



The Untapped Climate Opportunity in Alternative Proteins

Food for Thought

JULY 2022

blue
horizon

Messages clés

- **Un marché en plein essor.** D'ici 2035, le marché des protéines alternatives devrait représenter au moins 11% de la consommation mondiale de protéines (contre 2% en 2020), et engendrer une réduction des émissions de CO2 de 0.85 gigatonne, soit près de l'équivalent du secteur de l'aviation. Les investissements dans ce marché sont passés d'un milliard de dollars en 2019 à cinq milliards de dollars en 2021 (+124% par an).
- **Un investissement efficace pour lutter contre le réchauffement climatique.** Chaque dollar investi dans le secteur des protéines alternatives permet de réduire trois fois plus les émissions de CO2 que lorsqu'il est investi dans le ciment décarboné et onze fois plus que dans les voitures électriques. Malgré ce potentiel, le marché des protéines alternatives attire moins d'investisseurs que d'autres secteurs.
- **Les jeunes, les urbains et les plus aisés, principaux consommateurs :** la connaissance et la consommation de protéines alternatives augmentent en fonction des revenus (51% pour les salaires annuels compris entre 0 à 24k\$ vs 79% pour les salaires de +200k\$), de l'âge (81% pour les 18-25 ans vs 37% pour les 65-99 ans) et du lieu de vie (57% pour les ruraux vs 72% pour les urbains).
- **Un marché moins connu en France, mais une consommation en hausse :** 62% des Français déclarent connaître au moins une catégorie de produits à base de protéines alternatives (vs 76% à l'international). La France se situe en bas du classement loin derrière les Emirats Arabes-Unis (88%) et la Chine (83%). En revanche, un Français sur deux (48%) déclare consommer davantage de ces produits depuis le début de la crise sanitaire (équivalent à la moyenne internationale), principalement grâce à une meilleure prise de conscience des enjeux liés à la santé.
- **L'impact environnemental, 1ère motivation à la consommation de protéines alternatives pour 62% des Français.** La France est le seul pays du panel à classer l'impact environnemental en 1ère position (vs 55% au niveau international). A noter que près d'un Français sur trois (31%) serait prêt à ne consommer que des protéines alternatives si cela a un impact positif majeur sur le climat (similaire à la moyenne). Avoir une alimentation plus équilibrée (60%) et le bien-être animal (54%) arrivent en 2ème et 3ème position en France, contrairement au reste du panel où l'alimentation équilibrée est en tête (76%).
- **Le goût (55%), le prix (40%) et la texture (40%), sont mentionnés comme étant les principaux freins à la consommation en France.** Les Français seraient également prêts à consommer davantage ces produits s'ils étaient moins transformés.
- **Enfin, le prix est un critère déterminant dans tous les pays** puisqu'aucun consommateur n'est prêt à payer plus cher un produit à base de protéines alternatives, par rapport à des protéines animales.

The Next Generation of Healthy, Tasty Products Stands to Win Big

76%

of consumers are familiar with alternative proteins

50%

of experienced users increased their consumption of alternative proteins during the pandemic, mainly because of greater health consciousness

+100%

is the potential increase in exclusive or near-exclusive users if the main inhibitors—health and nutrition, taste, and safety—are resolved

0%

of consumers are willing to pay a price premium at taste parity, without value added over conventional animal protein

