Global Shrimp Forum Foundation

THE FUTURE

IS IN HIGH DEMAND

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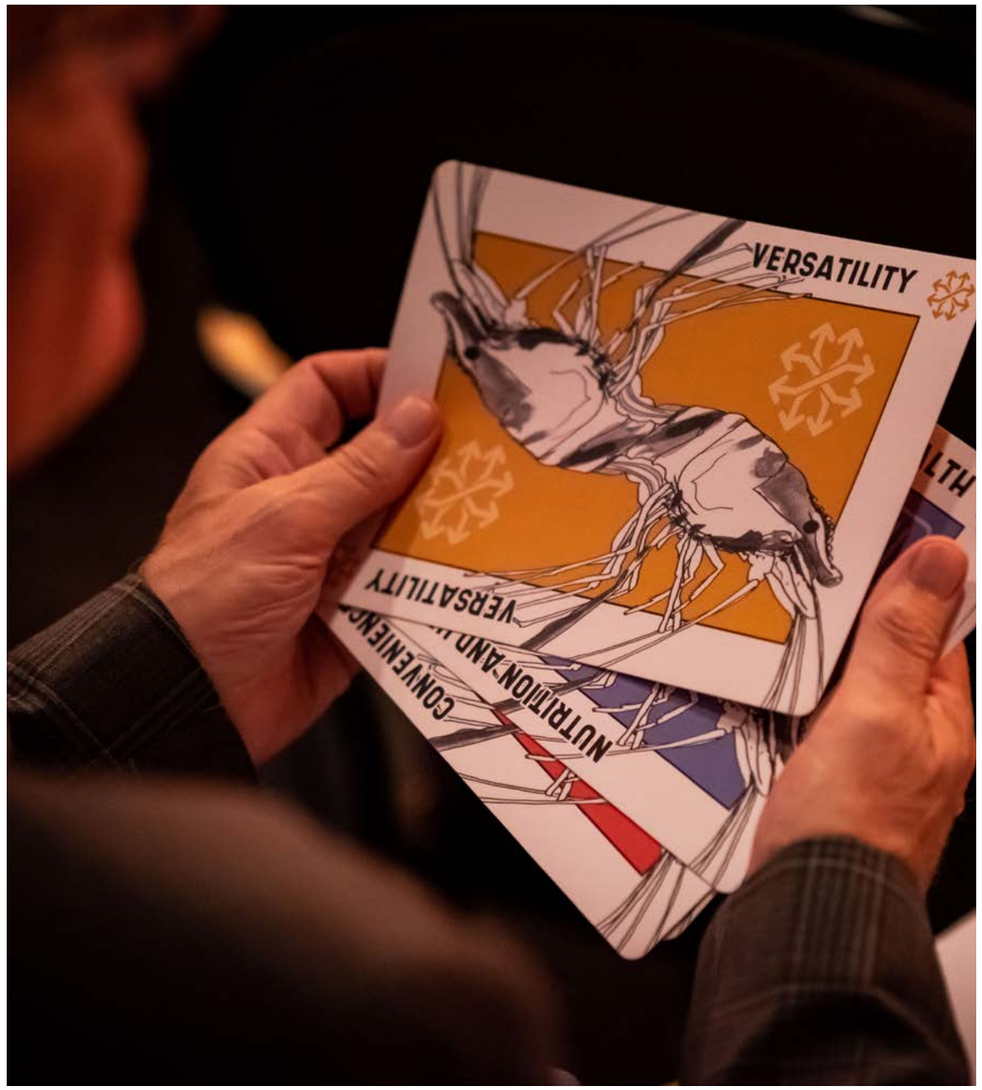


FOREWORD

During the first edition of the Global Shrimp Forum in 2022, it became apparent that promoting shrimp consumption is a top priority for the sector. This is in the context of continued growth of the industry despite oversupply and the collapse of shrimp prices. To stabilize prices, consumption must also grow. Increased consumption will also sustain the livelihoods of hundreds of thousands of farmers and workers worldwide providing that farming is responsibly undertaken.

This Report was written by Arnd Jan Gulmans, an independent marketing and branding consultant with an extensive track record in advertising strategy and marketing consultancy. He specializes in helping organizations to create the narrative that clarifies their future direction, and to make it come to life through powerful communication.

Arnd Jan was commissioned by the GSFF to conduct the research effort, and to write this accompanying Report. As part of this process, he conducted a series of interviews with a wide range of experts and leaders from across the industry. New to the world of shrimp, Arnd Jan looks at this topic with a fresh pair of eyes, providing a marketing consultant's perspective on how the industry can effectively promote shrimp consumption.

Promoting shrimp consumption has become such a priority that shrimp producers worldwide are coming together with one main ambition: to establish the Global Shrimp Council—an initiative led by Gabriel Luna from Ecuador and David Castro from Mexico. The Global Shrimp Council will be a voluntary organization that collects funds from its members that will then be used to finance research and marketing activities aimed at promoting shrimp consumption worldwide.

But how do we actually promote shrimp consumption? Which market should we target first and where will we have the most significant impact? What narrative sets shrimp apart, and how do we avoid any unintended consequences and potential backlash?

With this Report, produced by Arnd Jan Gulmans, a seasoned strategic marketeer, we hope to inspire individual companies, sector associations, and pre-competitive initiatives, such as the Global Shrimp Council, about how we can successfully promote the consumption of sustainably produced shrimp. The study on which this Report is based was funded by surplus revenue from the inaugural edition of the Global Shrimp Forum. As a non-profit foundation, this is one of the ways through which we can contribute to a more resilient future for our industry.

Producing this Report would not have been possible without the support of all the people who have shared their views and opinions in conversations with Arnd Jan. We therefore sincerely thank everyone who has contributed.

We'd love to hear your feedback and comments about the Report, so please reach out to us at secretariat@shrimp-forum.com. Until then, and on behalf of the Board of the Global Shrimp Forum Foundation, happy reading!

Chris Ninnes
Chairman

Willem van der Pijl
Board Member and Managing Director

1 ABOUT THIS REPORT

OBJECTIVES In 2023, the Global Shrimp Forum Foundation (GSFF) commissioned a study on the opportunity to promote global shrimp consumption and the main questions related to this.

The objective of the study—and this resulting Report—is to empower the shrimp industry to define its narrative as a first step to effectively promoting shrimp consumption in the long term. Because after all, great marketing starts with a great narrative.

> "Because after all, great marketing starts with a great narrative."

But why are we focusing on understanding and developing a growth strategy? Because the future of the shrimp industry is in high demand.

Imagine a scenario where demand for shrimp grows globally not just because prices go down, but because more and more people learn to enjoy shrimp. In time, they begin to change their habits and include it increasingly in their diets. This scenario describes a bold ambition. But it can be achieved.

One of the keys to achieving this goal is to get the marketing right, to frame that ambition together by promoting shrimp consumption collectively as an industry. A virtuous cycle emerges where prices are stable and there's more confidence in the value chain. This results in better conditions for investment and—ultimately—it will lead to a better product. And all of this will, in turn, create more demand. But that's if we get our collective strategy right.

With this scenario as the motivation, this Report presents the key findings and insights from the study carried out into this topic. It sheds light on opportunities for shrimp promotion, and provides a starting point for building a convincing and aligned narrative within the industry. It also provides recommendations for promotional communication activities. The Report builds on the findings presented at the second annual Global Shrimp Forum in Utrecht in September 2023.

THE RESEARCH PROCESS The research process combines a broad desk research effort with in-depth discussions with industry leaders from multiple markets (producers, importers, exporters, retailers, and experts). The research was conducted in the period from June to September 2023.

HOW TO USE THIS REPORT This Report can be used as a starting point for any shrimp promotion initiative anywhere in the world. It discusses the benefits of shrimp as a protein of choice, and unpicks why these benefits are relevant for consumers... and, thus, how they can be used to the industry's advantage to promote shrimp more broadly. With this perspective as our starting point, it defines the building blocks of a promotion narrative. It also lays out a sample campaign architecture, comprising marketing objectives, tasks for communication, and media selection.

2 EXECUTIVE SUMMARY

FINDINGS The Report looks at the opportunity to increase (global) demand of shrimp through promotion. It looks at this topic from different angles, as follows:

Chapter 3 considers the case for shrimp promotion. It analyzes the situation in the global market and the interplay between (growing) supply and demand, and the price volatility that ensues. It also discusses the benefits that promoting shrimp consumption could have for the industry. It draws the following conclusions:

- supply growth and demand falling behind are a major cause of price volatility
- demand growth can reduce this price volatility
- successful cases in other industries demonstrate the potential for pre-competitive (promotion) efforts, and they hold some important lessons for the shrimp industry.

Chapter 4 analyzes the growth potential for several consumption markets. It does so through different lenses: affordability, availability, awareness, and attraction.
It concludes that:

- In China, as well as in India, the affordability and availability of shrimp are bottlenecks for growth, except in the bigger (Tier-1) cities. However, both affordability and availability are likely to grow in the coming years, and this will allow shrimp consumption to grow as well (autonomous growth). In the meantime, the opportunity to use promotion to generate growth will be limited to those areas where affordability and availability are sufficiently high (bigger cities).
- In the US and Europe, affordability and availability are sufficiently high, and demand growth depends on increased awareness and attraction. Promotion can make a difference here, especially in light of the ongoing changes in dietary habits.
- In the European market, and to a lesser extent in the US, inflation and rising food prices could be an important hurdle for shrimp consumption growth, at least in the short term.

Chapter 6 looks at the "strong hand of cards" the shrimp industry holds: a metaphor for all the benefits that shrimp has to offer. It takes a deeper look at each of these benefits and discusses their relevance for audiences around the world.

RECOMMENDATIONS Chapter 7 looks at the question of how the shrimp industry can best play this strong hand of cards. This leads to the following recommendations:

Target audience
- in order to grow, focus on increasing market penetration instead of increasing frequency, and so: target the whole market, including light buyers and first-time buyers

Which cards to play
- the "nutrition and health" card combines strong evidence, high relevance, and low risk; to avoid preaching, this card should be combined with a more inspirational angle
- the "versatility" and "convenience" cards provide a lot of opportunity to add a fun and inspiring element to communication, which can boost people's curiosity and seduce them into buying shrimp more often—this angle can be even stronger when it is grounded in the positive associations that already exist in consumers' minds

Campaign architecture and channel selection
- a sample campaign architecture is provided outlining the business problem, the positioning of shrimp, the marketing objectives and key barriers to overcome, and the tasks for communication. For each of these tasks, a selection of recommended marketing communications channels is provided.

3 THE CASE FOR SHRIMP CONSUMPTION PROMOTION

In this chapter, we'll delve more into why shrimp consumption promotion will benefit the industry. We'll start with a brief market overview, then look in some more detail at the volatility of prices and the underlying causes. We'll then discuss how the promotion of shrimp consumption can reduce this volatility, and we'll also touch on some other benefits of shrimp promotion. Finally, we'll look at some examples of pre-competitive promotion efforts in other markets by means of three case studies.

MARKET ANALYSIS

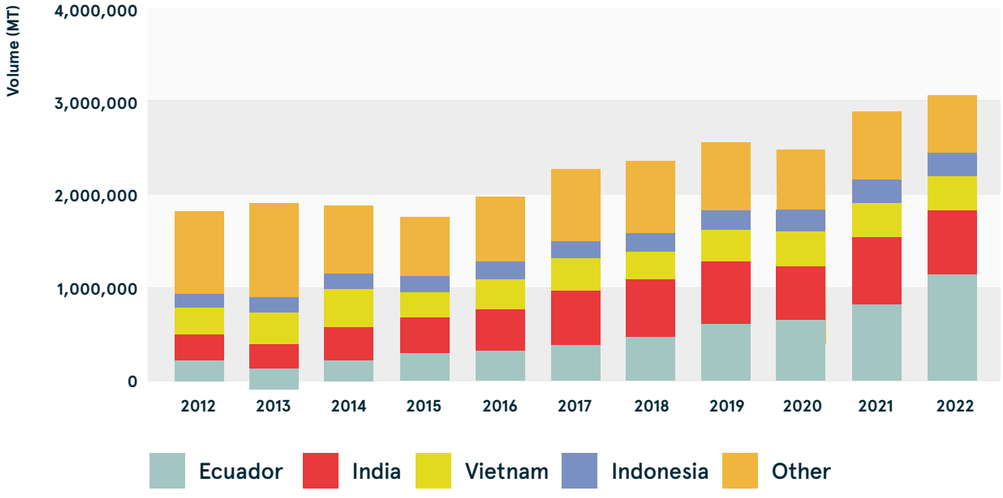
Of all the shrimp consumed worldwide, 55% is farmed and the rest is wild caught. Growth in the shrimp industry over the last two decades has come, for the most part, from farmed shrimp. And with limited wild shrimp stocks, this is also where future growth lies. For that reason, this Report will primarily look at farmed shrimp.

