2024 STATE OF GLOBAL POLICY:

Public investment

in alternative proteins to feed a growing world

About GFI's State of Alternative Proteins series

GFI's State of Alternative Proteins series serves as our annual alternative protein sector deep dive. The series compiles business developments, key technologies, policy updates, and scientific breakthroughs from around the world that are advancing the entire field. To read other reports, visit the series homepage.

This report covers government support and regulation of alternative proteins in regions where the Good Food Institute (GFI) has a focus. It is comprehensive through the end of 2024. GFI's teams collaborate extensively on every report, and some material appears in multiple reports. For detailed information on government policy and regulatory actions before 2024, please see GFI's 2023, 2022, and 2021 State of Global Policy reports. All dollar amounts in this report are U.S. dollars unless indicated otherwise. All figures/charts featured in this report present data sourced from GFI's Public Investment Database as of March 31, 2025.

Acknowledgments

Authors

Mackenzie Battle, Michael Carter, Ankur Chaudhary, Alex Holst, Kimiko Hong-Mitsui, Yeonjo La, Grace Liu, Manuel Netto, Vidvatta Sharma, Alla Voldman

Editors

Jessica Colley Clarke, Liz Fathman, Tara Foss, Dominic Scicchitano

Project manager

Emily Giroux

Designers

Kelli Cromsigt, Joseph Gagyi, Emily Hennegan

The cover image is courtesy of Tender Food.

Executive summary

Taken as a whole, public investment in alternative proteins remained steady in 2024, largely matching the level set in 2023.

GFI estimates that governments around the world announced about $510 million in new committed funding for alternative proteins, including increases in funding for R&D, bringing the all-time cumulative commitment from governments to around $2.1 billion.

Altogether, new public funding announcements for alternative protein and food technology added to the important work being done by existing projects, programs, and funding opportunities. Estimating the amount of funding spent annually through these and previous programs yields about $560 million in disbursements in 2024, exceeding the $348 million estimated to have been invested in 2023.

As governments began to put the weight of public investments behind their national bioeconomy plans, enhanced by a new sense of urgency in developing biotechnology capabilities and supply chain security and resiliency, they invested in projects to develop the science and industrial capacity of meat, dairy, and seafood made from plants, cultivated from animal cells, or produced via fermentation.

Taken in pieces, the global landscape of public investment in alternative proteins is quite varied. The bulk of the support in 2024 came from the world's three most populous countries. China, India, and the United States all began funding national bioeconomy plans that included alternative proteins in the scope. Meanwhile, new announcements from Canada and some EU countries were fewer in 2024 than they were in 2023, reflecting either a focus on existing programs (e.g., Canada's successful Protein Industries Canada program) or a shift to other policy priorities due to changes in government.