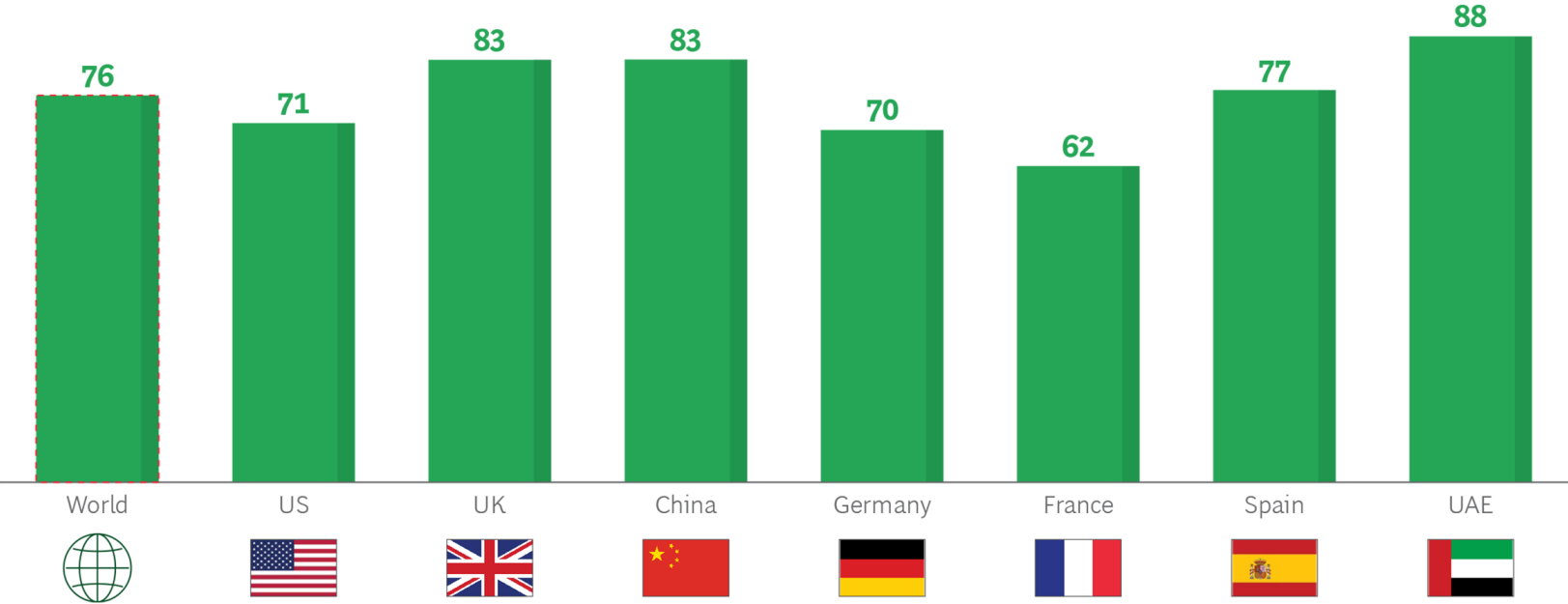
31%

of consumers consider a major positive impact on climate as a primary reason to fully switch their diet to alternative proteins

Source: Blue Horizon and BCG Customer Survey (February–April 2022, N = 3,729).

Exhibit 1 - Consumer Awareness of Alternative Proteins Is High

Share of respondents that know at least one product category (%)

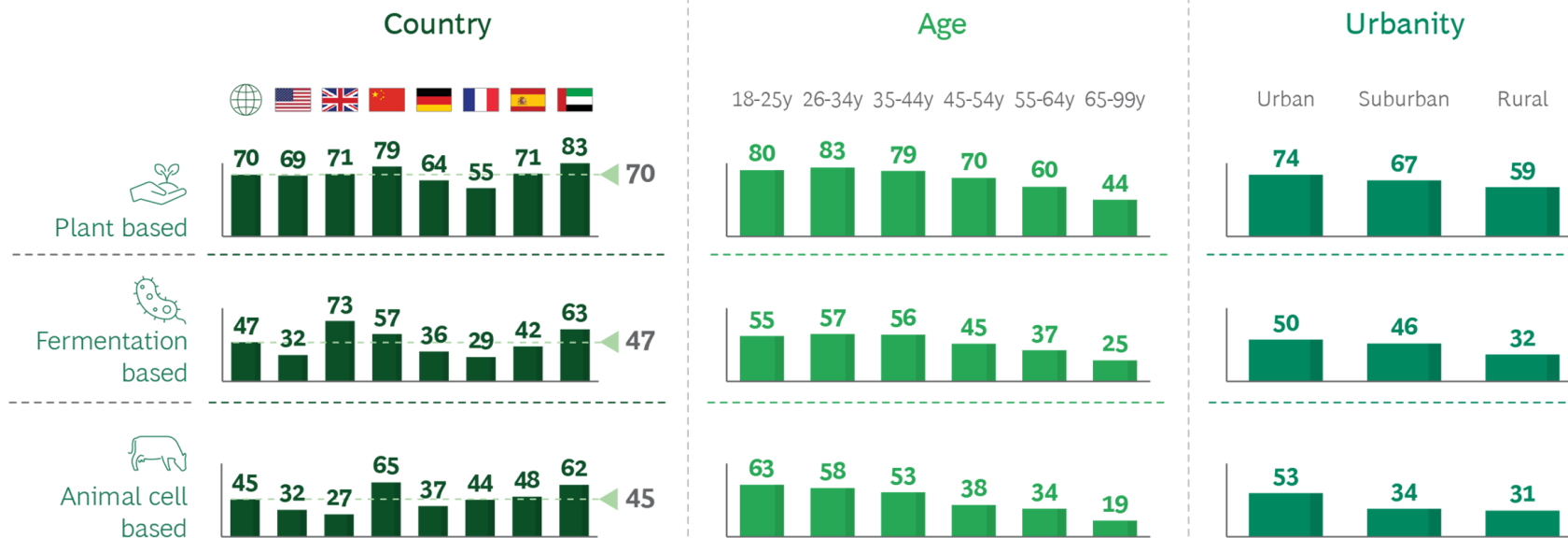


Source: Blue Horizon and BCG Customer Survey (February–April 2022, N = 3,729).

Q: Do you know or have heard of any product based on alternative proteins (i.e., animal-free products that aim to replace conventional animal-based products such as meat, eggs, and milk) in the following categories?