The most common types of farmed shrimp are whiteleg shrimp (L. vannamei) and black tiger shrimp (P. monodon). For the purposes of this Report, whenever we talk about "shrimp promotion," we're referring to generic promotion in the sense that no further distinction is made between farmed or wild-caught shrimp, nor between different species and countries of origin.

Export markets The data for 2022 show that the most important shrimp export markets were Ecuador (37% of the total export volume), India (23%), Vietnam (12%), and Indonesia (8%).[1]

[1] Shrimp Insights, 2022 data.

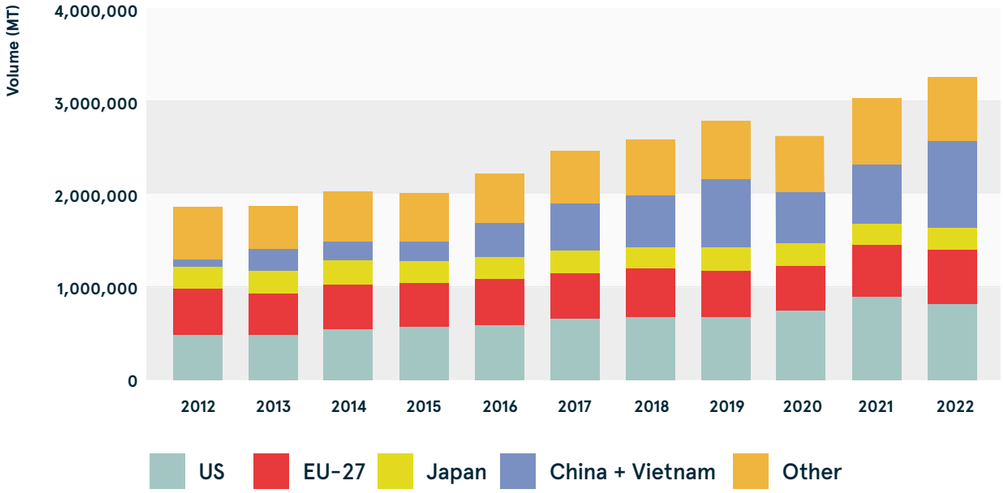
Shrimp exports per country (2012-2022)



Source ITC Trademap

Import markets The most important import markets in 2022 were China (29% of the total import volume), the US (26%), the EU (17%), and Japan (7%).

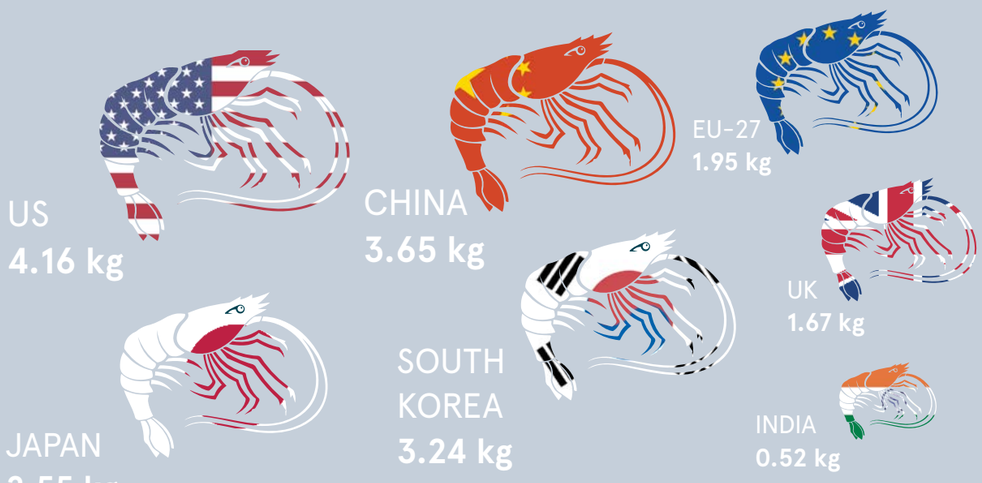
Shrimp imports per country (2012-2022)



Source ITC Trademap

Consumption In terms of consumption, reliable per capita data isn't readily available. Below, however, is a visual representation of apparent consumption per capita for 2022. The amounts have been calculated using the formula "imports + local production – exports." It's clear that the US, China, and South Korea have the highest per capita consumption of shrimp (3-4 kg per capita), while other Asian markets and Europe stand at around 2 kg per capita.

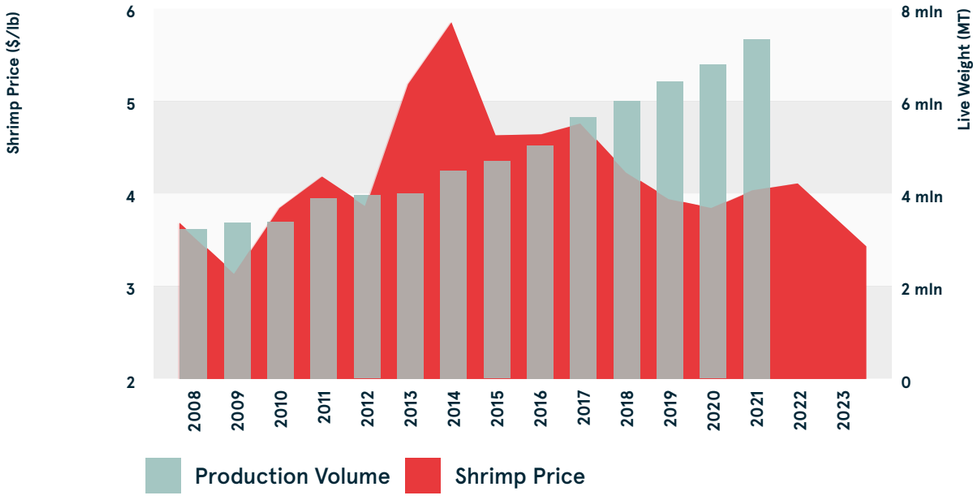
Apparent consumption per capita (LWE)



Sources ITC Trademap, Eurostat, ShrimpInsights (live weight equivalent (LWE) ratio estimates)

Price Over the last 15 years, shrimp prices have been rather volatile. The graph below illustrates how shrimp prices in the US fluctuated between 2008 and 2023, a period in which global production more or less doubled.

US shrimp price v. global aquaculture production volume (MT LWE)



Sources Food and Agriculture Organization (FAO) of the UN; Urner Barry's Comtell

Some might describe the industry over the last 15 years as a bit of a rollercoaster: prices have been up and down. Price volatility is, of course, a source of uncertainty and distress for producers and other actors in the industry. This is especially true for small producers, where sudden price drops can cause financial insecurity, and may even mean the end of their business if they don't have a buffer to withstand these fluctuations.

POTENTIAL BENEFITS OF GROWING DEMAND

Reduced price volatility Basic market theory describes the relationship between supply, demand, and price. If the supply curve shifts to the right (increased supply), this will normally lead to a lower price and higher demand. The magnitude of the effect on demand depends on the price elasticity of demand. By "price elasticity of demand," we mean "the ratio of the percentage change in quantity demanded to the percentage change in price."[2] If the elasticity of demand is high, a decrease in price will lead to a relatively high increase in demand. If the elasticity of demand is low, the effect on demand will be limited.

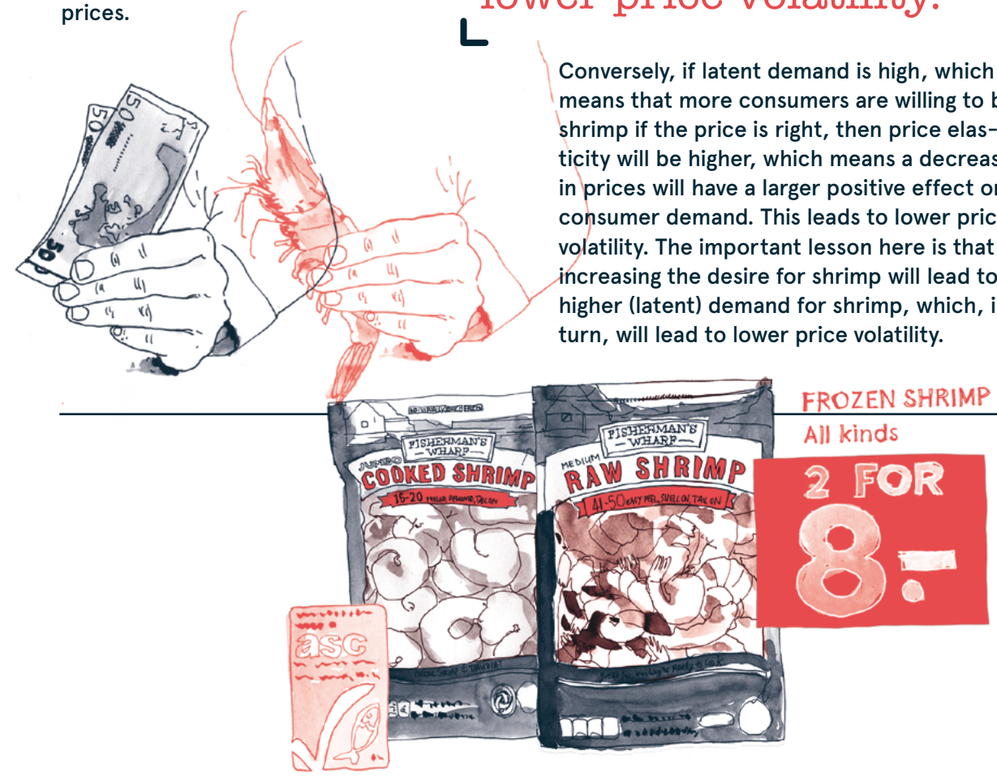
This elasticity of demand is a theoretical concept that is notoriously difficult to measure. But even without exact knowledge of it, we can derive an important insight: the notion of "latent demand" (i.e. the potential demand from consumers that would be willing to buy shrimp if the price were lower).

[2] Wikipedia contributors. (2023, October 24). *Price elasticity of demand*. Wikipedia.

If latent demand is relatively low, a lower price will have only a limited positive effect on demand (at least in the short term). This corresponds to a low elasticity of demand, and it leads to relatively high price volatility: an increase in supply levels will have a relatively large effect on prices.

> "...increasing the desire for shrimp will lead to higher (latent) demand for shrimp which, in turn, will lead to lower price volatility."

Conversely, if latent demand is high, which means that more consumers are willing to buy shrimp if the price is right, then price elasticity will be higher, which means a decrease in prices will have a larger positive effect on consumer demand. This leads to lower price volatility. The important lesson here is that increasing the desire for shrimp will lead to higher (latent) demand for shrimp, which, in turn, will lead to lower price volatility.



Increased confidence Having stable prices will increase the confidence of various parties in the value chain from producers to importers, and from exporters to retailers. If demand for shrimp grows, confidence will grow, too. And that can have a number of positive effects. For example, retailers may increase the availability and visibility of shrimp products on their shelf space; food service outlets may decide to put more shrimp dishes on their menus. Such changes will then ultimately lead to the increased *physical* availability of shrimp products and help to increase demand even further.

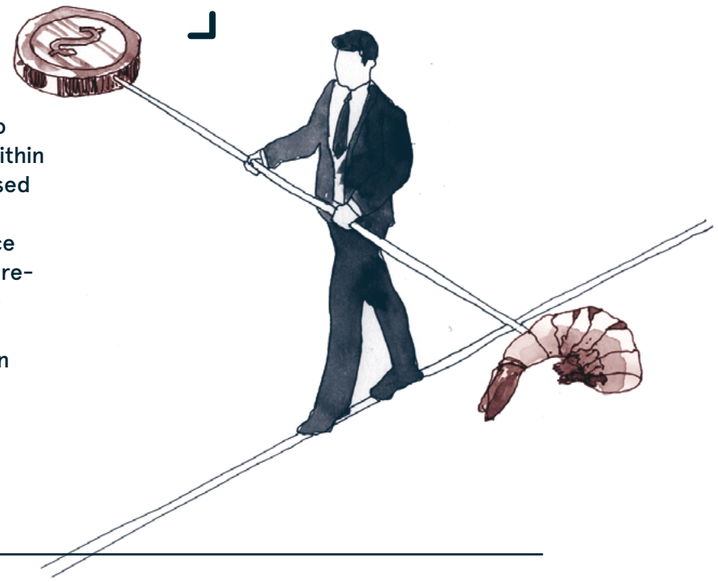
Increased confidence also leads to better conditions for investment and innovation, both for producers and for other actors in the value chain. This will result in creating better and more attractive products, which, in turn, can also help to boost demand for shrimp.