Figure 1. Yearly public investment in alternative proteins by type

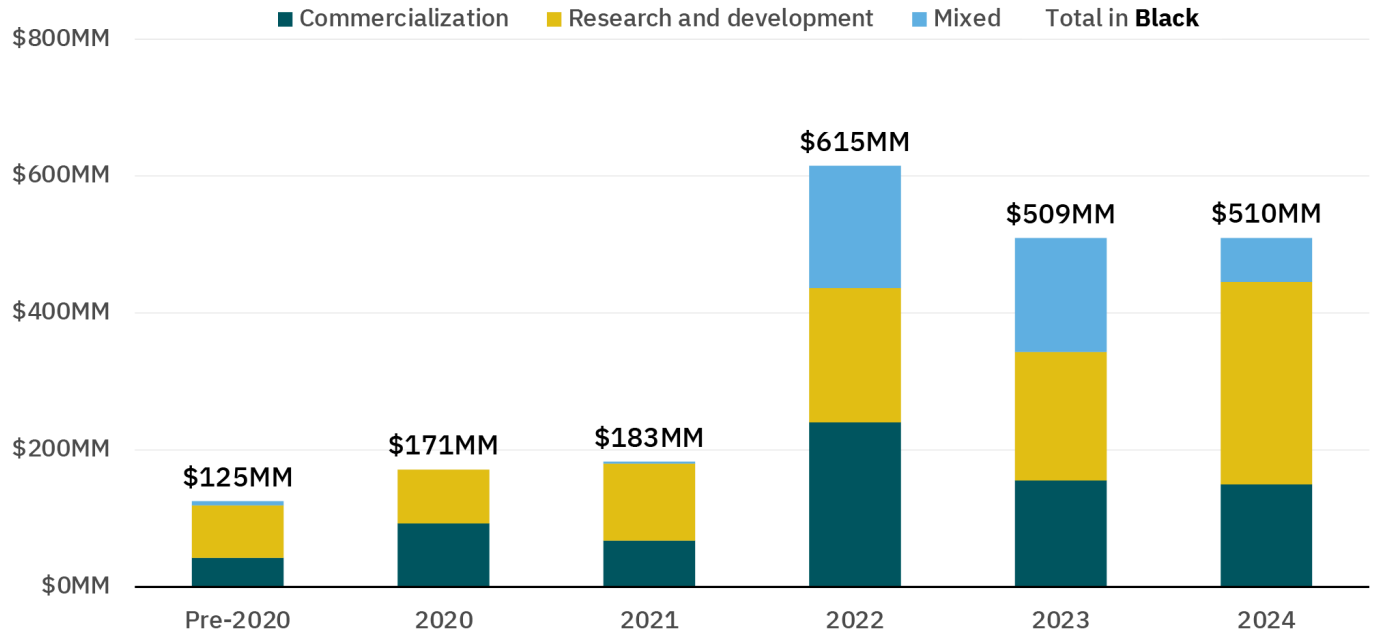
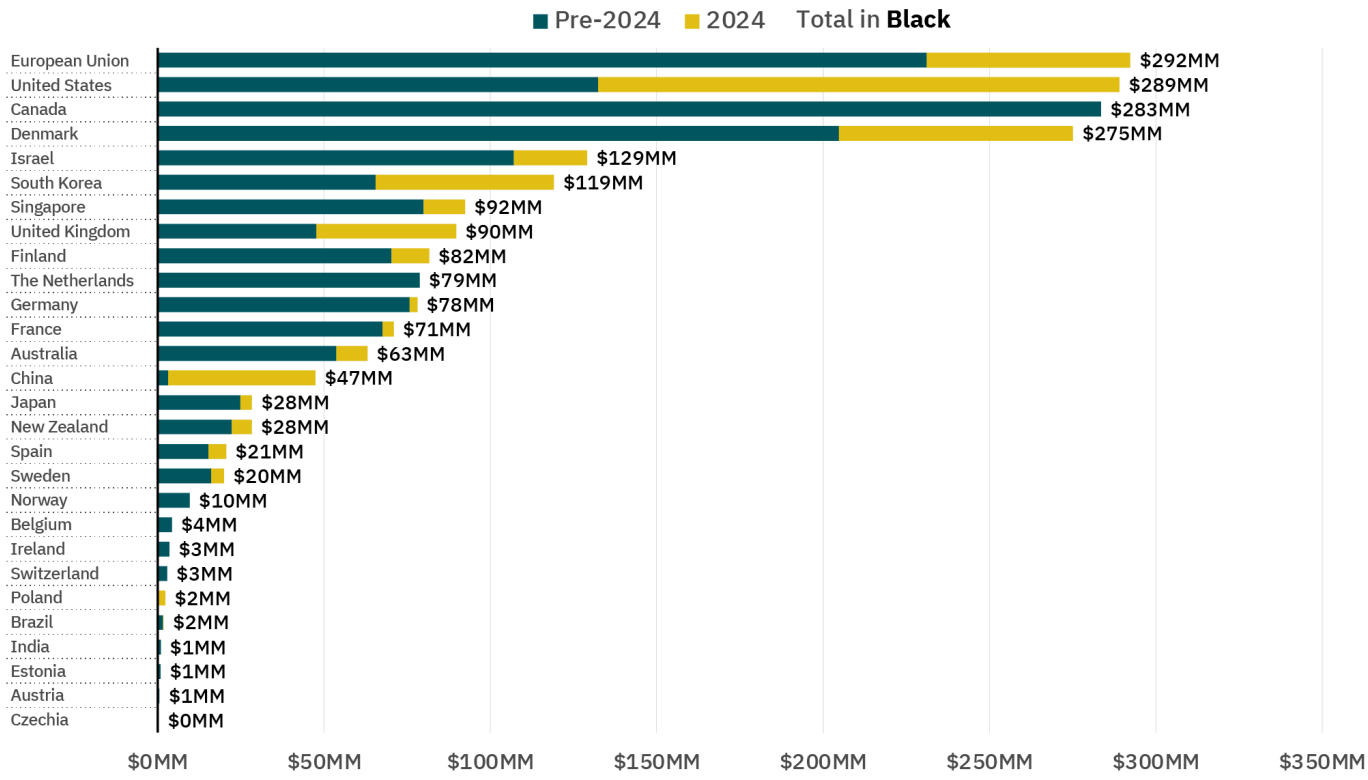