Exhibit 2 - Awareness Is Highest for Plant-Based Products and Decreases with Increased Age and Among Rural Populations

Share of respondents (%)

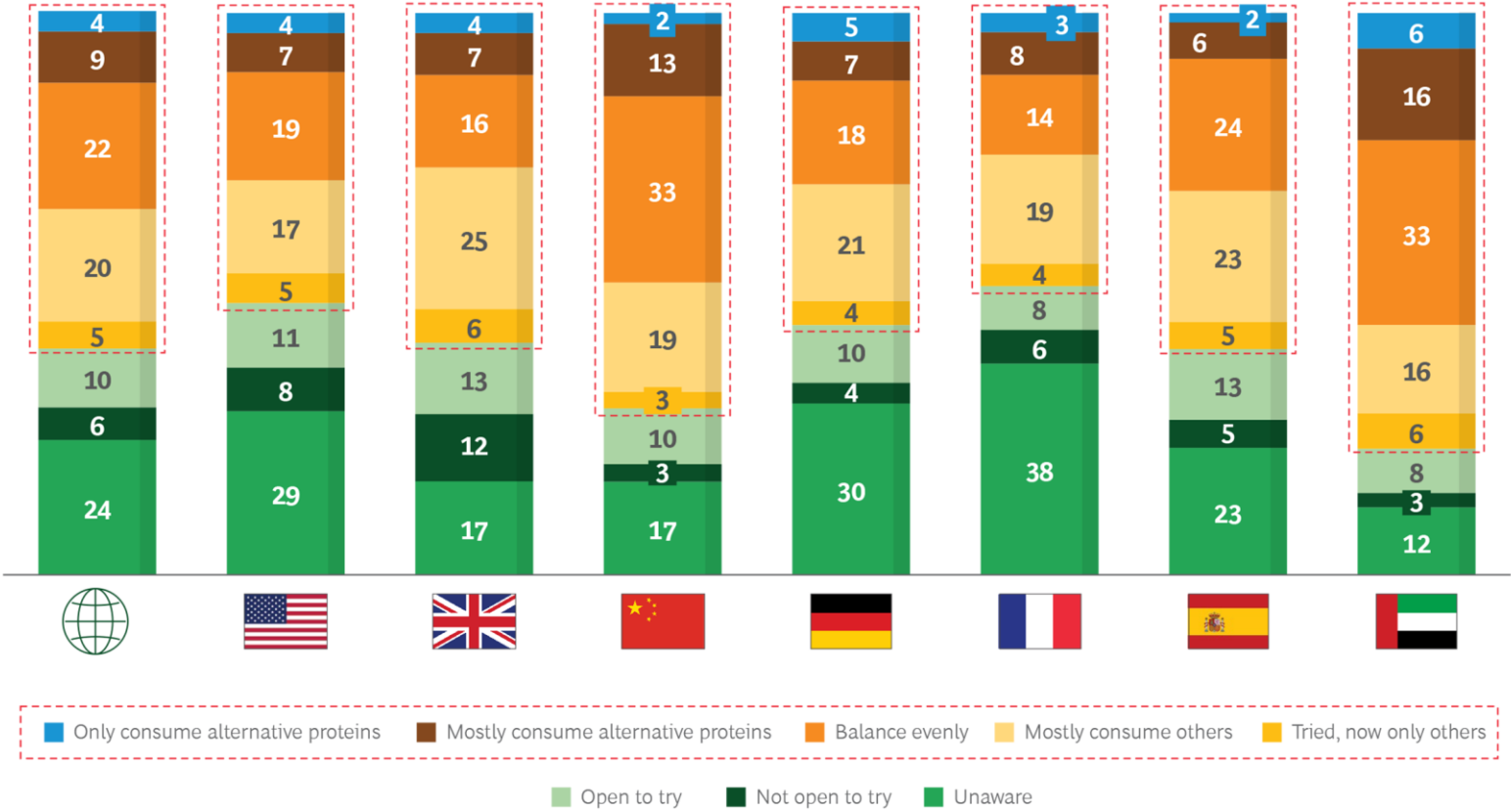


Source: Blue Horizon and BCG Customer Survey (February–April 2022, N = 3,729).

Q: Do you know or have heard of any product based on alternative proteins (i.e., animal-free products that aim to replace conventional animal-based products such as meat, eggs, and milk) in the following categories?

Exhibit 4 - Consumption of Alternative Proteins Varies by Market

Share of respondents (%)



Source: Blue Horizon and BCG Customer Survey (February–April 2022, N = 3,729).

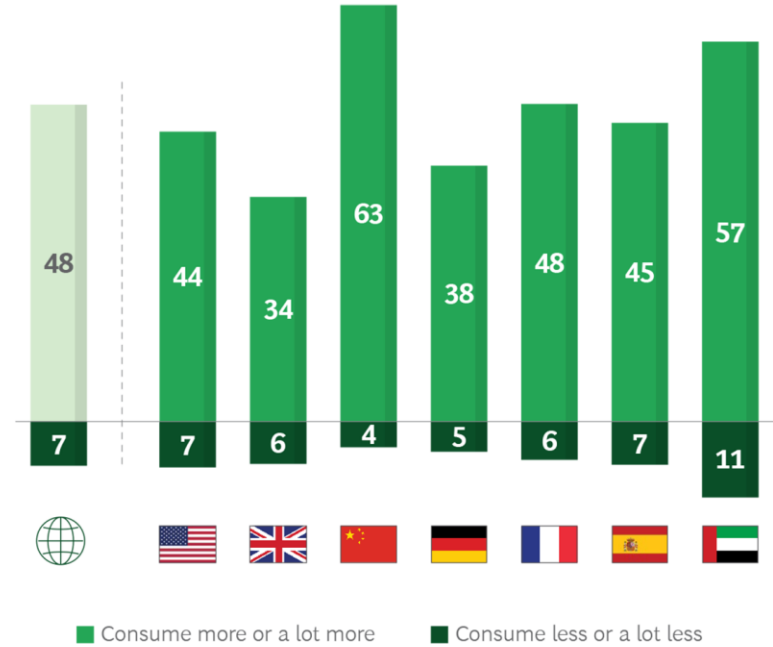
Note: Respondents had the option of choosing “Prefer not to answer,” but 0% did so in each country and globally.

