

# Jessa Garibay-Yayen

University of Cambridge

 @SAGB



Shellfish  
Association of Great Britain

THE CROWN  
ESTATE



Llywodraeth Cymru  
Welsh Government



Department  
for Environment  
Food & Rural Affairs



The FISHMONGERS'  
Company's

FISHERIES CHARITABLE TRUST

SEPAmatic



Infrastructure  
and Environment



Crown Estate  
Scotland  
Oighreachd a' Chrùin Alba

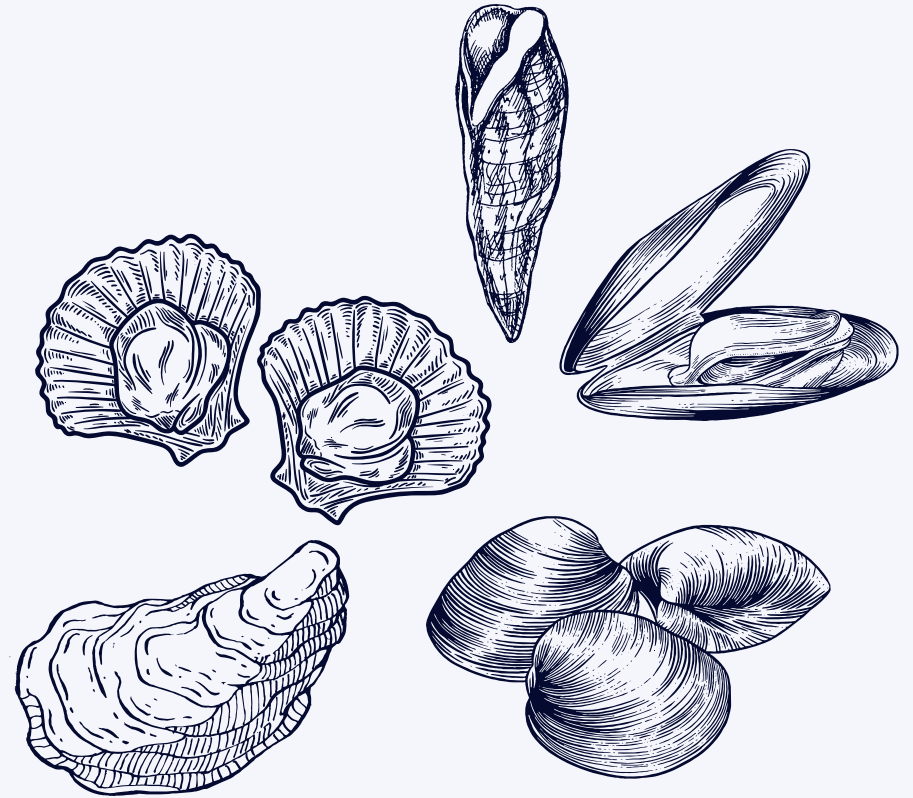
seafish



Marine  
Management  
Organisation

# SURFING UNDERLOVE D SEAFOOD

Understanding the drivers and barriers to the human consumption of underutilised seafood parts and species in the United Kingdom



---

Jessa Garibay-Yayen  
MPhil Seafood for Societal Health  
University of Cambridge  
jbbg2@cantab.ac.uk



Our global  
population is  
set to hit  
10 billion by 2050

Gu et al.,  
2021



It's getting  
HOT in here

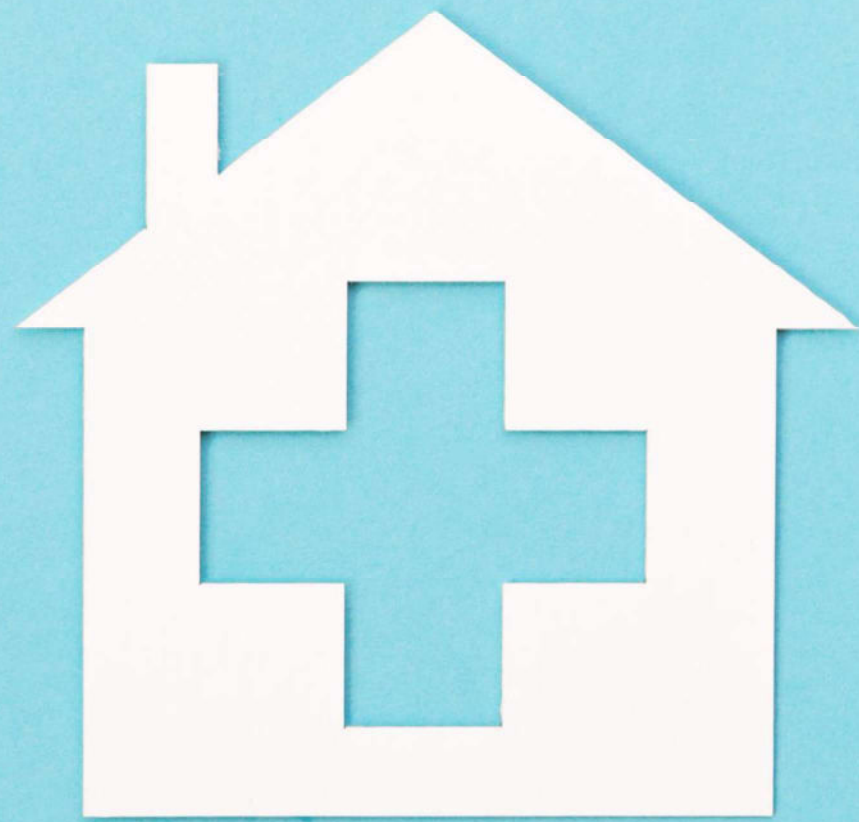
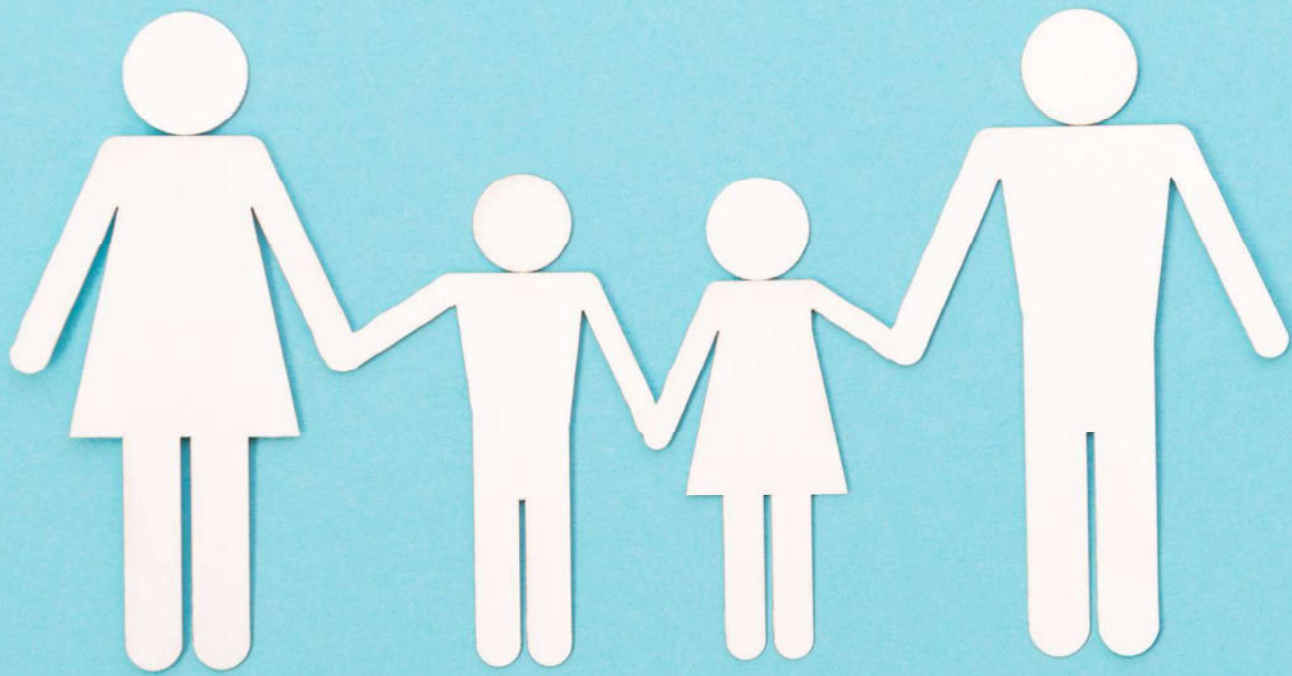