We're all familiar with the practice of using stock levels as a buffer for market shocks and to hedge market uncertainty. Increased confidence means a lower expectation of market shocks and lower uncertainty, and, hence, it will diminish the need to use stocks as a buffer. In turn, this will also reduce the price effects associated with the artificial demand generated when stocks are filled, and the artificial supply as they're depleted. This may also result in lower price volatility.

Increased collaboration It's to be expected that higher demand will cause different actors within the value chain to look at opportunities to meet increased demand levels more efficiently, either by investing in their own capabilities or by collaborating with other parties in the value chain. Increased efficiency can lead to lower prices while maintaining profitability.

What the industry expects In a survey among delegates at the 2023 Global Shrimp Forum, we asked the following question:

> "If global shrimp demand increases, what will the consequences be for the industry?"



Delegates' answers echoed the benefits outlined above, namely that "it will lead to increased collaboration and integration within supply chains in order to meet the increased demand effectively," an answer given by 51% of respondents to this multiple-choice question. Importantly—and interestingly—respondents told us that "more stable price levels" are a more likely consequence of increased demand for shrimp globally than "higher price levels."

POTENTIAL BENEFITS OF PRE-COMPETITIVE EFFORTS

When looking at the opportunity for pre-competitive efforts to promote shrimp consumption, it can be very informative to look at similar efforts in other industries, preferably food related. There are quite a few well-documented, successful initiatives in markets ranging from avocados and mushrooms to eggs, which, for our purposes, also serve as useful case studies. By means of these three case studies, we can identify the strategies and tactics that have been deployed in other markets, and the results that have been achieved in terms of consumption growth.

Case Study 1 – Avocados As is the case in the shrimp industry, increasing supply and demand falling short was a major problem for the avocado industry in the late 1990s. The Hass Avocado Board (HAB) was established in the US in 2002 (following the Hass Avocado Promotion, Research and Information Act being passed in 2000) to maintain and expand demand for avocados in the US. The aim of the HAB is to generate growth that benefits the global avocado industry. First of all, it concentrated its efforts on data collection, consumer research, and retail research. The insights gathered were then used to develop marketing campaigns.

avocados LOVE ONE TODAY®
nutrient-dense • heart-healthy

Source www.hassavocadoboard.com

One of the key drivers of the marketing campaigns was to highlight the health benefits of avocados. The HAB did this through combining sound scientific research on the avocado with strong marketing campaigns focusing on health and nutrition. Consequently, the HAB founded two key initiatives: the Avocado Nutrition Center—which undertakes nutrition research to inform public health—and Love One Today, which was launched by the HAB in 2013 as a free, science-based educational resource for consumers to learn more about the health and nutritional benefits of avocados, and to debunk some of the misconceptions that plagued avocados in the past. Love One Today is also a slogan used in communications. The Avocado Nutrition Center works in partnership with Love One Today.

A related success story is offered by Avocados From Mexico (AFM), a subsidiary of the Mexican Hass Avocado Importers Association, which was formed in 2013 as a partnership between Mexican avocado farmers, and importers and distributors in the US. Its purpose is to undertake collaborative efforts in advertising, promotion, public relations, and research for all stakeholders. Its brand "Avocados from Mexico" is one of the most successful avocado brands in the US. In 2017, the brand was certified by the American Heart Association's Heart-Check Certification program, so that all its products can be labelled with the Heart-Check mark. Its catchy current slogan "Always in Season" reflects that avocados from Mexico are available year-round. Since 2015, AFM has had six Super Bowl commercials that have also contributed to its success.

The results of these initiatives around avocados are impressive: per capita consumption in the US increased by more than 278% between 2000 and 2021, growing from 2.26 lb (1.03 kg) per capita to 8.55 lb (3.88 kg).[3]

[3] HAB. (2022, June 6). Hass Avocado Board: 20 Years of "Making it Happen."

Case Study 2 – Mushrooms In the US, the Mushroom Council is a collaboration of the biggest fresh market producers and importers of mushrooms. Previously facing a situation of production surplus, principally the result of domestic production rising, the Mushroom Council undertook pre-competitive research and promotion activities help to expand, maintain, and develop the market for mushrooms in the US.

When the Council started out, penetration of mushrooms was quite low, and mushrooms were considered a *special* food item—definitely not a staple in the American kitchen. Early promotion efforts focused on inspiring the public with ideas and recipes that highlighted the unique taste and versatility of mushrooms. The research carried out by the Mushroom Council informed this strategy, as it showed that this would be much more effective than to highlight the fact that mushrooms are sustainable or healthy, the feeling being that this can quickly become "preachy."

The Mushroom Council made smart use of external experts such as chefs, dieticians, and NGOs to raise awareness and highlight the benefits of mushrooms. An interesting way to get people to look at mushrooms in a new light was the "The Blend," a burger that can be purchased—or made yourself at home—that blends ground mushrooms with ground beef. As the Mushroom Council puts it, "mushrooms add flavor, veggies, and an earth-friendly ingredient to the plate."[4] This new product was then used to generate interest among chefs and influencers, who could then be used as leverage to convince food service providers to put the product on their menus.

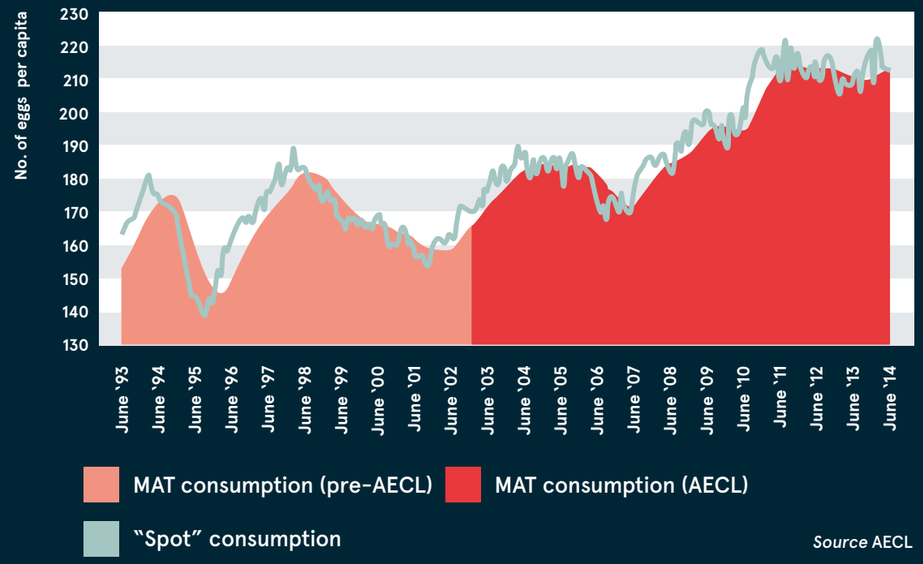
Case Study 3 – Eggs The Australian Egg Corporation Limited (AECL) is a member-owned, not-for-profit company providing marketing and R&D services for the benefit of Australian egg farmers. It's funded through statutory levies, collected under the Egg Industry Service Provision Act, and Australian government funds for the purposes of approved R&D.

Australian egg consumption had been on the decline since the 1960s at an average annual rate of 2%. The main reason for this decline was the perception among Australian consumers that eggs contained a nutrient that was harmful to their health: cholesterol.

In 2006, the AECL launched two campaigns to directly dispel the myths surrounding eggs and cholesterol. Special care was taken to ensure that all health-related claims could be backed up with solid evidence, and to prepare for critical questions about any possible shortcomings in the industry. The first campaign addressed the myths surrounding egg consumption. It managed to raise the positive perception of eggs from 30% to 70%, but an increase in consumption didn't occur. The second campaign, focusing on the positive side of consuming eggs, was launched within 6 months of the first campaign. Since the launch of these initiatives, egg consumption has risen at an annual average rate of 5.5%. See graph "Australian egg consumption (1993-2014)". The campaign won several Australian national and international awards, including an Effie Award (an awards program to honor the most effective advertising efforts) for long-term effectiveness.

[4] Mushroom Council. (n.d.). Start Blending Today. https://www.mushroomcouncil.com/the-blend/.

Australian egg consumption (1993-2014)

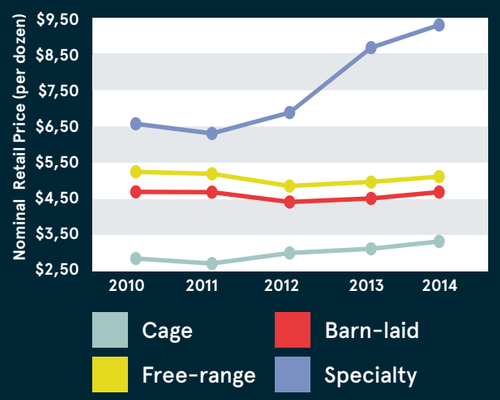


Source AECL

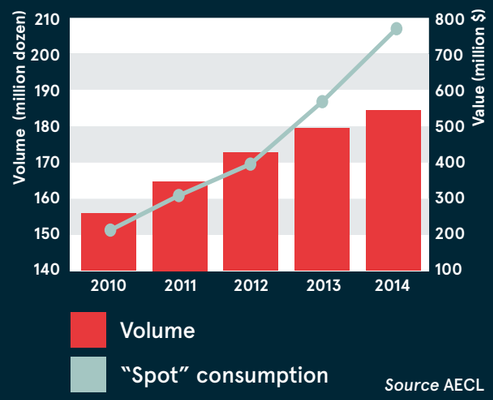
Importantly, apart from increasing sales volume, the campaign also aimed to de-commoditize the egg market to create space for the creation of value-added products and premium propositions. This objective was reached, as shown by the value growth in the years after the campaign launch and the price growth for specialty eggs.[5]

[5] Case description provided by Katherine Bryar, former Marketing Director of Australian Egg Corporation Limited (AECL), who was responsible for the campaign at the time.

Grocery sales of eggs – by segment



Grocery sales of eggs – by volume & value



Source AECL

4 ASSESSING THE OPPORTUNITY

In this chapter, we'll assess the opportunity to increase shrimp demand by taking a closer look at the consumer markets that represent the highest growth potential. As we've already seen, the biggest consumer markets for shrimp are China, the US, Europe, and Japan. But the fact that these markets are currently the largest markets doesn't necessarily mean that they also represent the largest growth potential.

One market we need to keep an eye on is India: the Indian market is a good example of a market where consumption is currently very limited (around 35 g per capita), but the sheer size of the population suggests substantial growth potential. And what makes the Indian market particularly interesting is the fact that India is the second largest exporter of shrimp in the world. For that reason, we'll be taking India forward into our analysis in this chapter. Japan, however, won't be discussed further—Japan has limited growth potential for two main reasons: fish and seafood are already very popular; and the population is rapidly aging and decreasing in size, further limiting potential for growth.

THE 4 "A"S

So, how can we get a clearer view on growth potential? Let's first establish that shrimp consumption depends on four factors:

AFFORDABILITY
people can afford to buy shrimp

AVAILABILITY
shrimp is readily available for people to buy

AWARENESS
people are aware of shrimp as a food choice

ATTRACTION
people would like to buy/eat shrimp

We're going to call these **the 4 "A"s**. Any growth in shrimp consumption depends on an increase in one or more of these four factors. The most important of these will vary per market—in other words, the "bottleneck" will be different depending on the market. (By "bottleneck," we refer to a factor limiting increased shrimp consumption).

If, for example, the bottleneck is *affordability* or *availability*, promotional campaigns likely won't prove very effective: growth will depend on an increase in one of these two factors that can't be influenced by promotional efforts alone. We'll call this type of growth "*autonomous growth*."

If *affordability* and *availability* are sufficiently high—and by "sufficiently high," here, we mean that shrimp is both affordable and readily available—the bottleneck (i.e. the limiting factor) to increasing shrimp consumption must either be *awareness* or *attraction*. And it's precisely in these areas that shrimp consumption promotion campaigns can make a difference. We'll call this type of growth "*growth through promotion*."