Q: What is the role of products based on alternative proteins in your diet? Please indicate how much alternative vs. other sources of proteins you usually consume.

Exhibit 5 - About Half of Those Who Have Tried Alternative Proteins Increased Their Consumption During the Pandemic

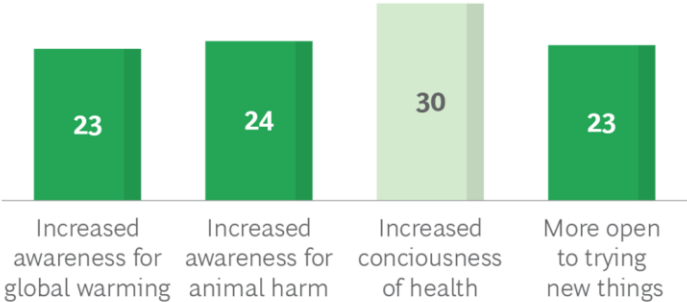
Q: How has the pandemic (COVID-19) influenced your consumption behaviour of products based on alternative proteins?

Share of respondents (%)



Q: Why do you consume more products based on alternative proteins since the pandemic?

Share of respondents (%)



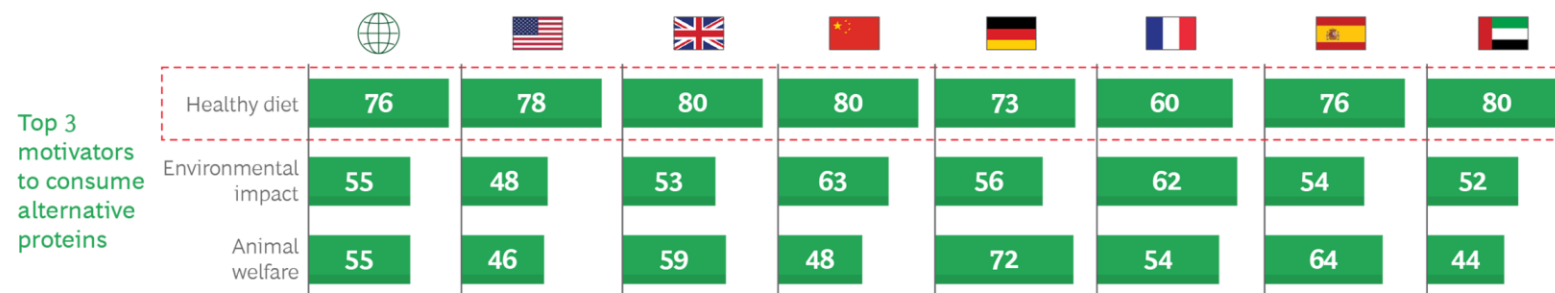
Source: Blue Horizon and BCG Customer Survey (February–April 2022, N = 2,240).

Note: Chart shows responses only for consumers who are experienced, frequent, near-exclusive, or exclusive consumers (60% of all respondents).

Exhibit 6 - Three-Quarters of Consumers Are Motivated to Buy for Health Reasons, but Taste Is a Key Criterion in Selecting Products

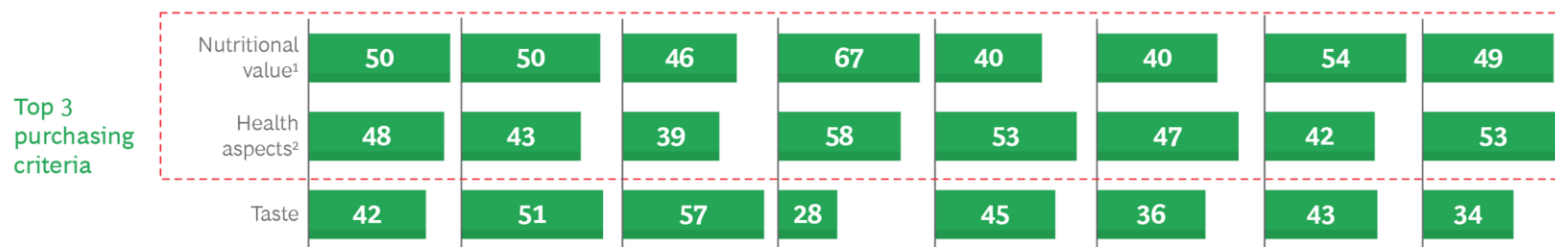
Q: Why would you choose to consume products based on alternative proteins?

Share of respondents who included the answer choice in their top 3 (%)



Q: Please rank the following criteria according to importance when buying products based on alternative proteins.