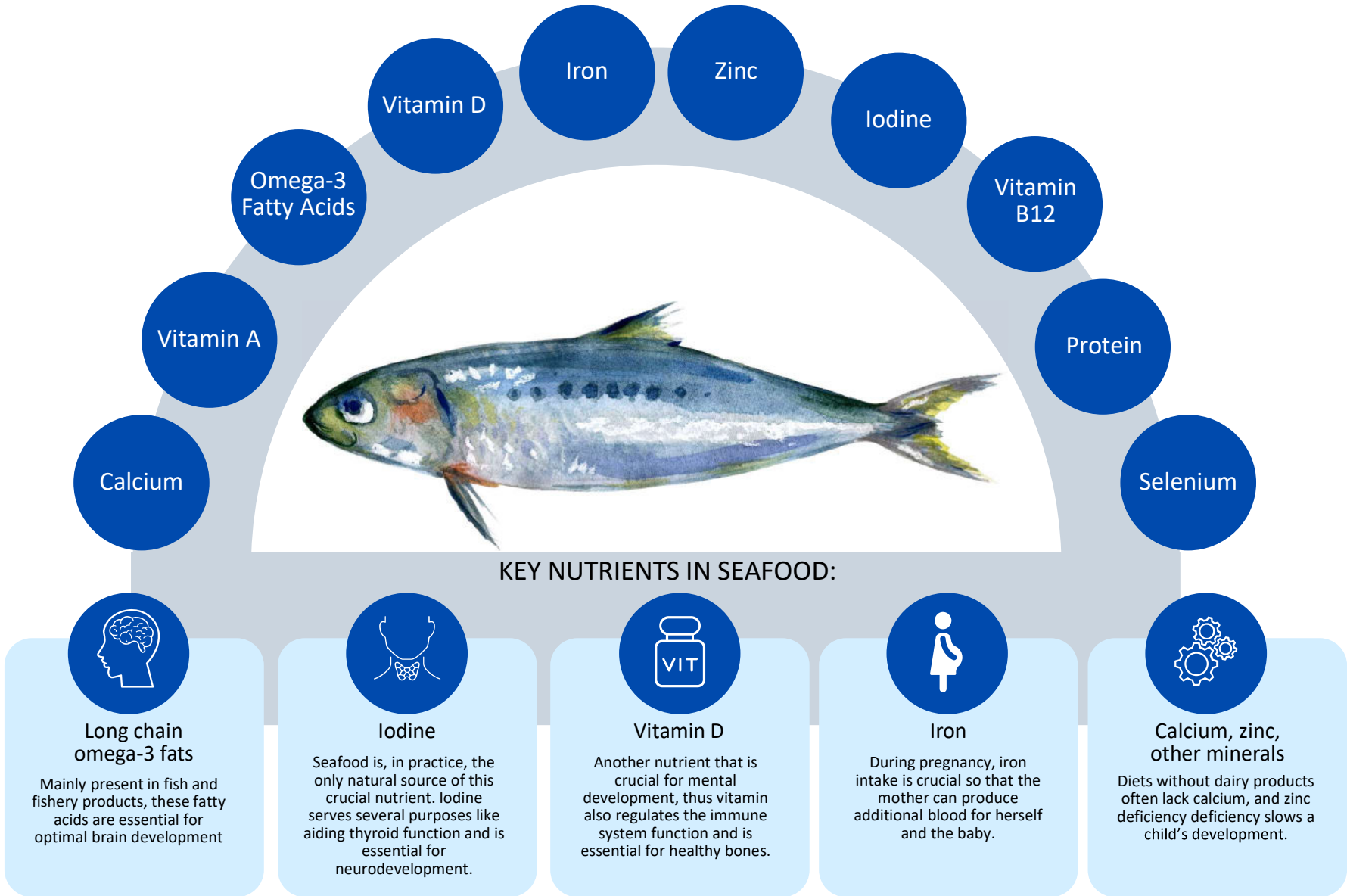


There is an urgent need for a resilient and diverse food system that is necessary for food security, human health, the planet's health, and social progress.

Seafood has the potential to support diverse and nutrient-rich diets.



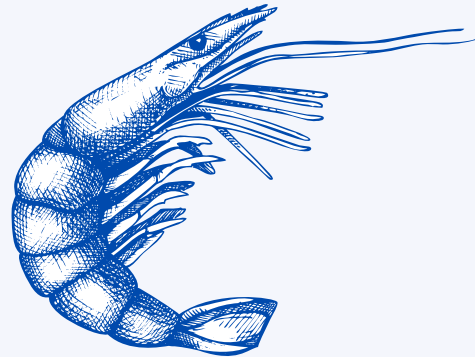
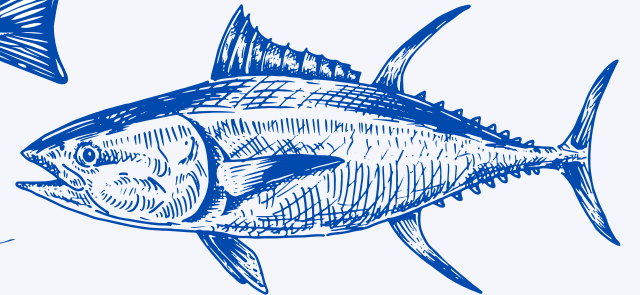
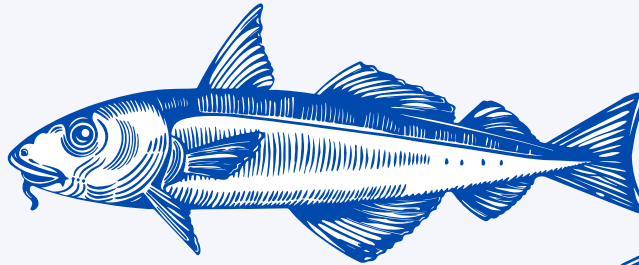
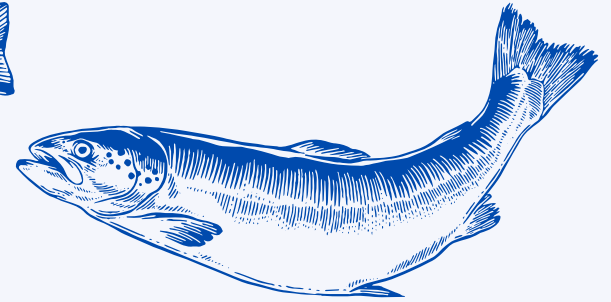
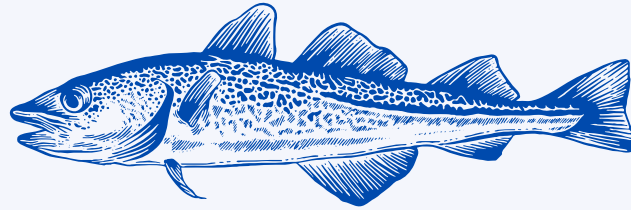












**UK's BIG FIVE**



The UK produces over 124 species domestically, with a total landed volume of 411,000 tonnes and a value of £ 757 million.

FAO, 2023,  
2022

# 5.2 billion portions of fish and chips by weight

WWF-UK,  
2022



The UK exports  
much of what  
it catches, and  
imports much  
of what it eats.