Figure 2. Public investment in alternative proteins by governments

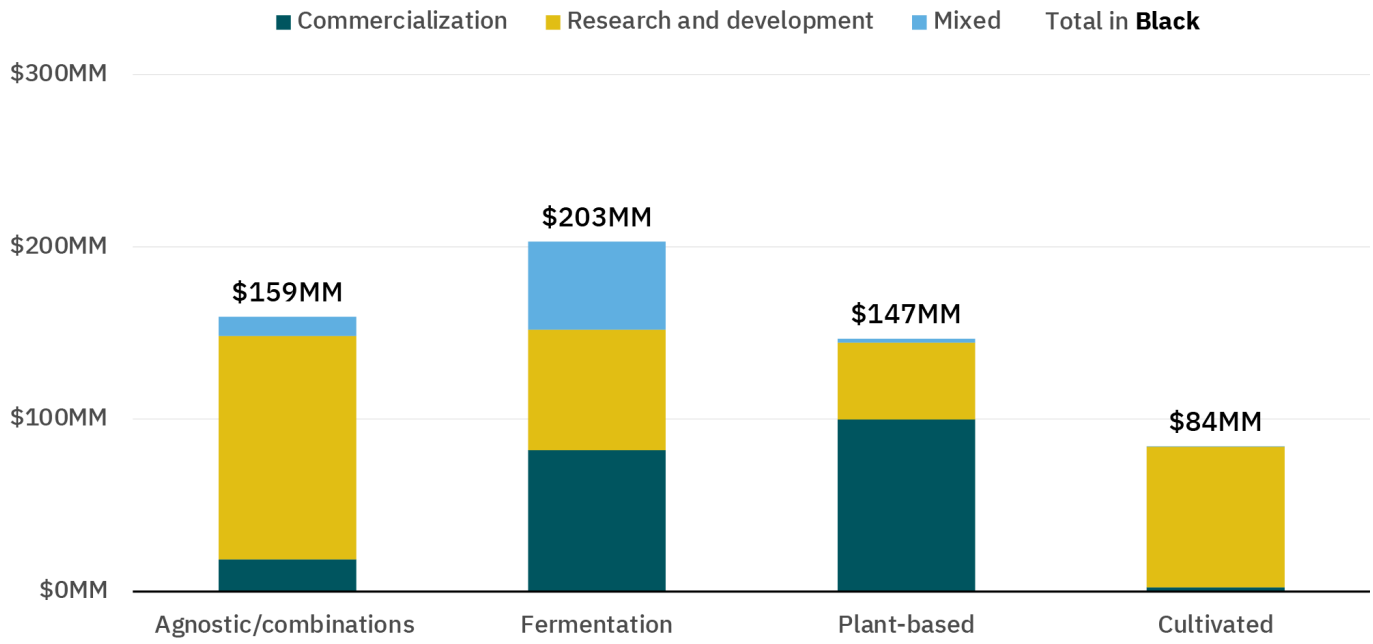
Investments announced before 2024 in green, new funding announced in 2024 in yellow



In addition to variances across countries, the state of global policy for alternative proteins looks distinct across different methods of production. For the first time, public investments in fermentation technologies ($203 million), which include precision fermentation, biomass fermentation, and gas fermentation, have exceeded public investments in plant-based protein. This mirrors the trend in private investment generally as more attention turns toward the promise of fermentation technologies. These various technologies sit squarely in the center of the emergent bioeconomy, as the field's science, equipment, and infrastructure overlap significantly with those needed for pharmaceuticals, biofuels, bio-based materials, and more.

In 2024, this synergy positioned fermentation to benefit from new initiatives to boost biotechnology and biomanufacturing, elevating the many benefits of fermentation-derived proteins to policymakers and incentivizing R&D efforts. Highlighting this dynamic is the fact that the United States, in by far the country's most active year yet, invested over $135 million in alternative protein projects that include fermentation in scope.