Using this framework, we'll now determine which markets hold the biggest potential for *growth through promotion*—the area that's of most relevance for our purposes—by a process of eliminating those markets where *autonomous growth* is currently the predominant form of growth.

Autonomous growth

AFFORDABILITY In the US and Europe, higher GDP and household spending power suggest that shrimp is more affordable than in countries like China and India.

GDP per capita v. percentage of household spending on food

MARKET	GDP per capita in USD (2023)	% of household spending on food
US	80,034	12.8%
EUROPE*	39,940	14.3%
CHINA	13,721	30.5%
INDIA	2,601	41%

*EU data

Sources GDP per capita: International Monetary Fund (IMF) |
Household Spending: U.S. Bureau of Labor Statistics; National Bureau of Statistics of China; Kantar; Eurostat

On average, US households spend USD 778 on food every month,[6] which corresponds to 12.8% of total household expenditure.[7] In Europe, average food expenditure is USD 455 per month, which represents 14.3% of total household expenditure.[8] Consumers in Europe and the US are currently dealing with the impact of inflation and rising food prices. While this is ongoing, it will also have an effect on the affordability of shrimp.

In India, food represents 41% of total household spending, a much larger share of total spending than in western societies.[9] And in China, even though the share of income spent on food has declined with growing GDP, it's still relatively high at 30.5%.[10]

In general, lower spending power means a higher share of household spending goes on food, and that a higher share of food spending goes on items that are deemed "necessary" instead of on those deemed to

[6] U.S. Bureau of Labor Statistics. (2023, September 8). Consumer Expenditures--2022.
[7] U.S. Bureau of Labor Statistics (2023).
[8] Eurostat. (2023), February 1). How much do households spend on food and alcohol?
[9] Livemint. (2022, October 31). Less affluent households spend INR2,000 on monthly groceries. *Mint.*
[10] National Bureau of Statistics of China (2023, January 18). *Households' income and consumption expenditure in 2022.*

be "luxury" items. This makes shrimp less affordable for the average household in China and India. In other words: the share of households that can afford to buy shrimp is lower in these markets.

However, in China as well as in India, continued economic growth corresponds to increasing household spending power. Over the last few decades, China has undergone a period of rapid economic transformation: between 2000 and 2020, GDP per capita (at constant prices) increased by almost 16-fold.[11] This means higher spending power for Chinese families, with per capita consumption expenditure rising from CNY 9,378 in 2010 to CNY 24,538 in 2022.[12] Further economic growth is expected for China: the IMF predicts GDP to grow by 3.8% per year until 2028. The Boston Consulting Group (BCG) estimates that China will add an additional 80 million people to the middle and upper classes in the period from 2022 to 2030.[13]

> "...the share of the population that can afford to buy shrimp will grow substantially in the coming years."

In India, we see a similar trend. GDP per capita grew from USD 479 in 2002 to USD 2,379 by 2022, a 5-fold increase. In 2022, the Indian economy grew faster than the Chinese economy (7.2% v. 3.0%) and it's now the fifth largest economy in the world.[14] The middle class is expected to grow from 432 million people in 2020/2021 to 715 million by 2030/2031, which would correspond to 47% of the total population.[15] This would make India, together with China, the world's largest middle-income market. These developments imply that the share of the population that can afford to buy shrimp will grow substantially in the coming years.

11 National Bureau of Statistics of China. (n.d.).
12 Statista. (2023b, January 18). Per capita consumer spending in China 1990-2022.
13 Chen, C., Li, S., Li, F., & Chen, B. (2023, June 22). The next chapter in China's consumer story. BCG Global.
14 IMF. (2023). IMF Data Mapper: Real GDP Growth: Annual percent change.
15 Shukla, T. (2023, July 10). The Rise of India's Middle Class: A Force to Reckon With. People Research on India's Consumer Economy (PRICE).

AVAILABILITY In the US and Europe, shrimp is widely available in retail stores and food service outlets. In India and China, this isn't the case. So even if the affordability of shrimp in India and China is increasing as income levels rise, the availability of shrimp may present another bottleneck for growth in these markets where the affordability of shrimp would make them set to boom.

In India, the availability of shrimp is quite limited, especially outside of the Tier-1 cities and further away from coastal areas. Another important factor to take into consideration when talking about India is that Indian households prefer fresh shrimp over the frozen variety. But the logistics infrastructure to ship and store fresh products will prove to be a bottleneck in that respect: it's not yet developed enough. As a consequence, products that depend on this infrastructure will be severely hindered, except in the bigger cities.

The Indian government is a driving force in developing the cold chain industry, supporting private participation through subsidies and grants. The Indian cold chain logistics market is expected to grow from USD 16 million in 2021 to USD 36 million by 2027. Meanwhile, there are initiatives to sell shrimp and other seafood directly to consumers through online storefronts. Fresh to Home and Licious are examples of such initiatives. Other ventures, such as Captain Fresh, aim to build a platform that connects supply (fishmongers) to demand (retailers). These and similar efforts are likely to increase the availability of shrimp in the longer term, albeit their focus being on Tier-1 cities for now.

In China, consumers enjoy both live and frozen shrimp. Live shrimp is mostly to be found in coastal areas. And, again, the availability of frozen shrimp depends largely on the cold chain infrastructure, which is still being developed in China. Even though the Chinese cold chain logistics market is growing rapidly at an expected compound annual growth rate (CAGR) of 8.5% by 2025, "the current cold chain infrastructure and technologies are still largely lagging behind the demand for high-quality food by Chinese consumers with increased incomes."[16] And so, while availability is not an issue in the bigger cities, it's still proving to be a bottleneck elsewhere. This means that opportunities for growth will be concentrated primarily in urban areas.

16 Guo, X., Duivenvoorden, W., Liu, Z. (2020, September). Market Study on Cold Chain Logistics in India. Netherlands Enterprise Agency 2018.

Growth through promotion

AWARENESS AND ATTRACTION In the US and Europe as well as the Tier-1 cities in China and India, affordability and availability are sufficiently high (i.e. they don't present bottlenecks): in these markets, there are many consumers who don't buy (much) shrimp, even though they can afford it and it's easily available. In these markets, the potential for growth, therefore, depends much more on whether people are aware of shrimp as a food option and whether they consider shrimp to be an attractive choice. And, for the purposes of our bold ambition to increase shrimp consumption, this is where we need to focus our attention and collective efforts.

Many food choices are dictated by habits and routines. This is especially true if we look at higher-level choices—like the major components of regular meals, such as including red or white meat in an evening meal—as opposed to looking at specific product or brand choices.

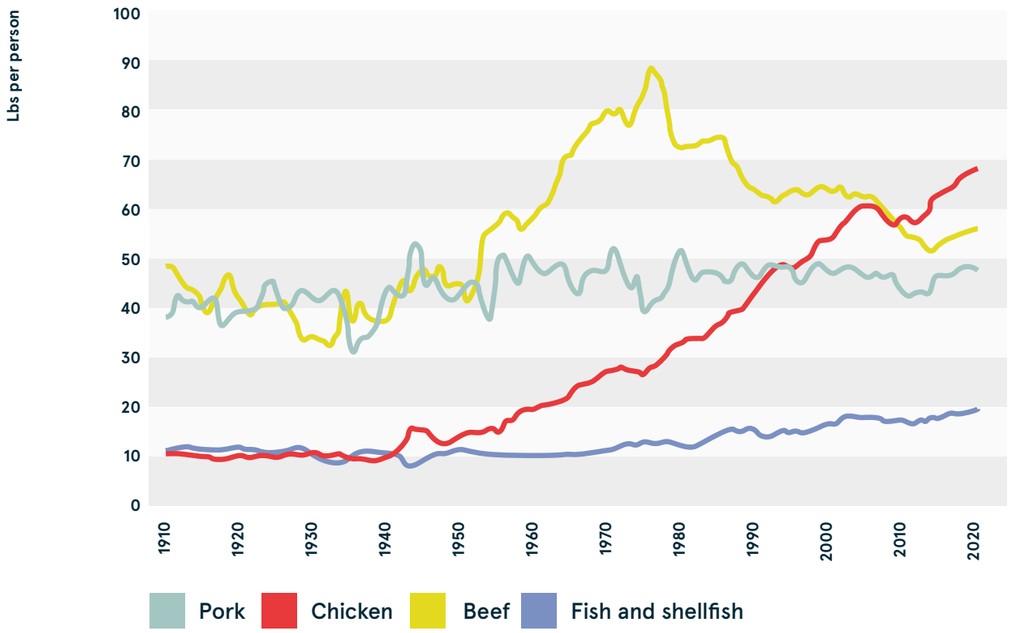
For us to understand the strength of the two "A"s awareness and attraction, it's first important for us to understand the dynamics of habits and routines. This is because fixed habits and routines make people less open to alternatives. So, if we find that people's food habits and routines change only slowly or don't change at all, this would seriously complicate matters for us: it would imply that we actively have to break people's routines in order to get them to choose shrimp more often. Well, luckily for us, it turns out that food habits do, in fact, change over time and, as we'll see in the next sections, they're currently changing quite significantly. This is good news for us, and for what this Report hopes to achieve. It's also good news for the wider industry.

Let's now take a look at how patterns and dynamics can influence habits and routines.

Long-term changes in food habits In the US, the consumption of animal proteins has changed steadily since the middle of the previous century. The two most important trends have been, as the graph below shows:

- the decline of beef consumption since the late 1970s
- the steep rise of chicken consumption from the 1950s onwards.

Availability of beef, pork, chicken, and fish/shellfish (US: 1910-2021)



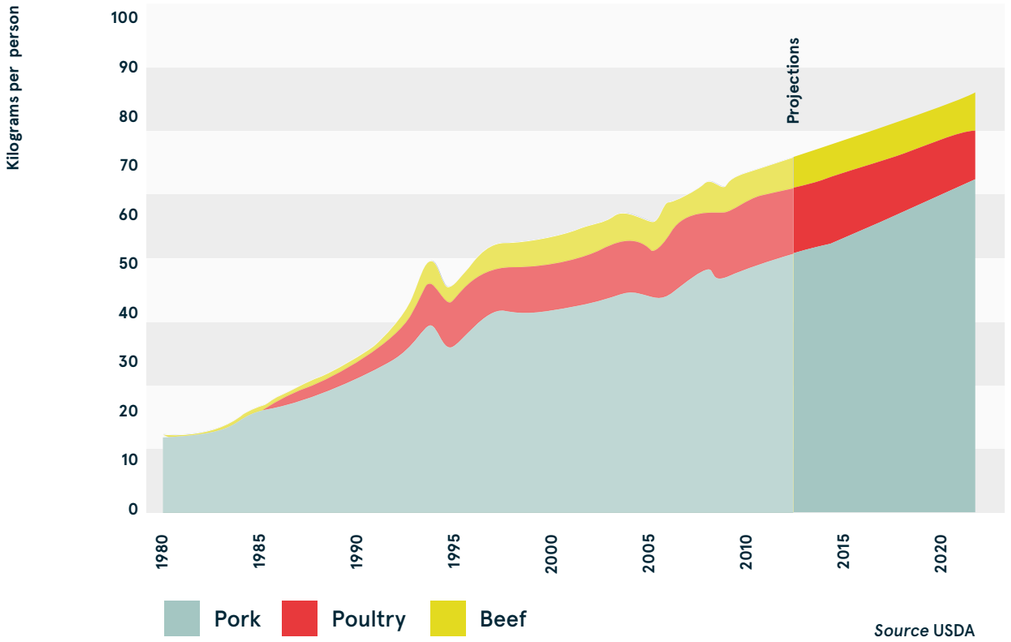
Source US Department of Agriculture (USDA)

In Europe, the trend is similar to that of the US where per capita beef consumption is also in decline and poultry is on the rise.[17]

In China, meat preferences have changed quite a lot since the 1980s. In 1980, pork was the main source of animal protein—chicken and beef consumption were still very limited (close to zero). Since then, per capita chicken consumption has shown steep growth to around 17 kg per person per year. Over the same period, beef consumption has grown to around 7 kg by 2022.

[17] European Environment Agency. (2013, November 20). Per capita EU-27 consumption of meat, fish and dairy (by weight)

China per capita meat consumption (1980-2014) and projection (2015-2024)



Source USDA

Recent changes in food habits In recent years, there's been quite a lot of research on changing food habits. Part of this interest stems from the impact of the COVID-19 pandemic. Not only did the pandemic impact the food choices available to people (restaurants were closed, social gatherings centered on meals were prohibited, etc.), but it also gave rise to an increase in health consciousness.