Harrison et al.,  
2023



**Barriers &  
drivers to  
consumption  
of species  
outside the  
BIG FIVE.**

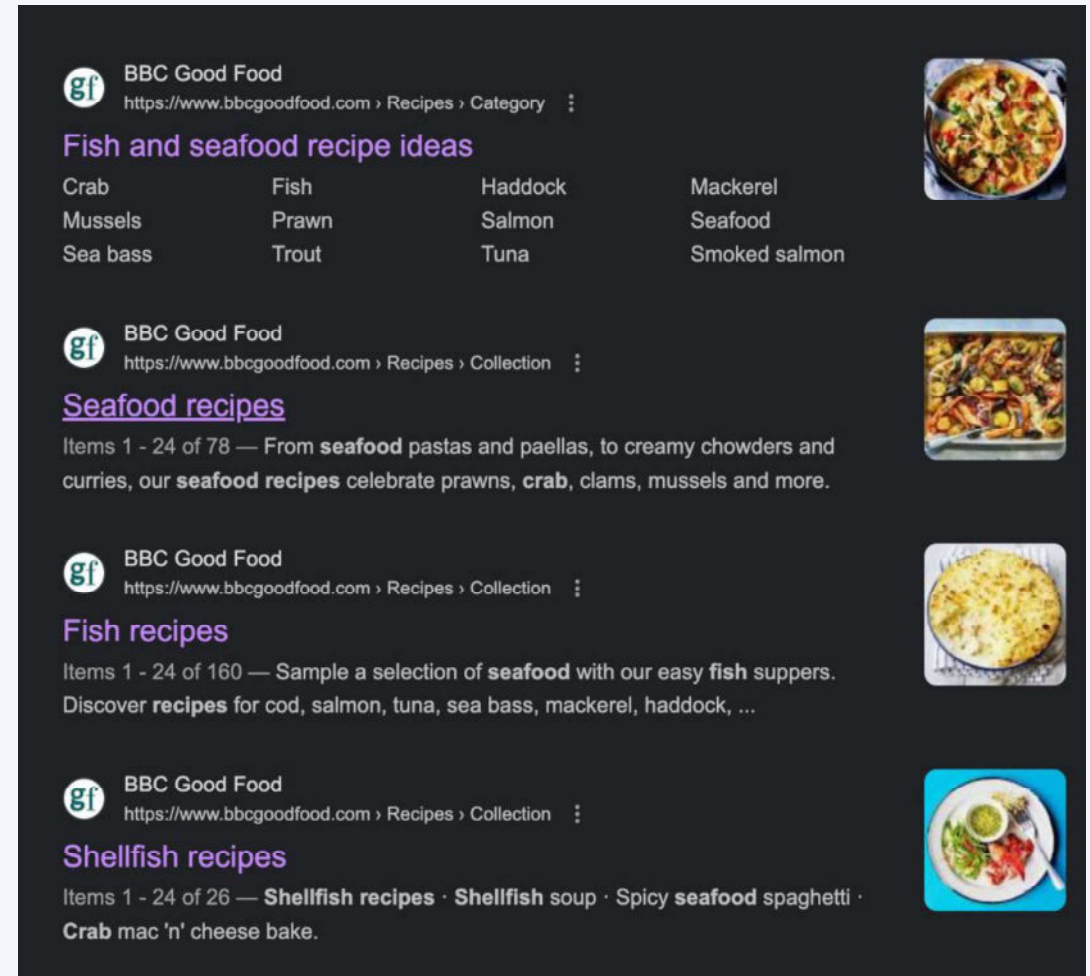


# Web scraping seafood recipes

> 8,000 recipes

Seafood representation:

Cuts/parts and Species

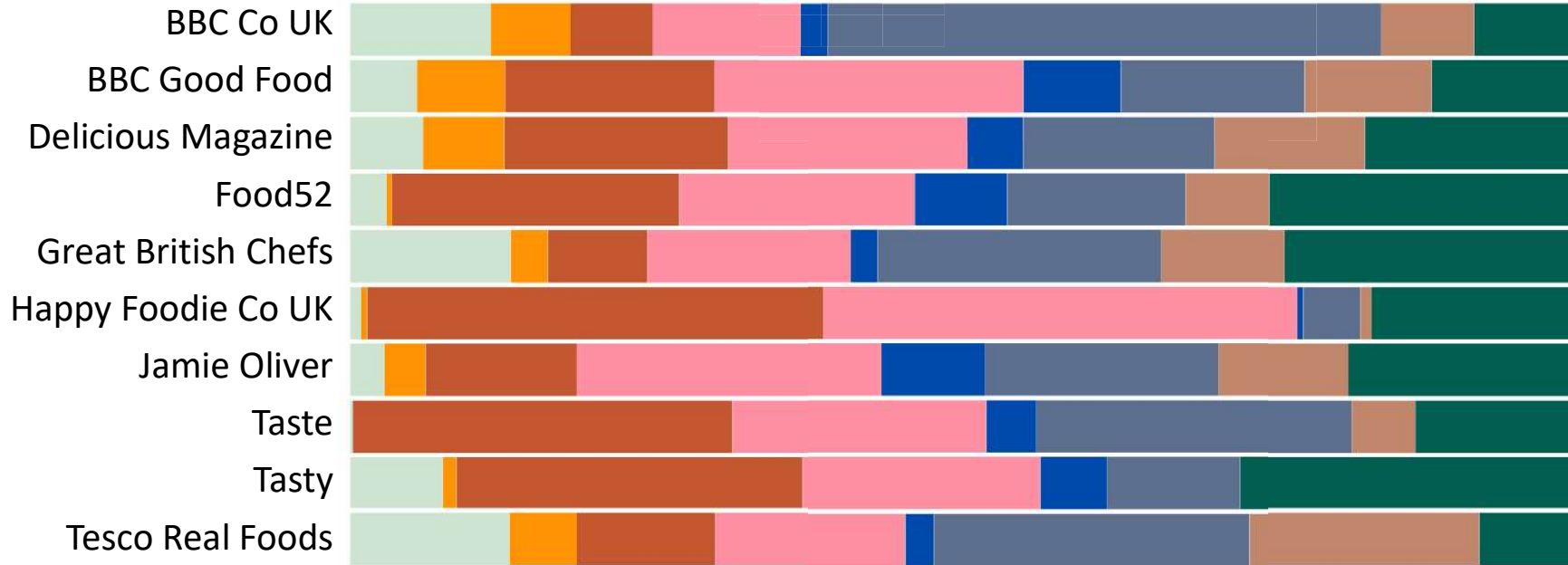


The screenshot displays four sections from the BBC Good Food website, each featuring a recipe category and a corresponding image:


- Section 1:** BBC Good Food, <https://www.bbcgoodfood.com/Recipes/Category>. Category: **Fish and seafood recipe ideas**. Includes a grid of links: Crab, Fish, Haddock, Mackerel, Mussels, Prawn, Salmon, Seafood, Sea bass, Trout, Tuna, and Smoked salmon. Image: A bowl of seafood salad.
- Section 2:** BBC Good Food, <https://www.bbcgoodfood.com/Recipes/Collection>. Collection: **Seafood recipes**. Description: Items 1 - 24 of 78 — From **seafood** pastas and paellas, to creamy chowders and curries, our **seafood recipes** celebrate prawns, **crab**, clams, mussels and more. Image: A seafood pasta dish.
- Section 3:** BBC Good Food, <https://www.bbcgoodfood.com/Recipes/Collection>. Collection: **Fish recipes**. Description: Items 1 - 24 of 160 — Sample a selection of **seafood** with our easy **fish** suppers. Discover **recipes** for cod, salmon, tuna, sea bass, mackerel, haddock, ... Image: A fish and vegetable soup.
- Section 4:** BBC Good Food, <https://www.bbcgoodfood.com/Recipes/Collection>. Collection: **Shellfish recipes**. Description: Items 1 - 24 of 26 — **Shellfish recipes** · **Shellfish** soup · Spicy **seafood** spaghetti · **Crab** mac 'n' cheese bake. Image: A plate of shellfish with a dipping sauce.