Figure 3. 2024 public investment by platform and type



In 2024, plant-based proteins received less new public investment ($147 million) than in prior years. This trend can be attributed to several factors: first, that plant-based meat sales have experienced a highly publicized plateau in the past few years, prompting hesitation in policymakers; and second, that the early surge in investment announcements for long-running programs has resulted in leading countries sustaining, rather than increasing, investments in plant-based proteins. Yet, research and commercialization funding for plant-based products is essential to increasing market share as consumers look for products that meet their taste, price, and nutritional preferences. Ahead of the curve as a long-time supporter of alternative proteins, Singapore has begun to buck this trend with a late 2024 commitment of research funding to "increase the consumer acceptance of [plant-based and fermentation-derived] foods by improving their flavour, texture and nutritional properties," directly addressing a societal challenge with targeted investment.

Cultivated meat ($84 million) experienced a surge in public investment in 2024, doubling from the previous high of $42 million in 2023. While the amount of support for cultivated meat technology development declined in the Americas and Europe, the Asia Pacific region drove the uptick in support in 2024. China, India, Japan, New Zealand, Singapore, and South Korea all dedicated funding specifically to cultivated meat R&D or scale up, positioning the region to pick up the bulk of the sector's momentum from the United States. In particular, several of the new announcements in 2024 focused on cultivated seafood, a highly promising but comparatively under-researched area of study. As seafood supply experienced new volatility, governments in China, India, New Zealand, South Korea, and the United States all allocated public funding toward developing resilient alternatives.

Other government actions not incorporated in GFI's estimate include stand-out announcements made by China and India to develop food biomanufacturing through government-supported research hubs and national bioeconomy plans. While these broad biotechnology plans encompass technologies and priorities beyond the scope of alternative proteins, they include these new food technologies prominently. India committed INR 9197 Crore ($1.1 billion) through the Biotechnology for Economy, Environment, and Employment Policy (BioE3) policy, of which one of the six pillars is "functional foods and smart proteins." China, meanwhile, announced the construction of an RMB 6.8 billion ($960 million) National Agricultural Science and Technology Innovation Hub, which will support 10,000 students studying and conducting research in four major innovation bases, comprising the Life Sciences and Nutritional Health Base, Intelligent Technology and Smart Agriculture Base, Cutting-Edge Technology and Future Industries Base, and International Agriculture and Global Development Base, to build a major national agricultural science and technology innovation platform cluster. While the exact proportion of these programs that will benefit alternative proteins specifically is unclear as of publication, they are the first to approximate the scale and commitment needed to lead the world in food technology.

These initiatives hint at the changing reasons that governments are investing in alternative proteins and new food technologies. The years 2023 and 2024 were marked by geopolitical upheaval, food supply chain stresses, new technologies like artificial intelligence, concerns about international trade, threatening zoonotic diseases, and many other issues of global concern. Alternative proteins can help address these challenges by providing domestic food sources from new and existing resources, creating jobs and benefiting local economies, and enhancing resilience to disease and other disruptors. In light of these events, policymakers are investing more heavily in developing the technologies that will allow them to address these challenges.