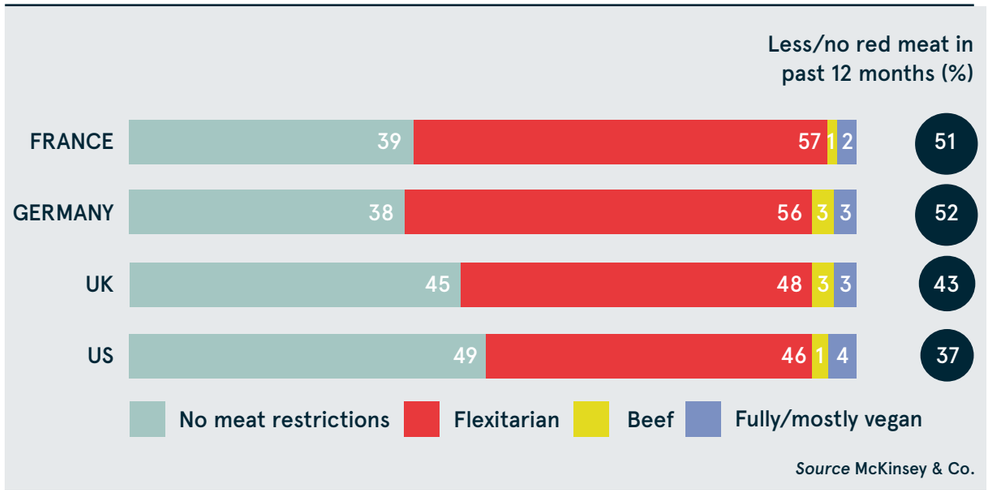
Healthy eating on the rise An example of one such piece of research is a study by McKinsey[18] that looks at attitudes and behaviors with respect to food in France, Germany, the UK, and the US. The study found that healthy eating is on the rise, with at least 70% of respondents saying that they want to eat more healthily and around 50% of consumers saying that healthy eating is a top priority for them. Also, a significant proportion of respondents reported reducing their consumption of food items or ingredients that are seen as unhealthy, such as processed foods, sugar, fat, salt, and red meat.

Did someone say flexitarianism? The aforementioned study by McKinsey[19] took a detailed look at meat consumption. Interestingly, it found that a growing number of consumers are eating less meat or no meat at all, especially in western Europe. Half of respondents in the typically heavily meat-based nations of France and Germany claim to have reduced their consumption of red meat in the last 12 months.

[18] Grimmelt, A., Moulton, J., Pandya, C., & Snezhkova, N. (2022, October 5). *Hungry and confused: The winding road to conscious eating.* McKinsey & Co. Based on "McKinsey Global Future of Food Survey 2022."

[19] Grimmelt et al. (2022).

Current diet, by nation (%)

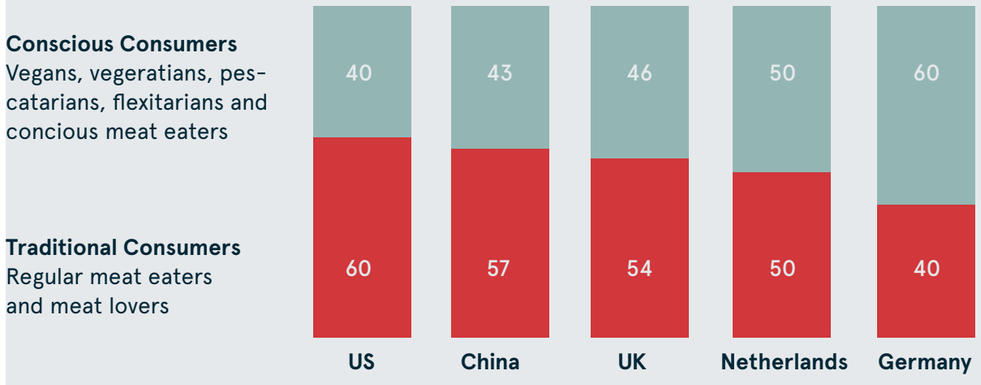


Source McKinsey & Co.

In China, similar changes in dietary behaviors can be observed, specifically related to the COVID-19 period: several studies suggest that the pandemic led to increased food health consciousness in China, too. According to McKinsey's research,[20] slightly less than half of Chinese consumers can be labelled "conscious consumers" (the definition of which—in that particular study—is "people who are committed to eating little or no meat"). This group consists predominantly of older women (the baby boom generation), who, having grown up on a traditional Chinese diet rich in plant-based protein but who later turned to more meat in their diets due to societal changes, are now once again seeking to eat more healthily, leading them to limit their meat consumption.[21]

[20] Grimmelt et al. (2022).
[21] Grimmelt, A., Hong, S., De Paula, R. U., Zhang, C., & Zhou, J. (2023, February 10). For Love of Meat: Five Trends in China That Meat Executives Must Grasp. McKinsey & Company.

Routine eating habits, by country (%)



Source McKinsey & Co.

So, apparently food habits do change over time: both in the short term and in the long term. And they are clearly currently changing in the US, Europe, and China. This is good news for us, because it means that in those markets and regions where affordability and availability are sufficiently high, there's an opportunity to increase awareness and attraction and, by doing so, increase demand.

> "...people are reconsidering their choices and they're open to suggestions. This represents an opportunity to increase people's awareness about and attraction to shrimp."

WHAT DO THE 4 "A"S TELL US?

Having looked at the 4 "A"s, we can draw a few conclusions:

- In India as well as in China, both *affordability* and *availability* are limited when compared to western markets. This means that the opportunity to develop shrimp consumption through promotion is limited as well. In these markets, the biggest opportunities for promotion efforts are to be found in bigger cities where affordability and availability don't represent bottlenecks.
- *Affordability* and *availability* will continue to grow in China and, somewhat more slowly, India. This means that shrimp consumption is likely to grow autonomously over the coming years. As this process unfolds, the bottleneck will shift towards awareness and attraction, and the opportunity for growth through promotion will consequently increase.
- Food habits are not set in stone; they change over time. In fact, they're currently shifting in a meaningful way in the US, Europe, and China. This means that people are reconsidering their choices and they're open to suggestions. This represents an opportunity to increase people's awareness about and attraction to shrimp.


CONVENIENCE
NUTRITION AND HEALTH
POSITIVE ASSOCIATIONS
VERSATILITY

5 A STRONG HAND OF CARDS

In this chapter, we're going to take a look at what sets shrimp apart from other more common proteins. We'll discuss some of the most important considerations for consumers around the world when making their food choices, namely positive associations, nutrition and health, versatility, convenience, and sustainability. From this point on, each of these different "aspects" will become a different "card" in our deck of five cards, and we'll use this metaphor throughout this chapter and the next as a way to facilitate the discussion around which of these "cards" should be played first, and how to maximize the chance of winning. Along the way, we'll assess the strength of shrimp's claim in each of these specific areas, while also taking a closer look at any weak points related to that particular "card". In this way, we aim to show that the shrimp industry holds a very strong hand of cards indeed.

POSITIVE ASSOCIATIONS

In most markets, the consumption of shrimp goes back a very long time. Hence, eating shrimp is often very much entwined with local traditions and has some strong cultural associations. These (positive) associations are important; they present an opportunity to be built on and further extended—in marketing, it's always easier to build on something that already exists in the minds of consumers than it is to create new associations from scratch.

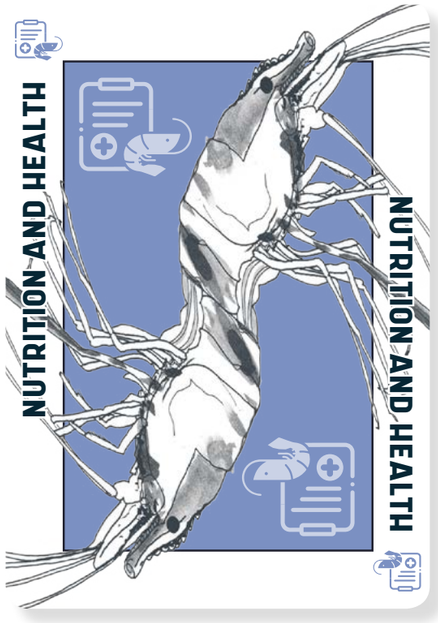
> "In marketing, it's always easier to build on something that already exists in the minds of consumers than it is to create new associations from scratch."

In China, shrimp is associated with longevity, happiness, and good fortune. There are various traditions in China that involve the consumption of shrimp, especially during festivals and celebrations. In the US, shrimp is associated with good times with friends and family, and with tropical holidays, not to mention its association with some well-known culinary traditions in Louisiana and other coastal areas. Europe also has some strong culinary traditions that involve shrimp: think of Mediterranean cuisine, paella, skewered shrimp, *gambas al ajillo*... Several yearly festivals in Europe feature shrimp, especially around Christmas.

NUTRITION AND HEALTH

Shrimp is a highly nutritious protein that offers many valuable nutrients with some well-defined health benefits. But, unfortunately, the nutrition and health benefits of seafood in general, and shrimp in particular, are often overlooked or not well-known. First, we're going to take a closer look at some of the misconceptions surrounding shrimp as a protein in a bid to debunk these myths. Second, we're going to present some science-backed facts and figures about the positive benefits of eating shrimp. Third, we'll tie these benefits into some of the current health trends we're observing in our key markets of China, the US, and Europe.

Myths Before looking at the nutritional benefits of shrimp, let's first talk about some widely held misconceptions and how we can refute these claims, particularly concerning cholesterol, mercury, and the use of antibiotics.



> "...shrimp can be eaten without problem, even by pregnant women, breastfeeding mothers, and children."

CHOLESTEROL Shrimp contain cholesterol, about 189 mg per 100 g to be precise. Because of this, many people—unhelpfully including doctors and dieticians—believe that they should avoid eating shrimp, or at least limit their consumption. In the past, it was thought that dietary cholesterol intake would contribute to the risk of heart disease. But newer studies haven't generally supported this.[22] It turns out that "bad" blood cholesterol is mostly increased by eating unhealthy fats (such as saturated fats or trans fats), which shrimp don't contain. The American Heart Association mentions shrimp as a healthy choice as part of its advice to manage blood cholesterol levels and reduce the risk of heart disease.[23]

MERCURY The concern about mercury levels in fish and seafood only applies to some specific types of fish (for example, marlin and swordfish). These species tend to accumulate mercury in their flesh. Some believe that this also applies to shrimp, and that consumption should therefore be limited. This is a myth. In fact, according to the US Food and Drug Administration (FDA), shrimp is one of the "five of the most commonly eaten fish that are low in mercury."[24] In its dietary advice, the FDA writes that shrimp can be eaten without problem, even by pregnant women, breastfeeding mothers, and children.

[22] Sass, C. (2022, September 15). *Eating Shrimp: Health Benefits, Nutritional Data and Warnings. Health.*

[23] American heart Association. (2020, November 11). *Cooking to Lower Cholesterol.*

[24] FDA. (2004). *FDA/EPA 2004 Advice on What You Need to Know About Mercury in Fish and Shellfish.*

ANTIBIOTICS Some shrimp producers use antibiotics to protect their crops from disease and to increase survival rates. But this is certainly not the case for all producers. There are stringent measures and strong initiatives emerging to make using antibiotics in shrimp a thing of the past. Some key things for consumers to be aware of to make sure their shrimp is antibiotics-free:

- ASC and BAP certification standards require shrimp sold under their logos to be free of antibiotics. In the EU and to a lesser extent in the US, strict regulations exist to prevent shrimp treated with antibiotics entering the market
- Ecuador's Sustainable Shrimp Partnership (SSP) members commit to using zero antibiotics and are tested in every production cycle
- in 2002, the Indian government imposed strict regulations, banning the use of five different antibiotics. It has also taken measures to ensure that shrimp exported to Europe and other markets is tested for antibiotics prior to export.

Nutrition

With some myths well and truly debunked, let's now touch on some of the positive health and nutrition aspects associated with shrimp that we can use to our advantage as part of our strong hand of cards.

PROTEIN Shrimp contain a relatively large amount of protein per 100 g. The amino acids in the protein in shrimp are important for various vital body functions, such as muscle growth, tissue regeneration, immune function, energy making, and blood sugar regulation.[25] [26]

Shrimp is a lean protein source, especially when compared to other sources of animal protein such as pork, beef, and chicken.

[25] Cleveland Clinic. (2021, December 22). Amino Acids

[26] Soundarapandian, P. (2014, November). Nutitive value of cultured white leg shrimp Litopenaeus vannamei.