Cod
  Haddock
  Prawn & Shrimp
  Salmon
  Tuna
  White Fish
  Oily Fish
  Shellfish




Percentage of Seafood Types across Website




**Creamy salmon, leek & potato traybake**  
 ★★★★★ 340 ratings  
 Nestle leeks, potato and capers around salmon fillets to make this easy traybake for two. It's great as an midweek meal, or for a more romantic occasion  
 40 mins Easy Gluten-free




**Clementine and cod curry**  
 by Nadiya Hussain



**Cod in curry sauce**  
 by Romy Gill



**Miso cod with mackerel and coriander broth**  
 by Matt Tebbutt



**Pomegranate salmon**  
 ★★★★★ 9 ratings  
 Use fresh pomegranate as well as molasses to get a deeper flavour in this salmon recipe. Serve with couscous or steamed green veg, if you like  
 30 mins Easy

### Tex-Mex fish fillets

Good Food team

★★★★☆ 8 ratings [Rate](#) [7 comments](#)

[Get 5 issues for £5 when you subscribe to our magazine](#)

⌕ Prep: 5 mins ⌕ Easy ⌕ Serves 4

Cook: 10 mins

A good way to spice up fish if children aren't that keen, get them to help cook

Nutrition: per serving

	kcal	fat	saturates	carbs	sugars	fibre	protein	salt	low in
	245	14g	2g	2g	1g	1g	27g	0.54g	

Try our app for tasty budget-friendly cooking

[Download now](#) **gf%**

### Whole sea bass with mango salsa

★★★★★ EASY JUNE 2022

✓ Test kitchen approved

SERVES 2

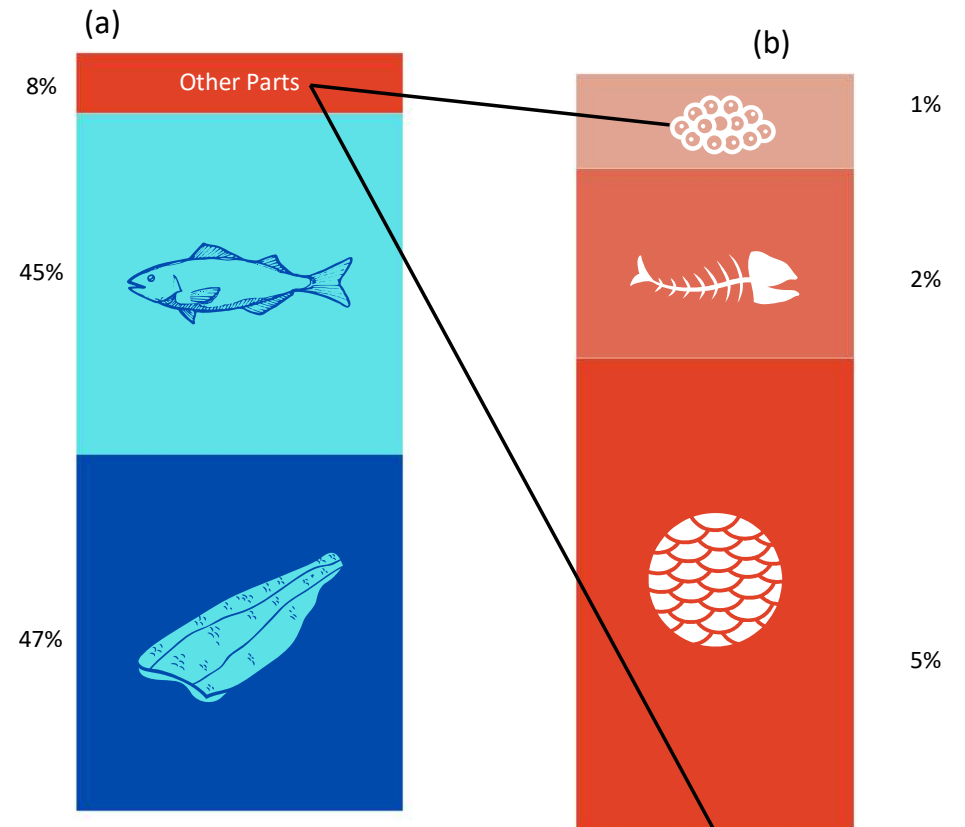
Debora Robertson's whole sea bass with mango salsa recipe makes a speedy and impressive dinner for two. Serve with salad and potatoes.

For an all-in-one fish dish, try our sea bass traybake with peppers, cherry tomatoes and pine nuts.

[DAIRY-FREE RECIPES](#) [GLUTEN-FREE RECIPES](#)

NUTRITION PER SERVING

	AMOUNT	PERCENTAGE
CALORIES		SPENCALS
FAT	37.80	(7.80 SATURATED)
PROTEIN	38.40	
CARBOHYDRATES	21.50	(19.20 SUGARS)
FIBRE	9.50	
SALT	0.40	



# Recipe Complexity

## Word count

### Bloody Mary prawns

★★★★★ 5 ratings

[Rate this recipe](#)



Treat yourself to this cheeky supper, inspired by the tomato-based cocktail that gives you one of your 5-a-day. Serve with crusty bread.

## Number of ingredients

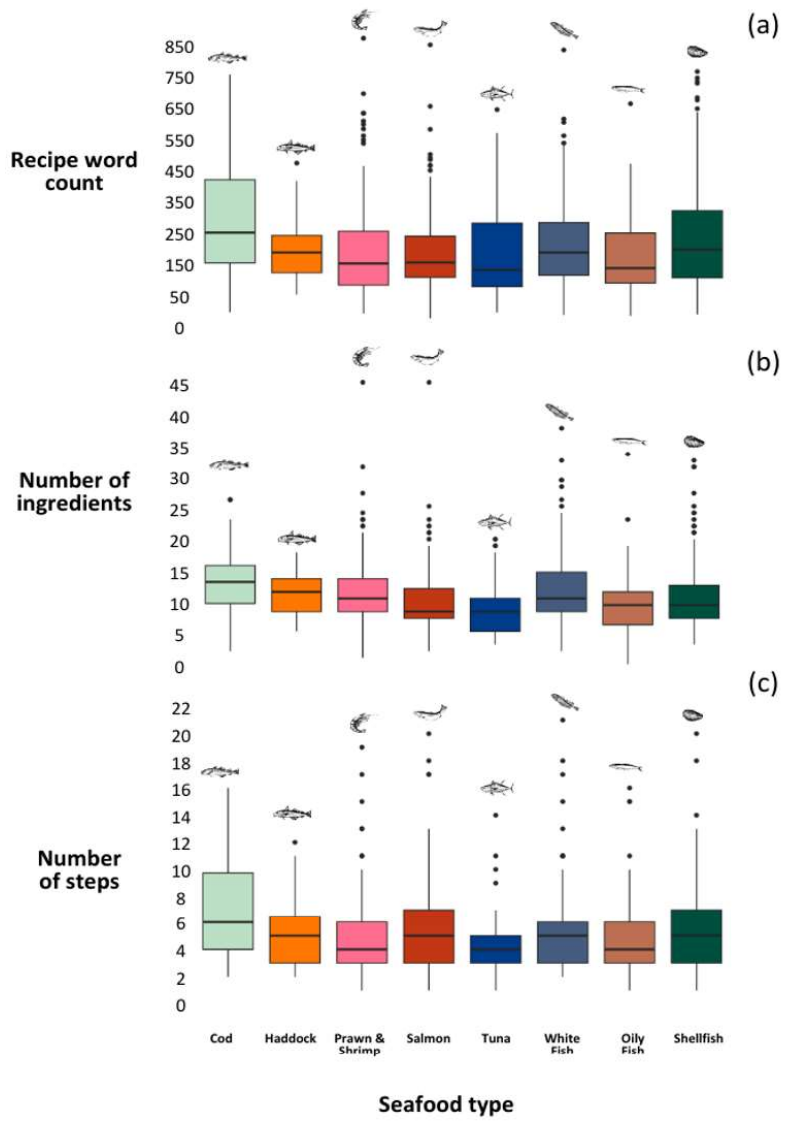
### Ingredients

3 large [garlic](#) cloves, thinly sliced  
1 tbsp extra virgin [olive oil](#)  
¼ tsp [celery salt](#)  
1 tbsp [vodka](#)  
400g tin [cherry tomatoes](#) in juice  
1 tbsp [Worcestershire sauce](#)  
½ tsp [caster sugar](#)  
7–8 dashes [Tabasco sauce](#)  
10–12 large raw king [prawns](#), shelled and deveined  
small handful flatleaf [parsley](#), roughly chopped

## Number of steps

### Method

1. Put the garlic and olive oil in a large, cold frying pan. Place the pan over a medium–low heat until the garlic has heated up and softened in the oil.
2. Stir in the celery salt, then add the vodka and let the liquid bubble away. Add the cherry tomatoes, Worcestershire sauce, sugar and Tabasco sauce. Turn up the heat and bring the sauce to the boil, then reduce the heat and simmer for 15 minutes, stirring occasionally and breaking up the tomatoes with the back of the spoon.
3. Turn the heat up to medium and stir in the prawns. Cook for 4–5 minutes, or until the prawns are just cooked through.
4. Divide between two warm bowls, scatter over the parsley and serve immediately, with crusty bread.



