A global health challenge**

The consumption of meat and other animal products is part of most cultures, yet large-scale industrial animal farming has gone beyond satisfying dietary needs and cultural practices. The extent to which we now produce and consume animal products is harming our health.

Industrial approaches to animal agriculture have spread across many nations and are rapidly increasing in low- and middle-income countries. Factory farms (also known as concentrated animal feeding operations, or CAFOs) use intensive methods to rear poultry, pigs, and cattle on a large scale for food products. Practices such as the indiscriminate use of antibiotics, close confinement of animals, and unsustainably large scale of production have become the industry standard, and each has grave consequences for human health. The problem, however, is getting worse as a rising proportion of global meat consumption comes from factory farms. Factory farms produce 67% of poultry meat, 50% of eggs, and 42% of pork globally. A return to more traditional husbandry methods is unlikely to occur, as the prevalence of factory farming has been rapidly increasing in both the high- and low- and middle-income countries.

Although many previous attempts to tackle factory farming have been largely framed around animal welfare or environmental concerns, we believe that limiting the size and adverse practices of factory farming is also central to improving global health.

Antibiotic resistance is a major threat to global health. Seven hundred thousand people die from antimicrobial-resistant diseases each year. If current trends continue, diseases caused by drug-resistant microbes could kill up to 9.5 million per year by 2050, more than current cancer-deaths. While quantification of specific morbidity and mortality burdens attributable to industrial agriculture is currently not possible, an increasing body of evidence suggests that antibiotic use in factory farming is a major contributor to resistance. Many industrial farms use low doses of antibiotics to marginally speed growth or prevent diseases in healthy chickens, pigs, and cattle, but do not bear the societal cost of antibiotic overuse. Although factory farms use antibiotics with the aim of keeping animals healthy and to increase productivity, accumulating evidence suggests that growth-promotion uses do not achieve this purpose and alternatives to antibiotic use for disease prevention such as better husbandry practices and vaccines are available and have been used with
Total consumption of antibiotics in animal food production is projected to grow by almost 70% between 2010 and 2030 [7]. According to the WHO, two of the three most commonly used classes of antibiotics in U.S. animal farming—penicillins and tetracyclines—are of critical importance to humans. Practices such as the constant low dosing [8] of antibiotics and environmental pollution through animal waste [9] make industrial animal farms the perfect breeding ground for antibiotic resistance by allowing transmission into the environment and nearby community. Several studies have found that the presence of antibiotic-resistant bacteria in livestock is closely associated with their presence in humans, and that decreases in antibiotic resistance have followed reductions in the usage of antibiotics in animals raised for food and humans [10]. The farming of fish in aquaculture poses similar health risks. Currently, in the EU and the US, over 75% of all antibiotics are used in agriculture [5], while BRICS countries are projected to experience a 99% growth [7] in antimicrobial consumption by 2030, largely due to the continued growth of factory farming. Low- and middle-income countries (LMICs) are estimated to experience rapid growth of both factory farming and antibiotic consumption through agriculture, in part because they may lack the regulatory oversight and veterinary medical workforce that high-income countries have. The consequences of antibiotic resistance will likely be more severe in LMICs because of higher bacterial disease burden [11] and the challenges patients face in accessing expensive second and third line antibiotics. Moreover, antibiotic resistance places a great burden on health systems [5], leaving weak health systems ill-prepared to deal with increases in resistance.

Climate change is projected to decrease global prosperity and increase wealth inequalities [12]. It is also expected to cause an additional 250,000 deaths [13] each year between 2030 and 2050. As the global health community acknowledges the intertwined nature of planetary and human health, it must also confront the role that factory farming plays in climate change. Experts predict that without rapid and drastic shifts in meat production, agriculture will consume half the world’s carbon budget necessary for keeping global temperature rises [14] under 2°C Celsius by 2050. Importantly, this contribution to climate change is not due solely to the emissions from raising livestock – animal farming is also a large contributor because of the deforestation that must occur [15] to supply grazing land for cattle and to grow crop feed. The World Bank estimates that between 1970 and 2004, 91% of cleared land in the Amazon has been converted to cattle ranching. Furthermore, factory farming is not only linked to macro-level environmental crises such as climate change, but one of the largest contributors to localized environmental problems like air and water pollution, as well as land and soil degradation. Although it is difficult to predict the multitude of harms that may spill over from livestock production, evidence suggests this deforestation may also be linked to emerging pathogens, an unexpected channel by which animal farming may contribute to the risk of disease pandemics beyond antibiotic resistance. A large proportion of emerging diseases stem from human-animal interaction in the wild, a process that deforestation accelerates. Zoonotic diseases can also emerge from animals in contact with workers in factory farms themselves.