Shrimp nutritional values compared to other proteins (per 100 g)

	Shrimp	Beef (ground)	Chicken (wing)	Pork (chop)
Energy (kcal)	99	209	161	196
Fat (g)	0.3	14.6	7.1	13.5
Carbohydrates	0.2	0.8	0.0	0.1
Protein	24	19.1	24.3	19

FAT The fat in shrimp is composed of unsaturated omega-3 fatty acids. These are the so-called "healthy fats" (as opposed to the unhealthy saturated fats and trans fats). Most fats from animal sources are saturated fats, whereas most fats in vegetables and fish are unsaturated.

FIBER Most dietary fiber is found in plant-based ingredients such as vegetables, fruit, nuts, etc. Meat and fish don't usually contain fiber. However, shrimp do contain a small amount of fiber in the form of chitin in the shells (if they're eaten).

VITAMINS Shrimp contain several essential vitamins:
- **Vitamin D** for bone health and immune function
- **Vitamin B12** for red blood cell production
- **Vitamin E** for antioxidant properties

MINERALS AND TRACE ELEMENTS Shrimp contain several minerals and trace elements:
- Iron for oxygen transport and energy production
- Selenium for immune function and antioxidant defense
- Zinc for metabolism and wound healing

Health

HEART HEALTH As shrimp is a lean protein source containing unsaturated omega-3 fatty acids, it's good for the heart.

In its Science Advisory of 2018, the American Heart Association recommends the inclusion of 1-2 seafood meals per week to reduce the risk of various types of heart problems (congestive heart failure, coronary heart disease, ischemic stroke, and sudden cardiac death). This positive effect on heart health is attributed to a combination of two factors: low saturated fats and high long-chain n-3 polyunsaturated fatty acids (n-3 PUFAs). Shrimp, however, is quite low in n-3 PUFAs compared to fatty fish such as salmon, so its positive effects on heart health are mostly due to the first factor.[27]

BRAIN HEALTH Omega-3 fatty acids play a role in cognitive function. The choline content in shrimp can aid brain development and brain function. What's more, shrimp contain astaxanthin, an antioxidant that is linked by several studies to the reduction of oxidative stress, and the ensuing neurodegenerative effects.[28]

IMMUNE FUNCTION Vitamins D and E found in shrimp, as well as the elements selenium and zinc, aid the body's immune function, helping it to combat infections.

Relevance of health and nutrition in key markets

CHINA In China, economic growth, urbanization, and rising incomes have caused major changes in dietary habits: diets contain more salt, fat, and sugar than ever before. This has had a major effect on the health of the population: obesity, cardiovascular disease, and diabetes are on the rise. In response to this development, the Chinese government has issued the "Healthy China 2030" Planning Outline and the Chinese National Nutrition Plan (2017-2030). There's some cause for optimism, as growing incomes in China's middle class seem to lead to an increased willingness to pay more for higher quality, healthier foods. This is especially true in larger cities, where young, affluent consumers see healthy eating as an aspirational lifestyle. The COVID-19 pandemic has further increased consumers' health consciousness.

THE US In the United States, there's a clear trend to eat more healthily. Half of consumers call healthy eating a top priority.[29] For most of them, this means cutting back on sugar, salt, and fat. About 37% of US consumers report that they've cut back on red meat. Again, the COVID-19 pandemic has also contributed to the desire to eat more healthily.

EUROPE In European markets, similar trends can be observed. For example, 62% of French respondents report having reduced their consumption of processed foods, and more than half of them have reduced their intake of sugar, fat, salt, and red meat. The German market shows similar data.[30]

[27] Rimm, E., et al. (2018). Seafood Long-Chain n-3 Polyunsaturated Fatty Acids and Cardiovascular Disease: A Science Advisory From the American Heart Association. *Circulation*, 138(1).

[28] Taksima, T., Chonpathompikunlert, P., Sroyraya, M., Hutamekalin, P., Limpawattana, M., & Klaypradit, W. (2019). Effects of Astaxanthin from Shrimp Shell on Oxidative Stress and Behavior in Animal Model of Alzheimer's Disease. *Marine Drugs*, 17(11), 628.

[29] Grimmelt et al. (2022).

[30] Grimmelt et al. (2022).

Reduction in consumption of products, by nation (2022)
% of respondents who consumed less/did not consume product

	Processed foods	Sugar	Fat	Salt	Red Meat	Carbo-hydrates	Caffeine	Dairy	Gluten	White Meat	Fresh fruit/ vegetables
France	62	52	52	51	51	34	33	29	29	20	9
US	43	44	40	43	37	32	29	30	33	20	14
Germany	42	47	42	38	52	28	23	28	30	30	11
UK	43	46	40	43	43	23	29	28	30	30	11

Source McKinsey & Co.

VERSATILITY Shrimp is a highly versatile ingredient for two reasons:

- it can be prepared in many different ways (think grilled, fried, barbecued, and even cured)
- it's used in many different culinary traditions and cooking styles: from Indian shrimp curries and Chinese Sichuan-style shrimp to Louisiana Cajun shrimp, Spanish paella, and Norwegian Skagenröra shrimp salad.

This versatility means that shrimp can adapt to a wide range of cooking styles and cuisines, including different cooking preferences depending on the time of year, and to special occasions. But it also means that shrimp is perfect for impromptu cooking, for those times when you just have to work with the ingredients available in your refrigerator. The versatility of shrimp makes it an easy choice to have in the home, always.

CONVENIENCE This card, "convenience," relates to everything from the time it takes to purchase an item to the difficulty involved in preparing and cooking it. In this respect, shrimp offers some really quite convenient plus points and some very specific benefits when compared with alternative (animal) protein sources:

- Shrimp has a very short cooking time (3-5 minutes) when compared to meat—and especially when compared to thicker cuts of meat.
- Shrimp needs little or no preparation: consumers can opt to buy peeled and deveined shrimp, and shrimp doesn't need to be sliced.
- Shrimp doesn't require any specific or strict kitchen hygiene measures, unlike when handling raw chicken.

- Shrimp can be easily portioned: you can always use just the right amount of shrimp when preparing a meal, especially when using frozen shrimp—the rest can be kept frozen and used at a different moment.

A lot of the benefits mentioned are of particular relevance for larger and/or busy households; reducing the amount of time spent preparing healthy and nutritious meals is always a win.

Something that we're seeing increasingly offered by supermarkets are ready-to-eat shrimp products or shrimp being sold in ready-to-cook packages. This increases its convenience even further: the increasing availability of these products is allowing consumers to discover a previously unfamiliar and (potentially) daunting product, in turn reducing barriers and lowering the "threshold" for people to actually put shrimp into their shopping baskets.

SUSTAINABILITY
What sustainability means for shrimp farming

According to the UN's 2022 World Population Prospects, the global population will grow to 9.7 billion people by 2050.[31] This means that there will be more mouths to feed, and the amount of food required will increase. But increased incomes and urbanization will also cause changes in the types of food demanded. It's suggested that the world's demand for animal-derived protein will double by 2050,[32] resulting in concerns for sustainability and food security.

Fish and seafood are already an important source of protein. According to the WWF, more than 3 billion people in the world rely on wild-caught and farmed seafood as a significant source of animal protein.[33] And as wild fisheries already face over-exploitation, aquaculture offers one solution to help meet growing demand. But aquaculture would need to grow significantly, underlining the importance of sustainability.

But first, it's important to define what exactly we mean by "sustainability" as related to aquaculture shrimp production. In its broadest sense, sustainability or sustainable development can be understood as "development that meets the needs of the present without compromising

[31] UN. (n.d.). *World Population prospects 2022*
[32] Westhoek et al. (2011, April 28). The protein puzzle: the consumption and production of meat, dairy and fish in the European Union. *PBL Netherlands Environmental Assessment Agency.*
[33] WWF. (n.d.). Sustainable Seafood.

the ability of future generations to meet their own needs."[34] For aquaculture shrimp, this means that a broad range of factors are at play:

- responsible production: including energy use, waste management, impact on water, etc.
- responsible sourcing of inputs: feed, broodstock, additives, etc.
- land use and repurposing: e.g. mangroves
- social responsibility: workers, their families, and communities
- responsible transportation and logistics.

A recent publication of the Markets Institute at WWF looks at the sustainability of aquaculture shrimp production through the lens of greenhouse gas (GHG) emissions.[35] In its analysis, most of the above factors are considered (with the exception of waste management and social responsibility).

The Markets Institute estimates the average GHG emissions from aquaculture shrimp production to be 13.5 kg CO2 equivalent per kg of edible weight, but it also highlights the fact that there are many different farming practices in place and that GHG emissions vary considerably between various types of production systems. In general, it finds that more intensive production methods are less GHG-intensive. It also emphasizes that more and better data is needed to better understand what contributes to GHG emissions and how the emissions can be mitigated.

The study concludes that the main sources of emissions vary depending on the intensity of production, but generally include feed ingredients, energy use, and land-use change (LUC) in shrimp pond creation. Together, these sources of emissions point at several opportunities for mitigating GHG emissions:

FEED INGREDIENTS
- the GHG emissions embedded in shrimp feed can add up to 60% of total production emissions
- using less-GHG-intensive feed ingredients can make a lot of difference
- for some ingredients, the LUC involved in their production can contribute substantially to their footprint
- the feed conversion ratio (FCR), the efficiency with which feed can be converted, is another important factor that determines the GHG emissions from feed: more efficient feed conversion drives lower GHG emissions.

ENERGY USE
- shrimp ponds use diesel or electricity to power pumps and aerators: even if electricity is used instead of diesel, this may not be from sustainable sources, depending on the local grid.

LUC
- the conversion of mangroves to shrimp ponds generates large GHG emissions as mangroves are very carbon-rich ecosystems—although mangrove clearing for shrimp ponds has decreased dramatically, its effects should still be accounted for in many production facilities.

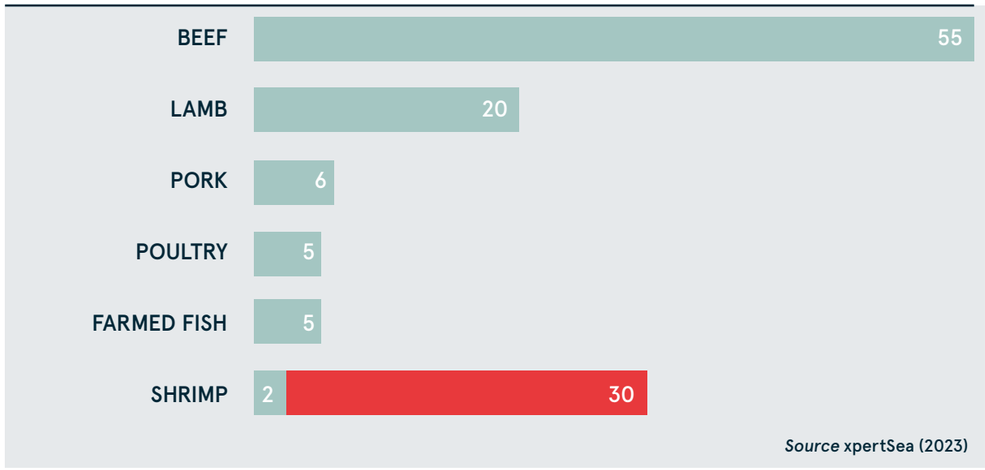
[34] Brundtland, G.H. (1987) *Our Common Future: Report of the World Commission on Environment and Development*. UN.

[35] Moberg, E., Min Lee, J., Kim, S., Boyd, C., & McNevin, A. (2022, September 10). Measuring and Mitigating GHGs: Shrimp. WWF Markets Institute.

Several research initiatives compare the GHG emissions of different sources of animal protein. The following chart compares CO2 equivalent emissions per kg of edible protein for various animal protein sources. It shows that shrimp emission figures range from as low as 2 kg CO2/kg of shrimp to as high as 30 kgCO2/kg.[36]

[36] Robitaille, V. (2023, August 14). *Towards a carbon neutral shrimp industry.* xpertSea.