### Cod en papillote with spicy olive sauce

★★★★★ 7 ratings  
Rate this recipe

Preparation time: less than 30 mins  
Cooking time: 10 to 30 mins  
Serves: Serves 1

Marcus Wareing's solo fish supper sees steamed cod served on top of a quick chilli tomato sauce, with plenty of olives and crusty bread for company.

By Marcus Wareing  
From Marcus Wareing Simply Provence

Share Add to favourites  
Shopping list Print recipe

#### Ingredients

- 1 tbsp olive oil, plus extra for drizzling
- 1 red pepper, finely chopped
- ½ red chilli, sliced and seeds removed
- 1 tbsp capers
- pinch herbs de Provence
- 400g tin chopped tomatoes
- 1 cod filet
- 1 lemon
- handful green and black olives, chopped
- sea salt and freshly ground pepper
- crusty bread, to serve

#### Method

- Heat the oil in a medium saucepan, then add the red pepper, chilli and a pinch of salt and pepper. Bring the temperature up slowly to sweat the vegetables.
- Add the capers and herbs de Provence, then stir for a minute to release the flavours. Tip in the tinned tomatoes, stir through and simmer gently while you cook the cod.
- Put the cod on a square of baking paper, then add a drizzle of olive oil and some salt and pepper. Top with three slices of lemon.
- If cooking the cod in the oven, preheat the oven to 180C/160C Fan/Gas 4. Keep the cod in its baking paper and place on a hot baking tray. If using a barbecue, wrap the cod in its baking paper, then again in a square of kitchen foil to create a parcel.
- Put the parcels directly onto the barbecue coals and cook for 5–10 minutes. If using the oven, bake for 12–15 minutes. Set aside.
- If using the barbecue, drizzle some olive oil onto the rest of the lemon and char it on the grill. Add some of the olives to the sauce, reserving a few.
- To serve, spread the sauce onto a plate and place the cod on top. Put the charred lemon on the side, drizzle with olive oil and scatter with the remaining olives. Serve with crusty bread.

### Tuna melt

★★★★★ 52 ratings  
Rate this recipe

Preparation time: less than 30 mins  
Cooking time: less than 10 mins  
Serves: Serves 1

This classic tuna melt can be made in a frying pan! If you like a little more texture to your toastie, it also works well with a tablespoon of finely diced celery folded through the filling.

By Sarah Cook

Share Add to favourites  
Shopping list Print recipe

#### Ingredients

- 80g tinned tuna, drained
- 1 spring onion, thinly sliced
- 1 heaped tsp diced red onion or shallot
- 50g/1½oz extra mature or mature cheddar, grated
- 1 tbsp mayonnaise
- tiny squeeze lemon juice
- 2 thick slices white or wholemeal bread
- 1 tbsp butter, softened
- 1 tsp olive oil
- salt and freshly ground black pepper

Recipe tips

#### Method

- Tip the tuna into a bowl with the spring onion, red onion and cheddar. Use a fork to flake apart the tuna and mix everything together. Add the mayonnaise, lemon juice, lots of pepper and a little pinch of salt and fold together.
- Sandwich the filling between the two slices of bread, then butter the outsides of the sandwich.
- Heat the oil in a frying pan over a low heat. Add the sandwich and immediately sit a clean, small, flat-bottomed saucepan on top with a tin inside to squash the toastie down. Fry for 4–5 minutes, or until the bottom is crisp and golden and the filling is starting to ooze – if it browns quicker than this the filling won't be melted enough. Flip and repeat to cook the other side. If it's perfectly toasted but the filling is not quite melted enough, pop in the microwave for a minute. Serve immediately.

# Online survey using Qualtrics

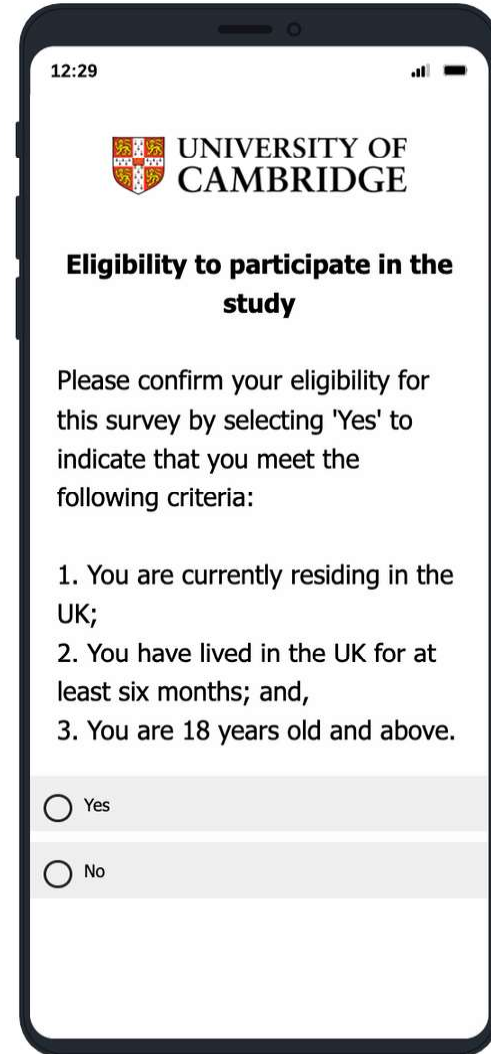
300+ respondents

Species & cuts consumed


Frequency & motivations

Barriers & threats

NCDs



12:29

 UNIVERSITY OF  
CAMBRIDGE

**Eligibility to participate in the  
study**

Please confirm your eligibility for  
this survey by selecting 'Yes' to  
indicate that you meet the  
following criteria:

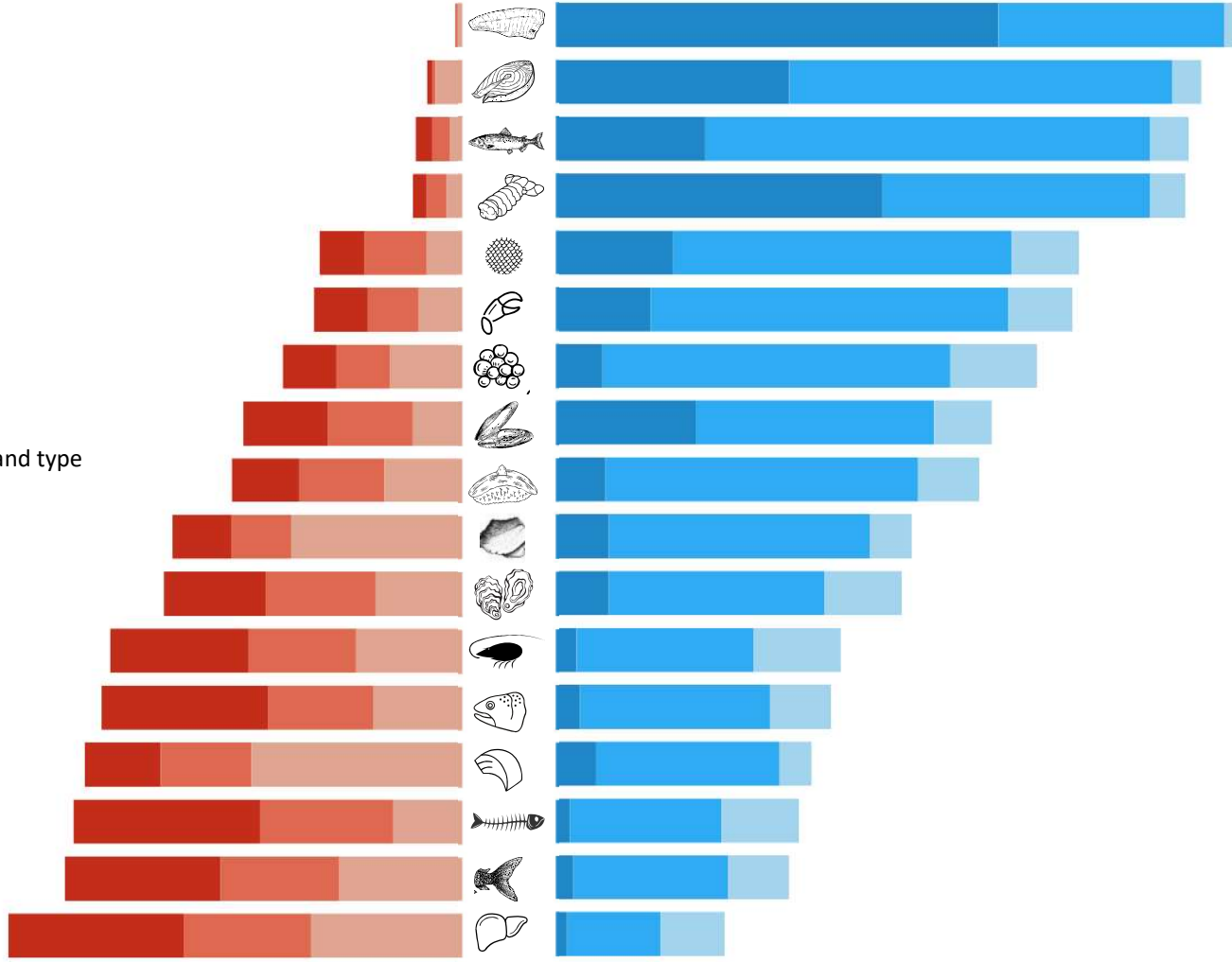
1. You are currently residing in the  
UK;
2. You have lived in the UK for at  
least six months; and,
3. You are 18 years old and above.

Yes

No

■ Regular Consumption   
 ■ Occasional Consumption   
 ■ Consumed  
■ Open to Trying   
 ■ Uncertain About Trying   
 ■ Not Open to Trying