Lastly, the rise of obesity and noncommunicable diseases (NCDs) can be partly attributed to the dramatic dietary changes made possible by factory farming. WHO has classified processed meat as carcinogenic [16] and red meat as probably carcinogenic. High meat consumption has been shown to increase risks [17] for several types of cancer [18], stroke [19], obesity [20], cardiovascular [21] mortality [22], lung disease [23] and diabetes [24]. The Institute for Health Metrics and Evaluation estimates [25] that diets high in processed meat and red meat contributed to over half a million human deaths (or over 16 million disability-adjusted life years, or DALYs) in 2015 – more deaths worldwide than interpersonal violence, and a similar DALY burden to breast cancer or alcohol use disorders. The declining cost of meat and its increasing prevalence in LMICs, facilitated by factory farms, contributes significantly to the rapidly rising burden of NCDs.

The path forward

The harms caused by large-scale, industrial animal farming are global in nature and felt beyond those who consume meat, dairy, and eggs. Climate change does not recognize borders and neither do drug-resistant infectious diseases. Although they contribute least to the global burden of animal farming, the world’s poorest countries are also the most vulnerable to rising water levels, natural disasters caused by climate change, food insecurity, and infectious diseases. Finding solutions to
problems posed by industrial animal farms and shifting us toward more healthful agriculture will therefore require the global leadership of WHO.

Just as the WHO has bravely confronted companies that harm human health by peddling tobacco and sugar-sweetened beverages, it must not waver in advocating for the regulation of industrial animal farming.

Conclusion

We applaud the WHO’s important actions on consumer product industries that jeopardize the right of all people to the highest standard of health. In particular, we recognize the significance of the Framework Convention for Tobacco Control, the inclusion of tobacco reduction in the United Nations Sustainable Development Goals, and WHO’s recommendation on sugar consumption.

We call on academics and researchers to apply their energy to document and publicize the harms of industrial animal farming to human, animal, and planetary health.

We call on all candidates for the WHO-Director General position to publicly acknowledge the harm that industrial animal farming inflicts on global health. The next Director General should take necessary steps to limit the expansion of industrial animal farming and encourage dietary recommendations that reduce meat consumption.

Finally, we call on the next WHO-Director General to provide global leadership to support all member states in finding sustainable alternatives to the rapid growth of industrial animal farming and help shift us toward farming methods that protect public health and the environment.

Concluding Policy Recommendations for the next Director General:

In order to lead us down the path of agricultural production that is better for people’s health than our current industrial animal production system, the WHO should:

- Strengthen WHO’s Global Action Plan on Antimicrobial Resistance to encourage member states of the WHO to ban the use of growth-promoting antibiotics in animal farming, as well as low-dose “disease prevention” antibiotics. This reform may cut unnecessary antibiotic use without additional cost to consumers.

- Negotiate country-level standards for antibiotic use in animal husbandry, in coordination with the Food and Agricultural Organization. Member states should be encouraged to articulate specific, verifiable standards for what constitutes legal antibiotic use in animal farms.

- Incentivize meat producers to dispose of antibiotics and waste residue properly to prevent environmental contamination and excess greenhouse gas emissions.

- Work with all relevant ministries, including those outside of health, to reduce the size and number of factory farms to better balance dietary need and ecological capacity.

- Discourage member states from subsidizing factory farming and its inputs, which can cause significant harm to the public.

- Consider the application of relevant fiscal policies in member states that would help to reduce meat demand and consumption, especially where consumption exceeds health recommendations. The WHO’s internal research expertise is well-suited to investigate the efficacy and tradeoffs of such a policy.

- Encourage member states to adopt nutrition standards and implement health education campaigns which inform citizens of the health risks of meat consumption.

- Work closely with ministers of health and agriculture to formulate policies that advocate for a
greater proportion of plant-based foods in the diets of member states.

- Consider funding the scientific development of plant-based and other meat alternatives, which have the potential to eliminate or reduce the harms of factory farming.

See the full list of signatures [here](https://www.pambazuka.org).

References


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Article Summary:
On 23 May 2017 Tedros Adhanom Ghebreyesus of Ethiopia was elected WHO Director-General. In a letter released a head of the election, over 200 scientists, policy experts and others concerned persons are urging the new Director-General to recognize and address factory farming as a growing public health challenge. Just as the WHO has bravely confronted companies that harm human health by peddling tobacco and sugar-sweetened beverages, it must not waver in advocating for the regulation of industr... read more

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