CO2 emissions per kg of edible protein



Source xpertSea (2023)

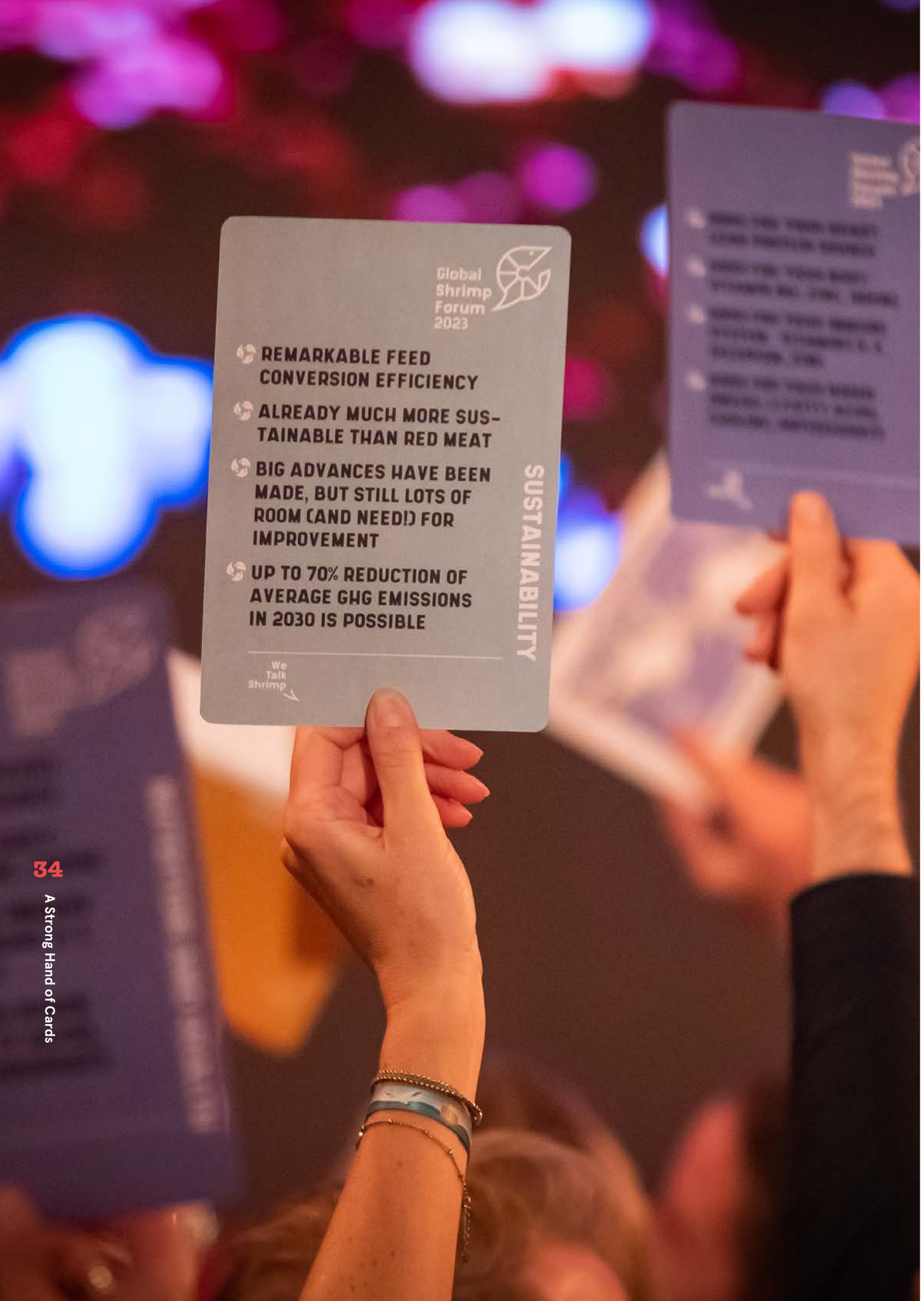
As the chart above shows, GHG emissions from aquaculture shrimp can vary significantly, as there's such a broad range of farming practices. This underlines the potential for a substantial reduction of GHG emissions by adopting different production methods and practices.

There are several opportunities to significantly reduce GHG emissions from shrimp production as better production practices are developed and adopted. Still, there's a large disparity between the front runners and those lagging behind.

Something else to consider is social responsibility. In the past, the shrimp industry has been linked to instances of forced labor and human rights abuses. There are several global initiatives to ensure worker safety, as well as fair pay and treatment.

One example of such an initiative is Seafood Task Force, which tackles underlying issues in the seafood sector that impact the working, social, and environmental conditions. Specifically in the shrimp sector, it's been working on the problem of forced labor in Thai fishmeal fisheries. Social welfare is an increasingly important element of third-party certification, such as ASC and BAP, and many retailers require separate social compliance certification for shrimp processing operations.

It's easy to see how stories about poor GHG performance or other bad practices can overshadow a claim that shrimp is a sustainable product. This makes presenting shrimp as a sustainable food option tricky, as doing so would probably invite criticism and lead to reputational risks (and promotion efforts may backfire).



Relevance of sustainability in various markets Although awareness around climate change is rising around the world, research carried out by McKinsey shows that sustainability isn't at the top of consumers' minds when they're buying food:

> "Most survey respondents prioritize eating healthy over limiting their personal impact on climate change."[37]

[37] Grimmelt et al. (2022).

Health, therefore, seems to outweigh sustainability in terms of its impact on consumers' food choices. While many consumers *say* that sustainability is important to them—sustainability ranks high as a consumer goal in the US (64%) and in Germany (70%)[38]—when it comes to actual *behavior*, the percentage is significantly lower: only about 28% of people report eating more sustainable products, and fewer than 30% say they're willing to pay more for products designed to protect the environment.

[38] Grimmelt et al. (2022).

In Europe, especially western Europe, sustainability is already playing a bigger role. The transition towards a more climate friendly diet is underway. Of particular interest is the role played by bigger retail chains; they're not waiting for consumers to make significant changes but instead set out to play a proactive role in shaping food preferences and shopping behavior.

In China, awareness around sustainability is rising, but awareness of the climate impact of food choices is still limited.[39] Other factors, such as food safety and health, have much more influence on food buying behavior. Indeed, other research shows that even those who do purchase organic or sustainable products do so not out of concern for climate change but because these products are considered to be healthier or safer.[40]

[39] Grimmelt et al., 2023.
[40] Li, Y., Zhang, L., & Jin, M. *China Sustainable Consumption Research Program—Consumer Awareness and Behaviour Change in Sustainable Consumption.* CCFA.

SO DO WE REALLY HOLD A STRONG HAND OF CARDS?

In this chapter, we've identified five cards that make up our hand. The shrimp industry holds this hand of cards collectively: it makes up our collective "strong hand of cards." Having identified the aspects of shrimp that we consider to be beneficial for consumers (whether that be for health or because of positive associations), how are we actually going play this hand? In the next chapter, we'll undergo in-depth analysis of how these cards can be played to maximum effect.

6 HOW TO PLAY OUR CARDS RIGHT

Having established our hand, we're now going to tackle how to play it while at the same time answering some important questions that are bound to come up in our bid to promote shrimp consumption. This chapter builds on our analysis of the various markets (chapter 4) and our outline of the various benefits offered by shrimp (chapter 5).

We'll answer the following questions:
- How do we decide which markets to focus on?
- How should we define our target audience?
- Which card(s) should we play (first)?
- How can a promotion campaign be structured?
- How should we frame the ambition?
- What are the rules of the game?

MARKET FOCUS

Choosing which market to focus on depends for a large part on assessing which market represents the biggest growth potential. As we discussed in chapter 4, the opportunity to increase consumption through promotion is biggest in markets and regions where affordability and availability are sufficiently high (i.e. when these don't present a bottleneck). This is the case in the US and in Europe, as well as in Tier-1 cities in China and India. But when we want to determine which market represents the greatest potential effectiveness of a shrimp promotion campaign, there are some other factors to consider:

> "...the opportunity to increase consumption through promotion is biggest in markets and regions where affordability and availability are sufficiently high."

- **Efficiency of communications efforts:** An obvious difference between the European market and the US market is that the European market is much more fragmented, both culturally and economically. Any promotional effort in the European market would need to navigate this fragmentation: multiple languages, differences in food cultures and habits, differences in media availability, etc. The Chinese market falls somewhere in between: although China is one nation, there are multiple languages, and many cultural and economic differences between different parts of the country. Some of these differences could be navigated by focusing on specific geographies, such as metropolitan areas. But, still, the fragmentation would likely be bigger than in the US.
- **Efficiency of media:** The same communications budget may generate a bigger reach or higher frequency of contact in different markets. This could be an important factor in the potential effectiveness of a promotion campaign.

So what should we consider, then, when selecting one or more markets to focus our campaigns on?

- **growth potential for shrimp:** affordability and availability
- **potential resonance of the campaign:** relevance of the message, how to strike a chord with the audience
- **potential efficiency of communication efforts:** level of fragmentation within the market and the target audience
- **potential efficiency of media:** reach and frequency that can be generated with a specific communications budget.

These factors can aid in decision making, but to make a useful assessment of each of them, more research would be required.

TARGET AUDIENCE

When defining the target audience, it seems logical to focus on people who are most inclined to eat shrimp. After all, it would seem that these are the people who require the least effort to be persuaded to buy (more) shrimp. But actually, this is a common pitfall.

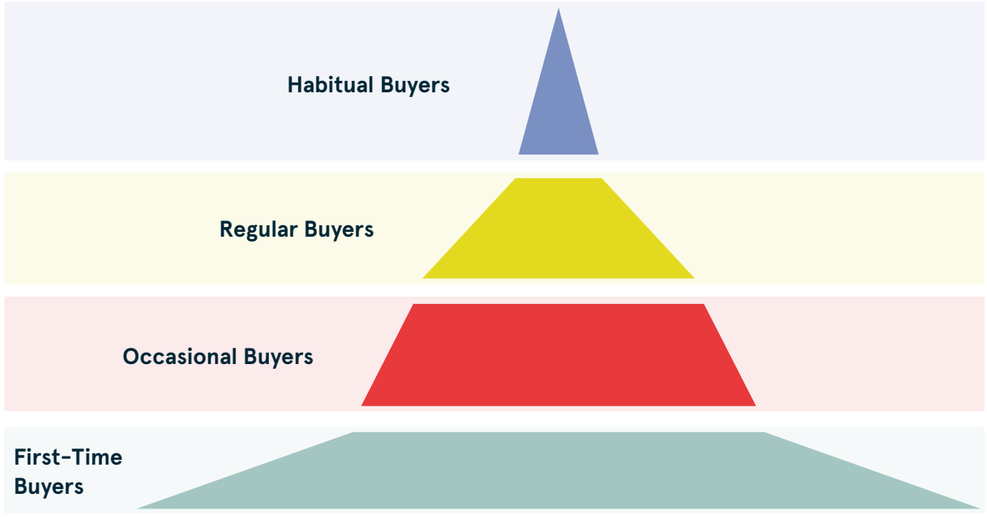
There's a famous law of marketing discovered by Andrew Ehrenberg in 1959, the law of Negative Binomial Distribution. The law states that most buyers of a brand or a product type are "light buyers" in the sense that they buy it very irregularly. But when taken together, these light buyers usually account for over half of total sales.

For the shrimp category, this means that in order to grow, it needs to attract (many) new buyers. We'll refer to this growth strategy as an "increase in buyers." In other words, it needs to increase its penetration instead of increasing the average amount of shrimp bought by (current) shrimp buyers—we'll refer to the latter growth strategy as an "increase in frequency."

This can be understood by visualizing shrimp buyers as a pyramid (see representation below) with a wide base of low-frequency buyers and a narrow peak of high-frequency buyers. For the pyramid to grow, it needs a wider base: this broader base of familiarity with shrimp will then also lead to broader levels higher up.

The other way around (expanding the peak without expanding the base) is not consistent with marketing theory. To understand why this wouldn't work, consider that the number of high-frequency buyers is much smaller than the number of potential light buyers. Even if we would succeed in getting all of the high-frequency buyers to buy shrimp more often, it still wouldn't represent a significant volume when compared to increasing the number of light buyers.

Sales volume per buying frequency cohort



Note This illustration is not based on actual purchasing data

It's also important to note that the communication messages that would be required to get current shrimp buyers to buy shrimp more frequently would differ from those aimed at first-time buyers. In fact, the messages aimed at more frequent shrimp buyers would probably not work that well for first-time buyers. But the messaging for first-time buyers would probably work quite well for those who already buy shrimp—even though it may not tell them anything new, it would still serve as confirmation of their existing attitudes and behaviors. This provides an extra argument to focus our messaging on light buyers, including first-time buyers.

WHICH CARD(S) TO PLAY?