Seafood part and type



Consumption and willingness to try



Importance Score

0 \\ 2

3

4

Novelty

Packaging

Cultural or traditional reasons

Adherence to recipe

Variety of options available

Brand reputation

Desire to support local or domestic seafood industry

Source

Certification labes

Health Benefits

Environmental impact

Price

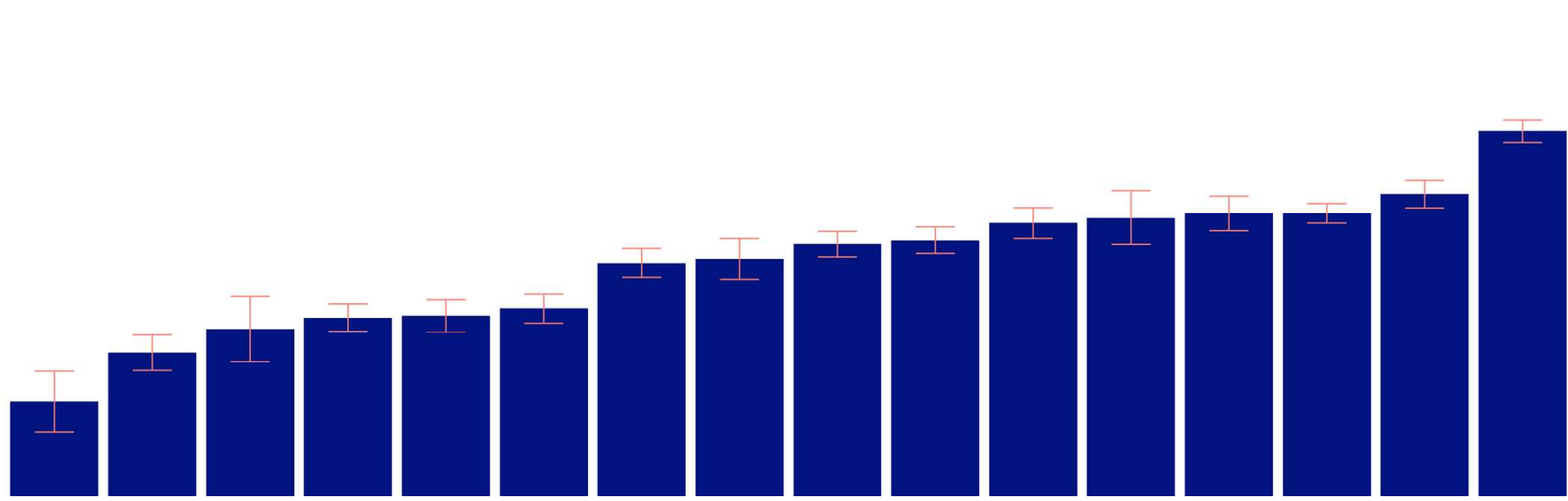
Sustainability

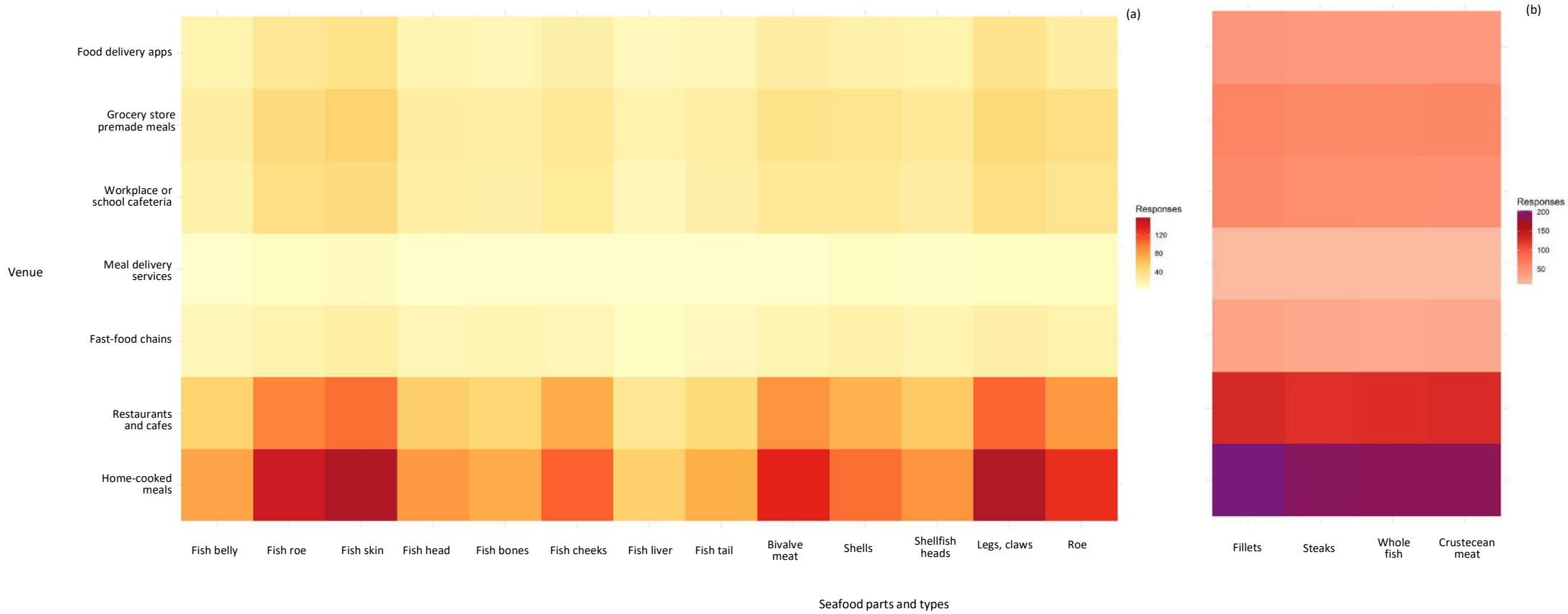
Species

Availability and accessibility

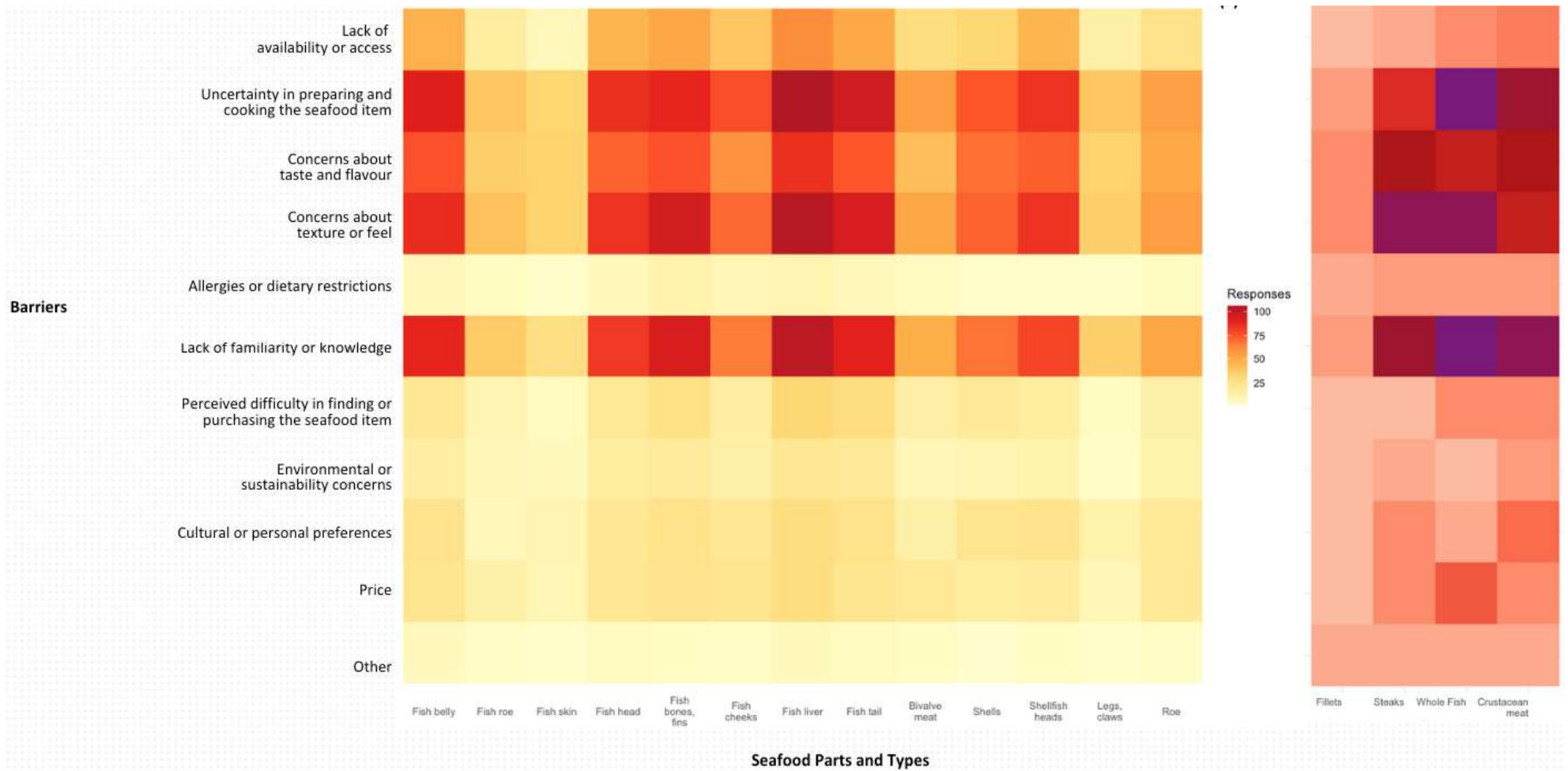
Quality

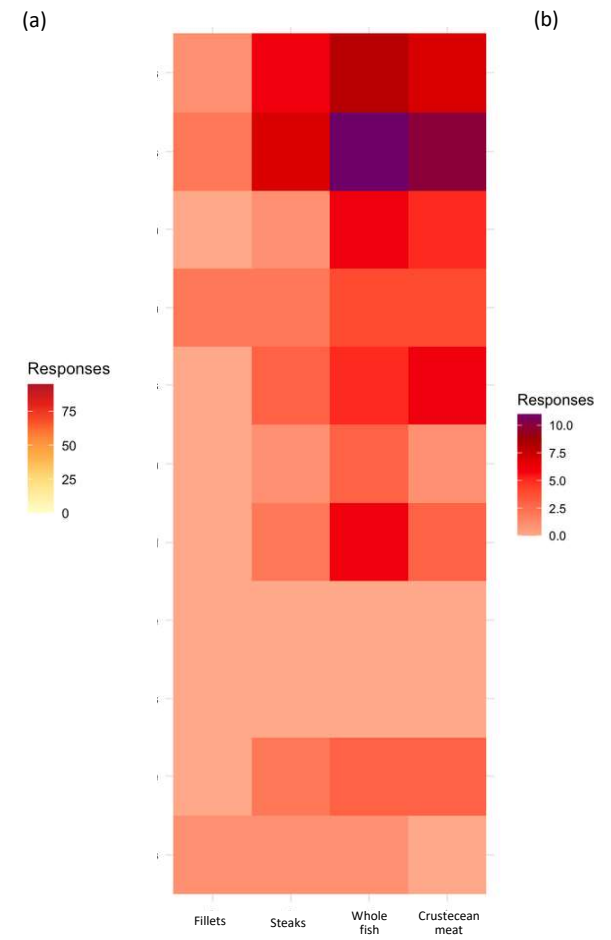
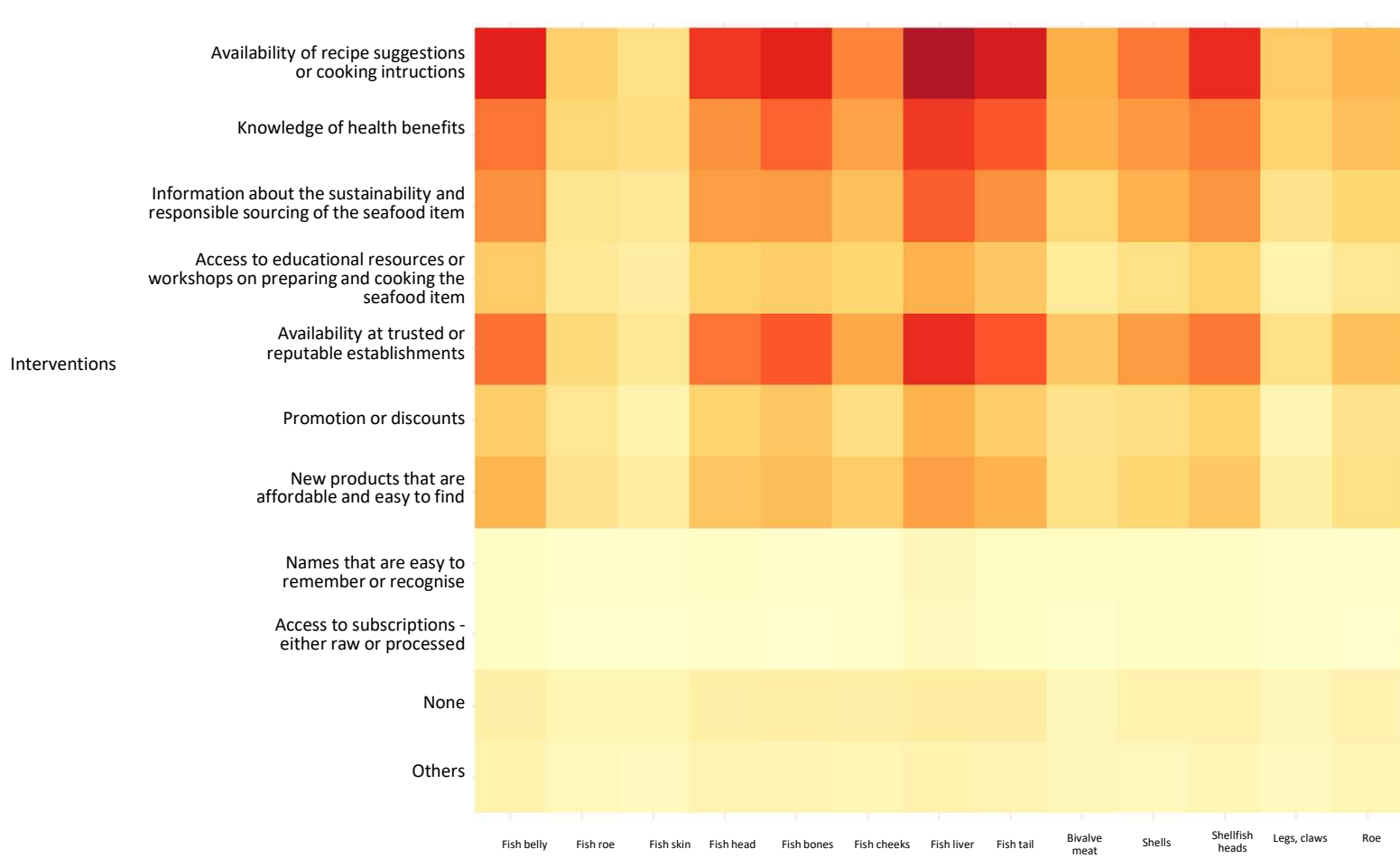
Factors considered in purchasing