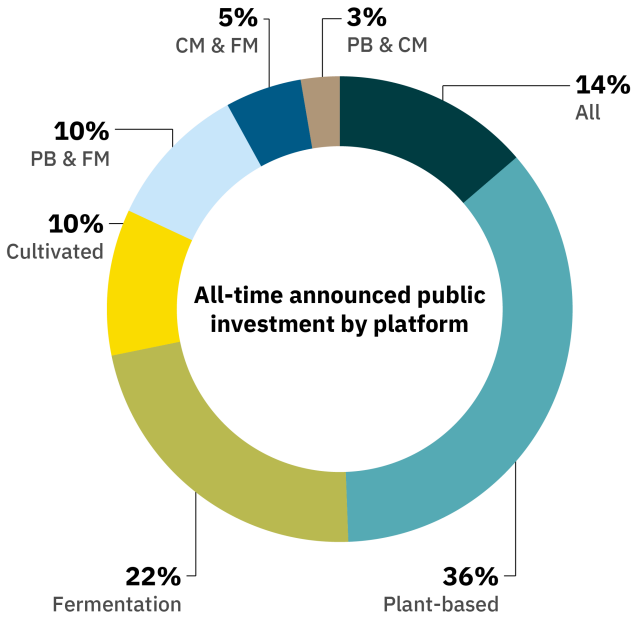
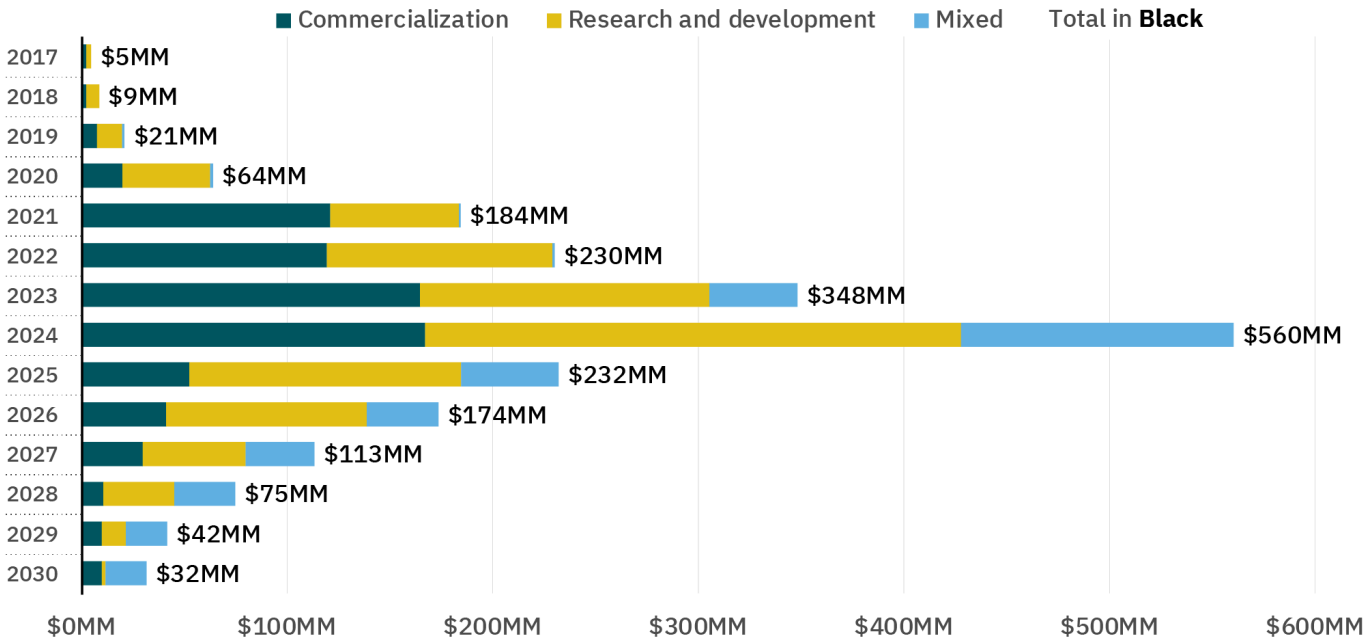


Figure 4. Public investment by platform

To best attract talent, spur and sustain economic activity, diversify supply chains, strengthen food resilience, and bolster national security in defense, health, and trade, governments are beginning to build scientific and industrial strengths in new food technologies. The United States, for example, continued important R&D investments from the Department of Agriculture and the National Science Foundation in 2024 while adding support from the Departments of Defense, Energy, and Commerce. This reflects the growing importance of biotechnology and food science to address a range of issues affecting national security, technological leadership, and economic growth.

Figure 5. Estimated and projected disbursements of pre-2025 multiyear commitments by year