When selecting the "card(s)" to feature most prominently in a promotional campaign, we should look at the following criteria:

- Relevance: How much does the intended audience care?
- Credibility: Do we have a solid reason to believe?
- Competitive strength: How strong is our claim in light of the alternative choices available to the audience?
- Risk: What is the chance of negative publicity or it backfiring?
- Mileage: Will this allow us to stay relevant in the years to come?

The matrix below assesses each of these criteria for the five cards in our hand.

Strength assessment of the various benefits of shrimp

	Relevance	Credibility	Competitive Strength	Risk	Mileage
Positive Associations	Especially in the US and China				Good basis to build on, but can't be the whole story
Nutrition & Health	Highly relevant around the world	Strong evidence to build on		Health reputation is vulnerable to "incidents"	Relevance likely to grow
Versatility	Inspirational		Other options are also very versatile (e.g. chicken)		Rich source for storytelling
Convenience	Highly relevant around the world	Substantial gap with perception	Strong when compared to meat		Depends on new evidence (e.g. ready-to-eat products)
Sustainability	Relevance is strongest in Europe Very likely to grow everywhere in the coming years	Industry "front runners" are very convincing Large gap with those lagging behind could undermine credibility	Strong alternative to red meat Less convincing when compared to chicken and plant-based protein	Risk of negative publicity/ backfiring	Will only become more relevant in the coming years

\+ ± –

Positive associations The strong associations people have with shrimp are a good basis to build on. However, they can't be the whole story. First of all, while they can provide a strong emotional connection, they don't offer any rational arguments to eat shrimp. What's more, they don't bring anything "new." This presents little opportunity for storytelling.

Nutrition and health This is a very strong card to play as it's highly relevant around the world, and this relevance is likely to become greater in the coming years; health consciousness is set to grow, especially in markets with aging populations. On top of that, there's very strong evidence to support the nutritional values and health benefits of shrimp. Still, there remains a risk of "incidents" that could harm the health reputation of shrimp (think antibiotics, pollution resulting from (natural) disasters, etc.).[41]

An important caveat with communication around nutrition and health is that people don't like to be told what they should or shouldn't eat. Finding the right tone for communication is crucial: "preaching" doesn't work. The pitfall is that for some people, "healthy" is considered to be at odds with indulgent: if something is good for you it can't be something you love to eat. This presents an opportunity for the shrimp industry to show that these can go hand in hand. "First seduce, then convince" could be an important motto here.

Versatility The versatility of shrimp as a food option is highly relevant, and the evidence is compelling. As such, versatility opens up a rich vein for storytelling content that inspires and even seduces people to eat shrimp more often. There is, however, a strong competitor in this area, and that's chicken. This makes it questionable whether versatility by itself would be a strong enough reason to choose shrimp over chicken (competitive strength). The versatility card likely needs to be combined with another one.

Convenience Shrimp is a very convenient ingredient in the kitchen, mostly because of the short cooking time and the fact that (peeled) shrimp doesn't require further preparation. Frozen shrimp presents yet another convenience benefit as it can be used directly in a dish without thawing—what could be more convenient than that? Finally, the possibility to use exactly the desired amount of (frozen) shrimp means less food waste.

What's striking here is that, despite all of the convenience benefits mentioned, shrimp isn't currently perceived to be a convenient food, especially among those who haven't cooked with it before, or those who use it infrequently. This relative unfamiliarity makes shrimp seem less convenient than it actually is: any ingredient that's outside of someone's comfort zone is likely perceived to be difficult to prepare.

Sustainability Sustainability will only become more relevant in the coming years. Awareness around climate change will no doubt grow. More importantly, so will awareness of the link between dietary habits and climate change. Shrimp can be a strong alternative for those who

41 M. Ives et al. (2023, 25 August). Seafood Is Safe After Fukushima Water Dump, but Some Won't Eat It. *The New York Times.*

become conscious of the climate effects of eating meat, especially red meat, but who don't necessarily want to become vegetarian or vegan.

The problem with sustainability is the large gap between the performance of the "front runners" in sustainable shrimp production and those lagging behind. This gap presents a risk of negative publicity (i.e. there's a risk that playing this card will backfire). A claim that shrimp is a sustainable or responsible choice in light of climate change, backed up by best-in-class examples, can (and will) invite criticism that points at those producers that are lagging behind. Such criticism can easily damage the sustainability reputation of shrimp in general, and sidetrack promotional efforts.

Making a choice Choosing the strongest card(s) to play, of course, depends on the (market) scope and the objectives of a specific promotional effort. In general, though, based on our assessment of the relative strengths, we can conclude that the "nutrition and health" card combines high relevance, strong evidence, and low risk. The biggest caveat is that we don't want to preach; the health message should be combined with a more inspirational angle.

The "versatility" and "convenience" cards provide just this, an opportunity to add a "fun" element to communication. This will boost people's curiosity and seduce them into buying shrimp more often. This fun and inspiring element can be even stronger when grounded in the positive associations that already exist in consumers' minds.

CAMPAIGN ARCHITECTURE

When setting up a promotion campaign, it's useful to clearly define the communication tasks. In other words, what specific objectives should a promotion campaign help to accomplish?

The table below presents a sample campaign architecture. Please note that we don't intend this to be a final (or comprehensive) architecture, as this would depend on the starting points of the campaign (market, target audience, and budget, to name just a few). In that respect, the table simply shows one possible way to approach the business problem in question.

Business problem The top of the diagram highlights the business problem: currently, shrimp is seen as a special food option in the sense that it's bought and consumed less frequently than other sources of animal protein (red meat and white meat). Aside from its higher price, the main factors that prevent shrimp from *going mainstream* are:

- it's perceived as special (only for special occasions or specific meals)
- it's relatively unfamiliar.

Positioning In our sample campaign architecture, shrimp is positioned as "giving you more reasons to smile." Here, it's important to note that this isn't intended as a fully formed positioning statement but rather as a concise way to summarize the combination of benefits represented by the strongest cards in our hand: *nutrition and health, versatility,* and *convenience,* all of which are reasons to smile. It also seeks to strike the right tone for shrimp communication: we want to highlight shrimp as an exciting food option, with a touch of humor and lightheartedness.

Marketing objectives, barriers, and tasks for communication Three different marketing objectives are set out in the sample campaign architecture: *awareness, consideration,* and *purchase.* Each of these is connected to a specific barrier that we need to overcome. Each of these barriers is then mapped to a specific *task for communication*. Finally, these communications tasks are mapped to the most suitable communications channels.

Channel selection Selecting the most appropriate channels for a specific promotion campaign would require careful consideration based on the specific market, audience perceptions and attitudes, and budget, as well as many other factors. In general, however, for each of the marketing objectives and associated tasks for communication, we can suggest a set of channels that should be considered.

For the first pillar *(awareness)*, appropriate channels combine a high potential reach with the ability to trigger an emotional response. Video content is most suitable for this, and, depending on budget and audience behavior, this could lead to a combination of social and digital video advertising with traditional TV advertising.

For the second pillar *(consideration)*, channels should offer the opportunity to deliver inspirational and educational content. Typically, this leads to digital and social channels around food inspiration and recipes, possibly amplified by collaborations with influencers or chefs on culinary TV programs. Digital PR can be used to tackle specific challenges or to dispel myths. Digital out-of-home advertising can also be very effective here, especially when targeted to the right context (for example, before dinner, or close to retail or food service outlets).

> "Our ambition must generate momentum and motivate different stakeholders to work together."

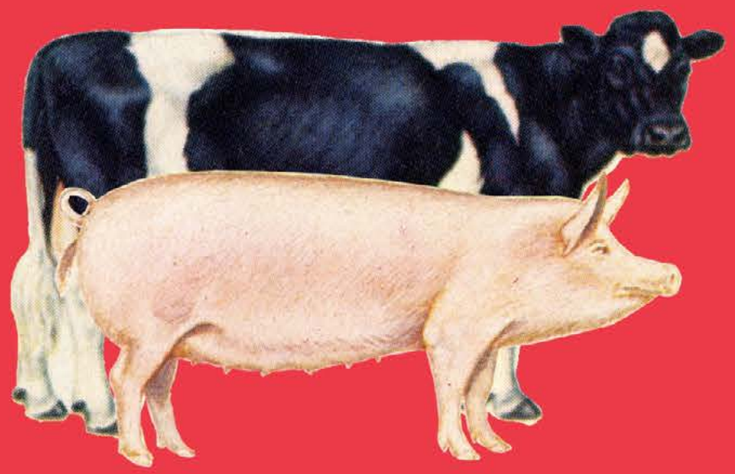
It's important to mention the potential represented by collaborations with retail brands and food service chains. These outlets have a lot to offer in terms of reach, both in-store and through their own communications channels (apps, websites, newsletters, promo leaflets, etc.). And they're always looking for new ways to inspire and excite their customer base: shrimp can help them do so. The more traditional opportunities like special offers and sales promotions can be combined with offers that integrate shrimp in the growing selection of ready-to-cook packages that many retail outlets are now offering.

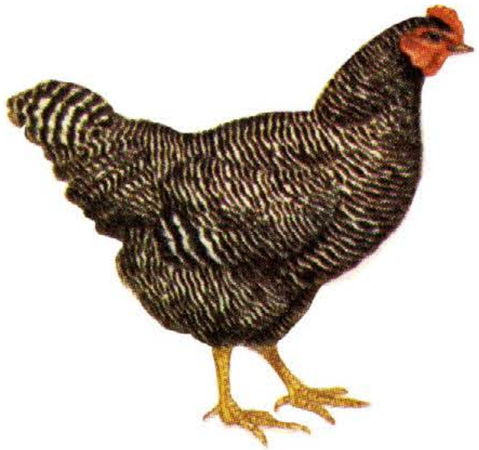
FRAMING THE AMBITION

It's important to think carefully about how to frame the ambition for shrimp promotion: if the bar is set too low, our ambition won't motivate people to join in the effort. Our ambition must generate momentum and motivate different stakeholders to work together. It's also important to consider timeframe: the ambition shouldn't be defined according to a too short a term. It's reasonable to set a time horizon of 10 years—it will probably take this amount of time to make a real difference in dietary preferences and behaviors.

Sample campaign architecture

Business problem	"Shrimp is **too unfamiliar** and **too special** to go mainstream"		
Positioning	"Shrimp gives you more reasons to smile"		
Marketing objectives	Awareness	Consideration	Purchase
Barriers	Unknown means unloved	Considered mainly for special occasions/meals	Seen as too difficult to prepare
Communications tasks	Let people in on the reasons why shrimp will make them smile	Inspire and seduce people into finding more reasons and occasions to buy shrimp Educate, dispel myths	Make it easier to buy, prepare, and enjoy shrimp
Channel selection	Social (video) content Online video advertising TV	Digital/social content (Digital) PR Digital out-of-home Influencer collaborations (Culinary) TV	Special offers/ sales promotions Integration of shrimp in ready-to-cook packages
		Retail and food service collaborations	





"A choice between red, white and blue."

We must also think carefully about *how* we talk about shrimp. If we emphasize the fact that shrimp is a "special" product, we may reinforce the idea that shrimp is only for very specific occasions. The result of this could be that a portion of our target audience then adopts the idea that "shrimp isn't for me." If we start to show how shrimp can actually add something to regular food routines, this will trigger people's curiosity. In turn, it will invite them to choose shrimp.

As we've seen in chapter 4, consumers are activity reconsidering their food habits and (animal) protein is at the heart of the changes taking place. We've also seen that shrimp has many attractive properties that can compete with these other proteins.

One approach would therefore be to frame the ambition in terms of this "protein competition": *as a choice between red, white, and blue.*

It's a simple and straightforward way to make it clear that our objective is to make a radical change in the way shrimp is perceived by the public. And if we want to make a big difference, we need a bold, ambitious goal.

SOME RULES OF THE GAME

Whatever promotion initiatives will be set up by the industry, there are some fundamental rules to play by that will maximize the effectiveness of the effort.

"Underpromise, and then overdeliver."

Be prepared

As soon as you start to communicate, you can expect some questions, some challenges... and yes, also some criticism. And you must know beforehand how you will respond. Openly and truthfully usually works best. *Under promise, and then over deliver.*

Play together

The best way to win is to play together. If you only compete with each other for a larger piece of the pie, you won't succeed in increasing the size of the pie itself.

Play the long game

This isn't something you can achieve in 1, 2, or even 3 years. This will probably take a decade. But that doesn't mean that you can afford to wait before you start.

Be consistent

To land a story in people's minds takes time. If you change your story too often, it won't stick. So when you have plotted a course, stay on it.

COLOPHON

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