Share of respondents who included the answer choice in their top 3 (%)



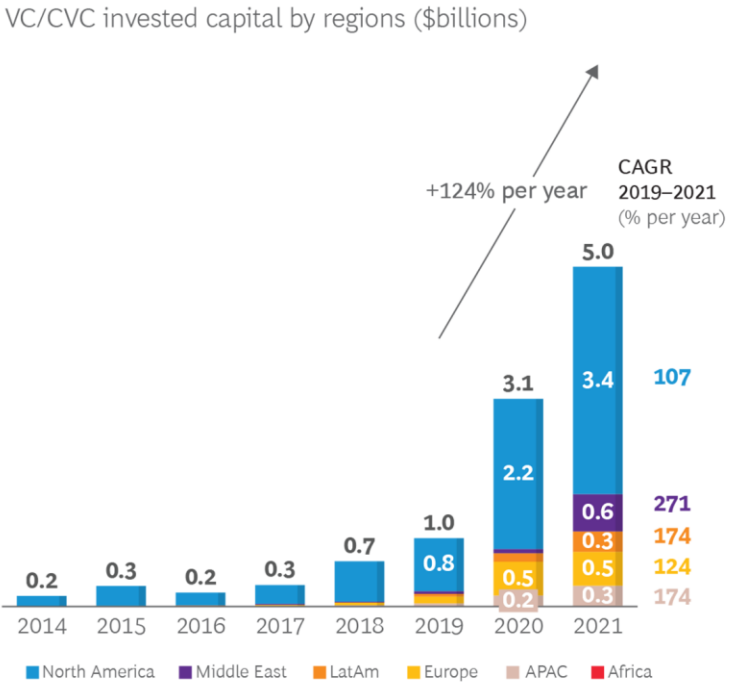
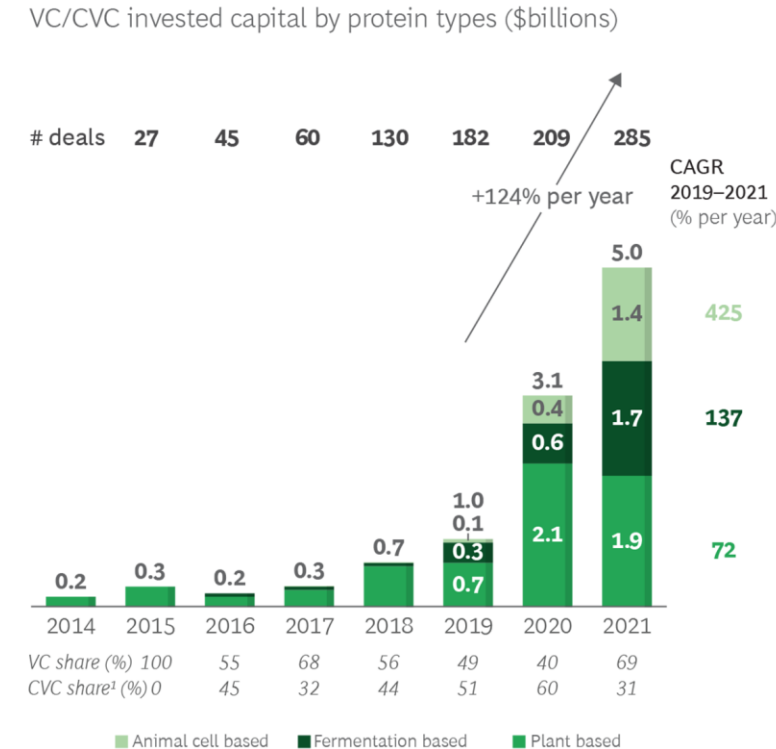
Source: Blue Horizon and BCG Customer Survey (February–April 2022, N = 2,240).

Note: Chart shows responses only for consumers who are experienced, frequent, near-exclusive, or exclusive consumers (60% of all respondents).

¹For example, has similar or better protein, fat, and carbohydrate content as compared to conventional products.

²For example, avoid antibiotics present in conventional animal-based protein.

Exhibit 8 - Funding Is Accelerating, Especially for Fermentation-Based and Animal-Cell-Based Proteins