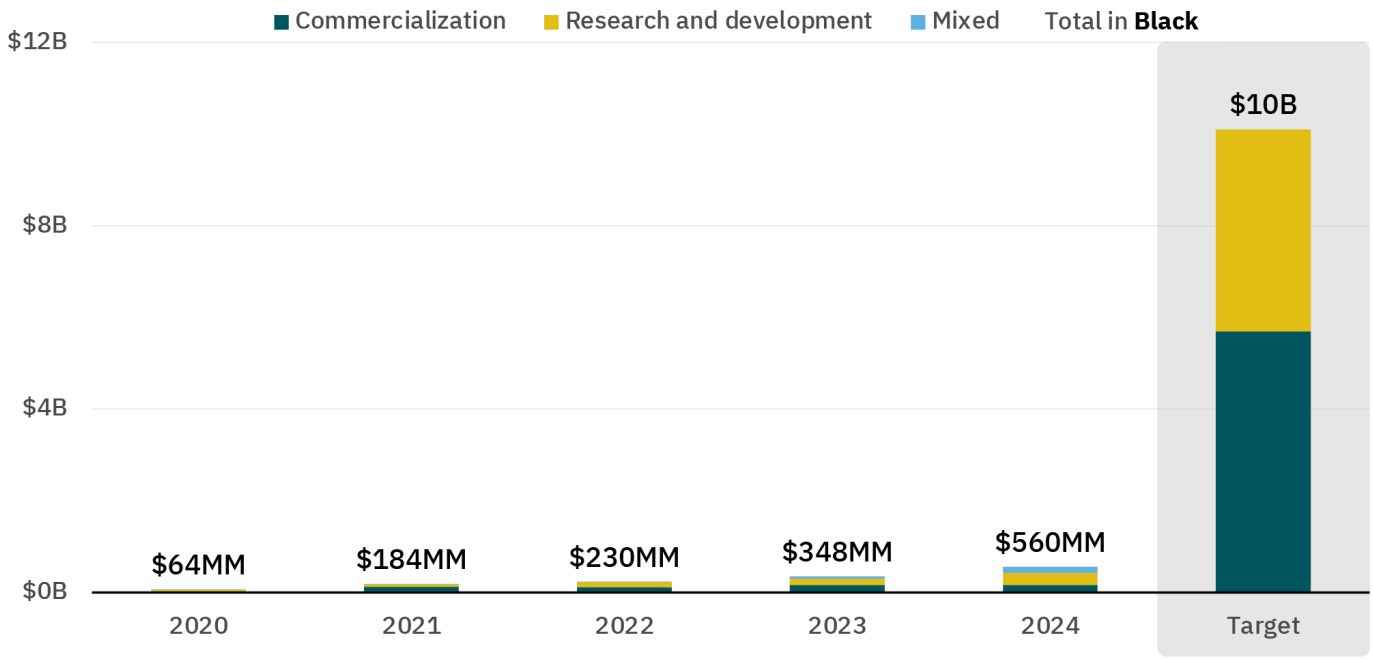


Note: Projections are based on programs established before 2025 and do not consider new programs established in future years.

To reap the full benefits of a mature alternative protein sector, including up to 9.8 million jobs, $1 trillion in economic value, and benefits for food resilience, global health, and environmental security, a Global Innovation Needs Assessment (GINA) found that governments must invest $10.1 billion in alternative proteins on an annual basis.

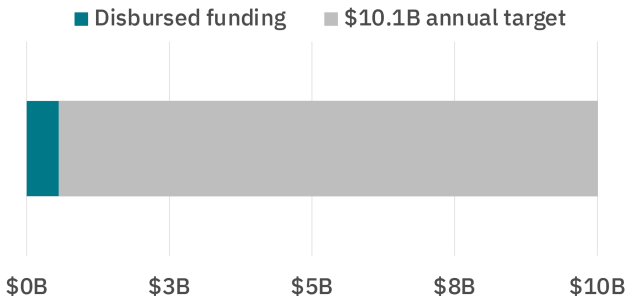
Though new announcements boosted prospects for future investment, the estimated $560 million spent in 2024 satisfies less than six percent of this need.

Figure 6. Annual disbursements compared to GINA target



The fair regulation of alternative proteins has also experienced uneven progress across the globe. Headwinds for alternative proteins' fair access to markets continued in 2024. Several countries and U.S. states took action to ban or restrict alternative proteins, with various degrees of success. However, as in 2023, there were more successes than setbacks. Cultivated meat was approved for the first time in Israel and briefly debuted in Hong Kong (a Special Administrative Region in China); new fermentation-derived foods were approved for the first time in Canada; new regulatory processes were set up or tested for the first time in Australia/New Zealand, China, the EU, and South Korea; and applications for cultivated meat approvals were submitted for the first time in the EU, South Korea, and Thailand. These updates reflect a growing understanding, global in scope, that new foods present an opportunity for governments, economies, and consumers that regulatory agencies should be ready to meet.

Figure 7. 2024 disbursed funding compared to the annual GINA target



The state of global policy concerning alternative proteins and new food technologies continues to evolve. In 2024, that evolution reflected both momentum in some quarters and headwinds in others. While 2025 will present new and unpredictable developments, alternative proteins will continue to offer policymakers viable opportunities to navigate global challenges, build scientific and economic strength, and provide citizens and global markets with new sources of food.