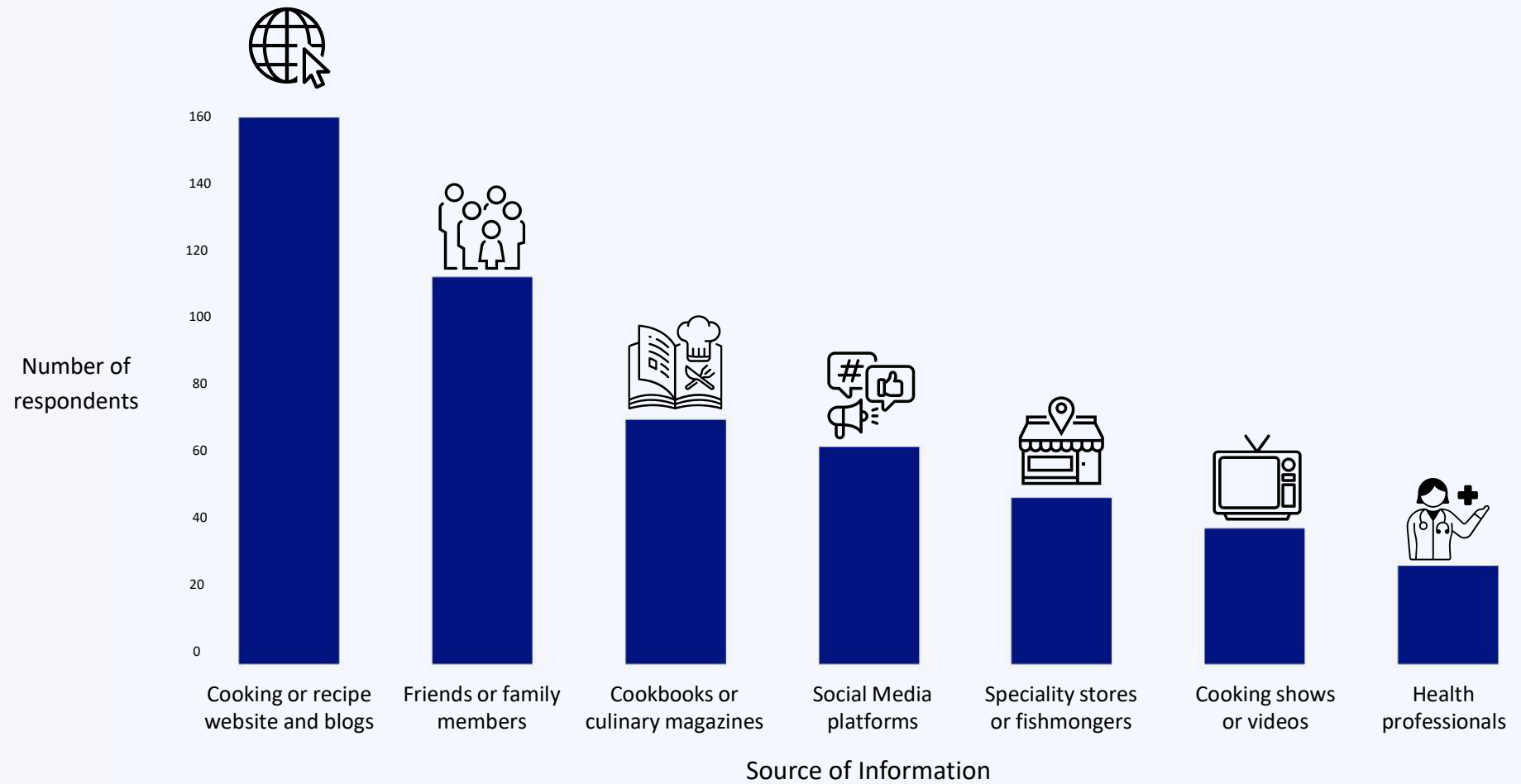




















# MARAMING SALAMAT PO!

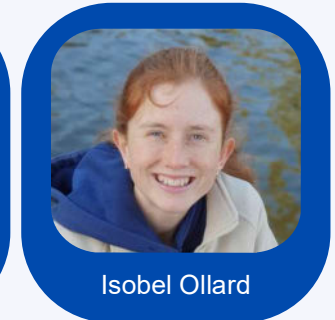
Jessa Garibay-Yayen  
MPhil Seafood for Societal Health  
University of Cambridge  
jbbg2@cantab.ac.uk



Prof David Aldridge



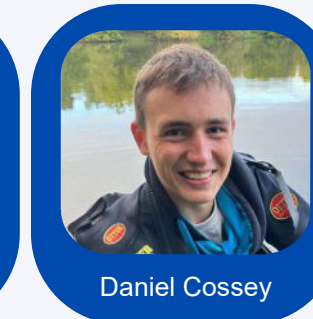
Dr David Willer



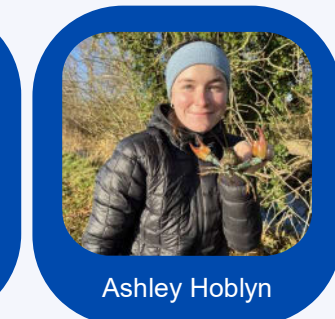
Isobel Ollard



Broderick House



Daniel Cossey



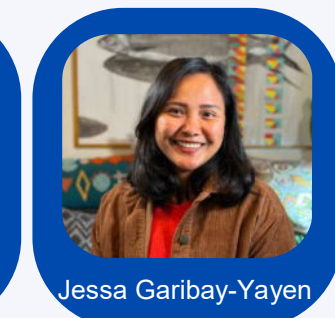
Ashley Hoblyn



Skylah Reis



Megan Walker



Jessa Garibay-Yayen





# 54th Annual Conference

Shellfish Association of Great Britain

#SAGB54