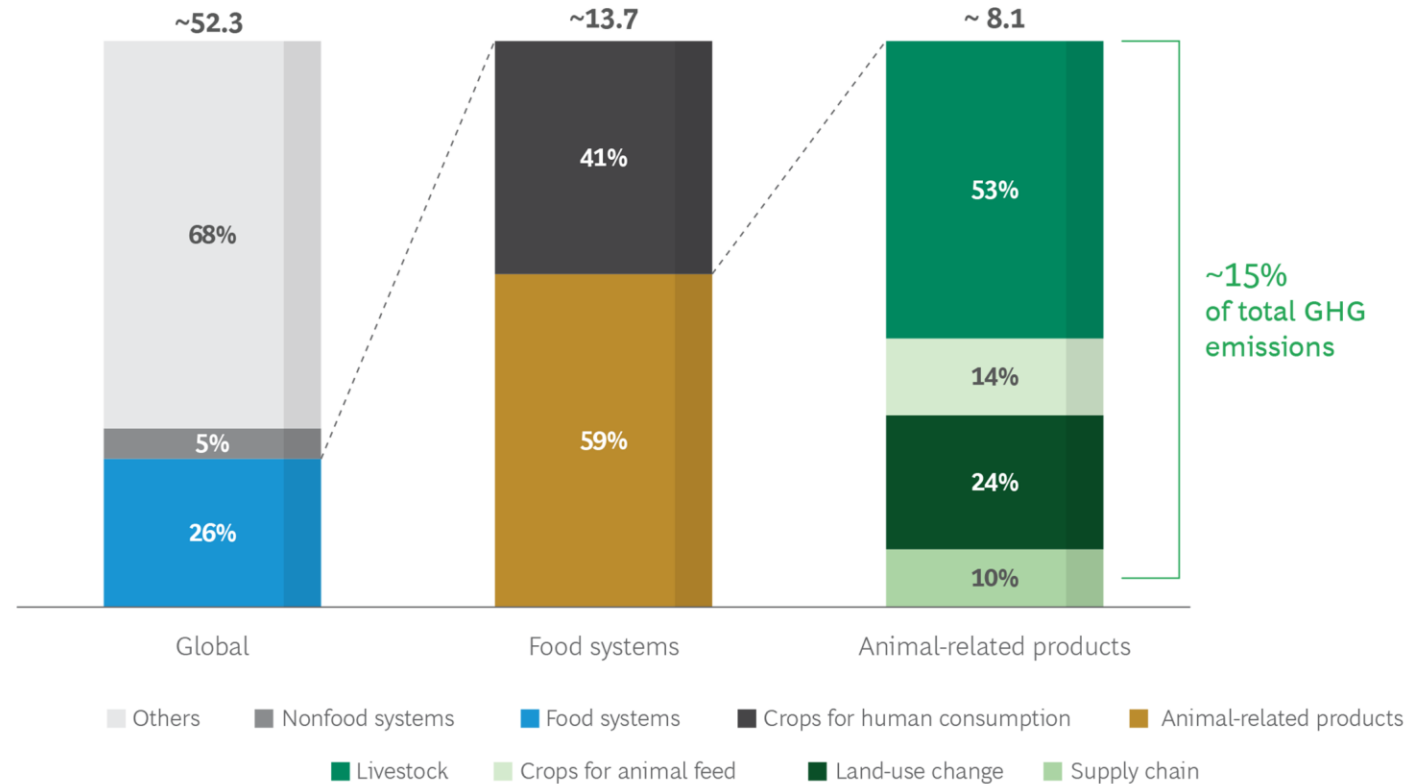
Sources: The Good Food Institute; Pitchbook; BCG analysis.

Note: VC = venture capital; CVC = corporate venture capital.

¹Deals involving CVC participation.

Exhibit 12 - The Global Food System Accounts for About 26% of Global GHG Emissions, with Animal-Related Products Responsible for About 15%

Global GHG emissions in 2010 (Gt CO₂e)¹

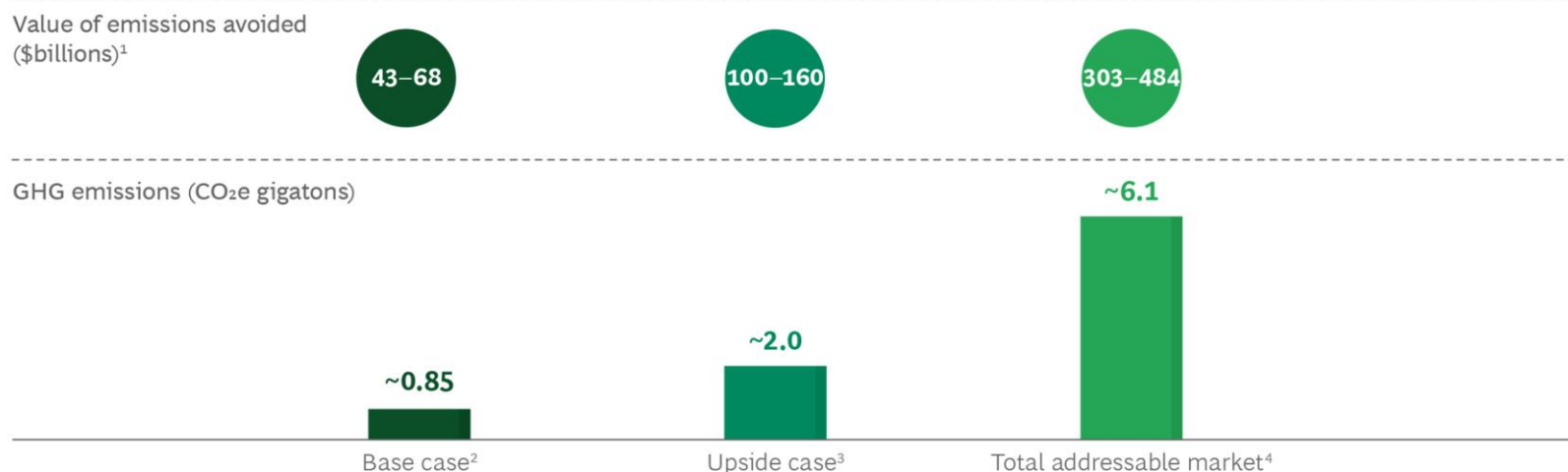


Sources: Poore and Nemecek 2018; Blue Horizon and BCG analysis.

¹Carbon dioxide equivalent (CO₂e) is a metric measure used to compare emissions from various greenhouse gases (GHGs) on the basis of their global-warming potential (GWP).

Exhibit 14 - Alternative Proteins Have the Potential to Eliminate up to 6.1 Gigatons of Emissions, Representing Potential Savings of \$303 Billion to \$484 Billion

Emission savings potential in 2030 from replacing conventional animal-based proteins with alternative proteins



Sources: UN; BCG analysis.

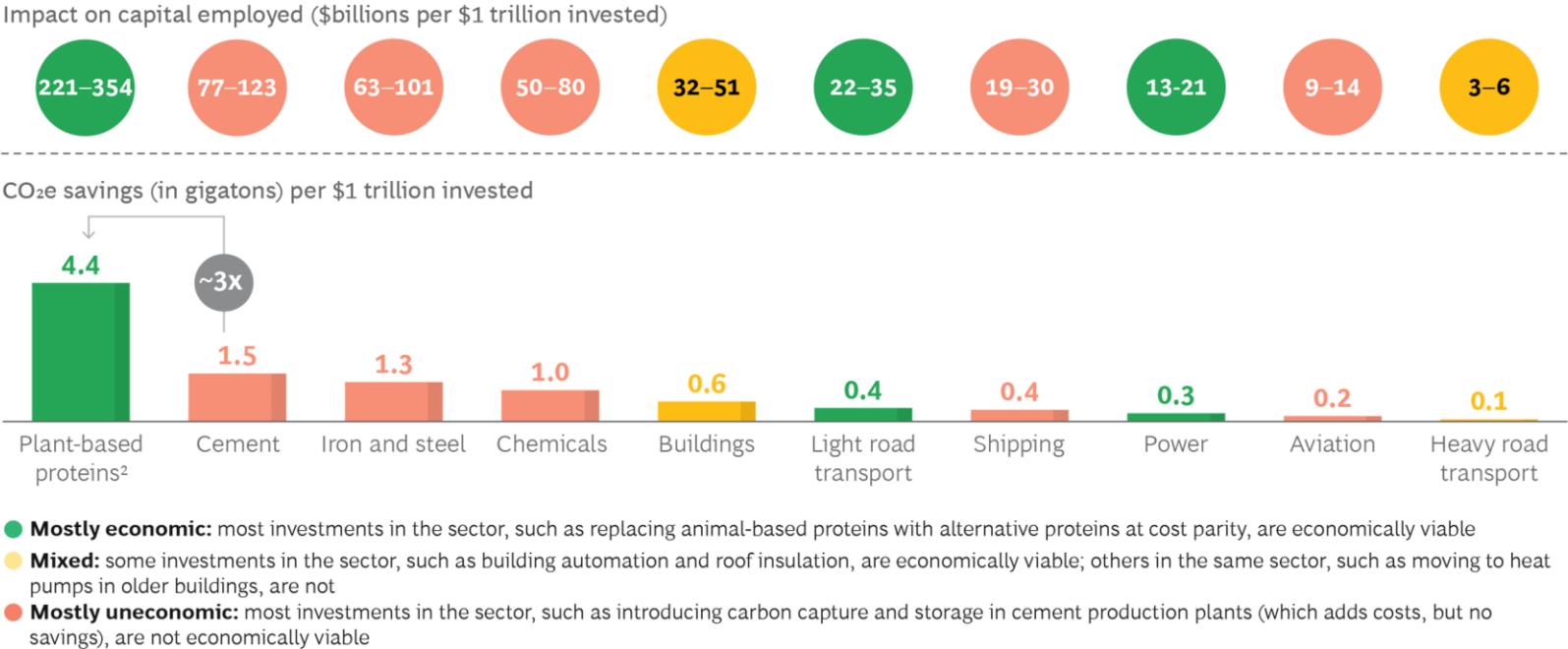
¹Assuming a price of \$50 to \$80 per ton of CO₂e.

²The base case scenario assumes that alternative proteins will represent an 11% share of total protein consumption by 2035.

³The upside case assumes a 22% share for alternative proteins by 2035, driven by technological step changes and supportive regulation (both outlined in “Food for Thought: The Protein Transformation”).

⁴A 100% share of the protein market except for highly complex structures (e.g., dry-aged ribeye).

Exhibit 15 - Plant-Based Proteins Have Greater Impact on Capital Employed¹ Than Other Decarbonization Levers in All Other Sectors



Sources: BCG/GFMA report, “Climate Finance Markets and the Real Economy”; BCG analysis.

¹Impact return on capital employed (which Blue Horizon has termed IoCE, or *impact on capital employed*) assumes a market value for avoided tons of CO₂e per dollar invested of \$50 to \$80 per ton.

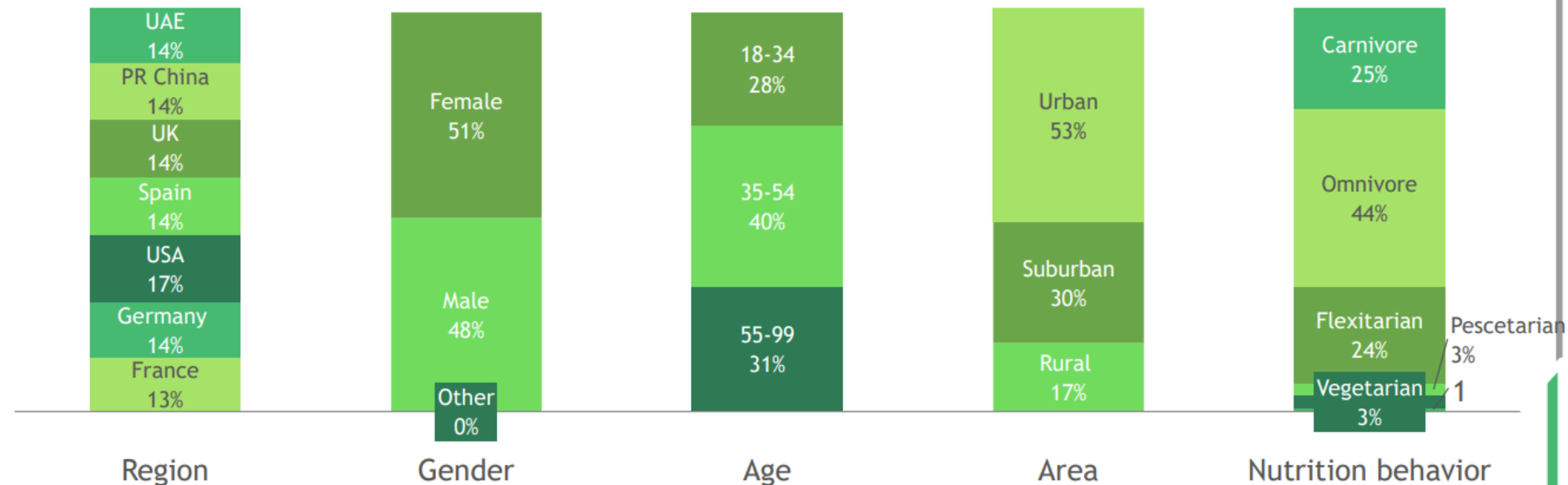
²CO₂e savings from plant-based products only (red meat, pork, chicken, fish, and seafood).

Méthodologie

Customer survey | Diverse and balanced set of consumers participated in the survey across 7 countries

Statistics of survey data

N=3'729 across 7 countries (USA, PR China, France, Germany, UK, Spain, UAE)

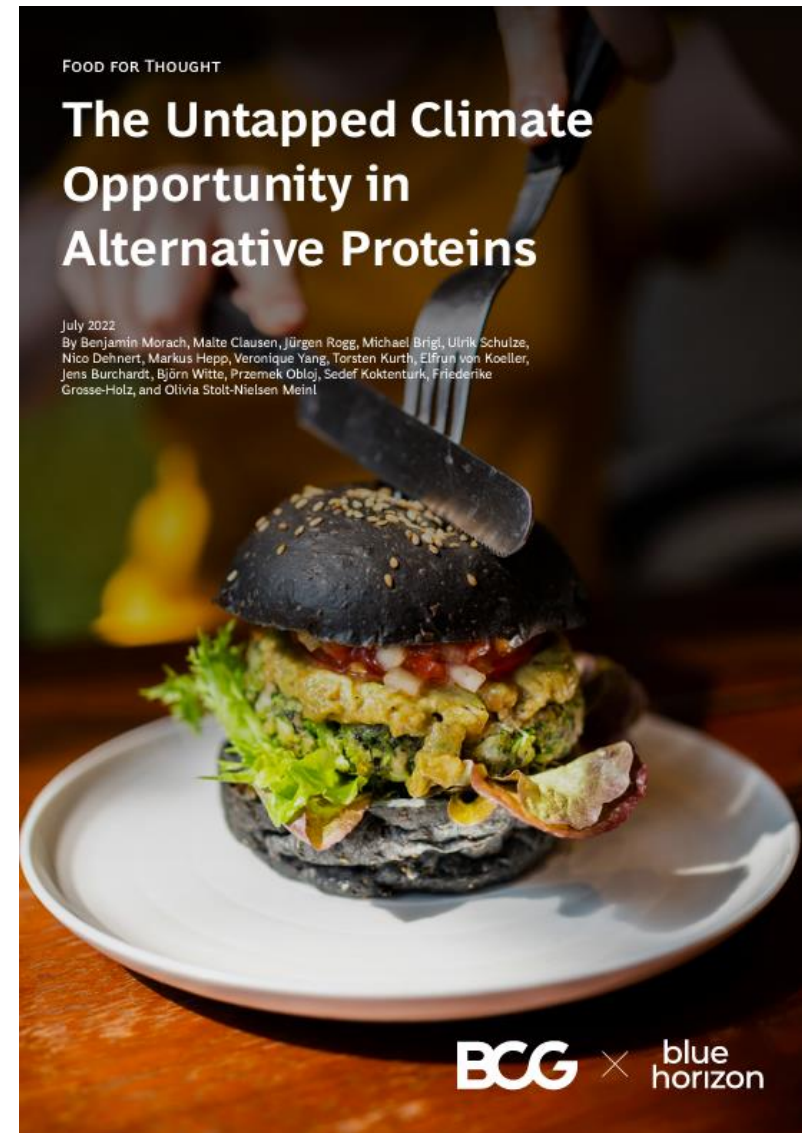


Source: Customer Survey; BCG Analysis

3

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