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Consumer perceptions on the use of seaweed in diet

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Institute of Food Technology,
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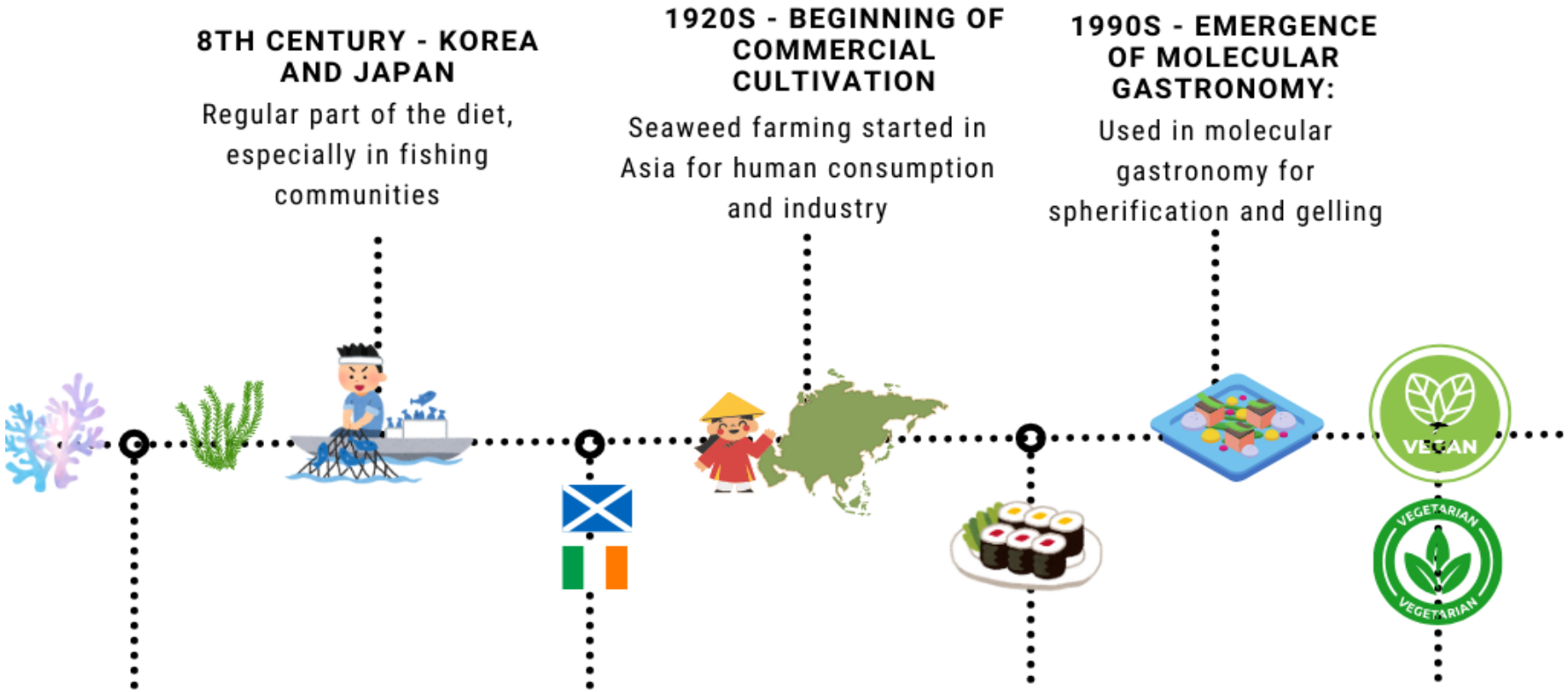


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Background

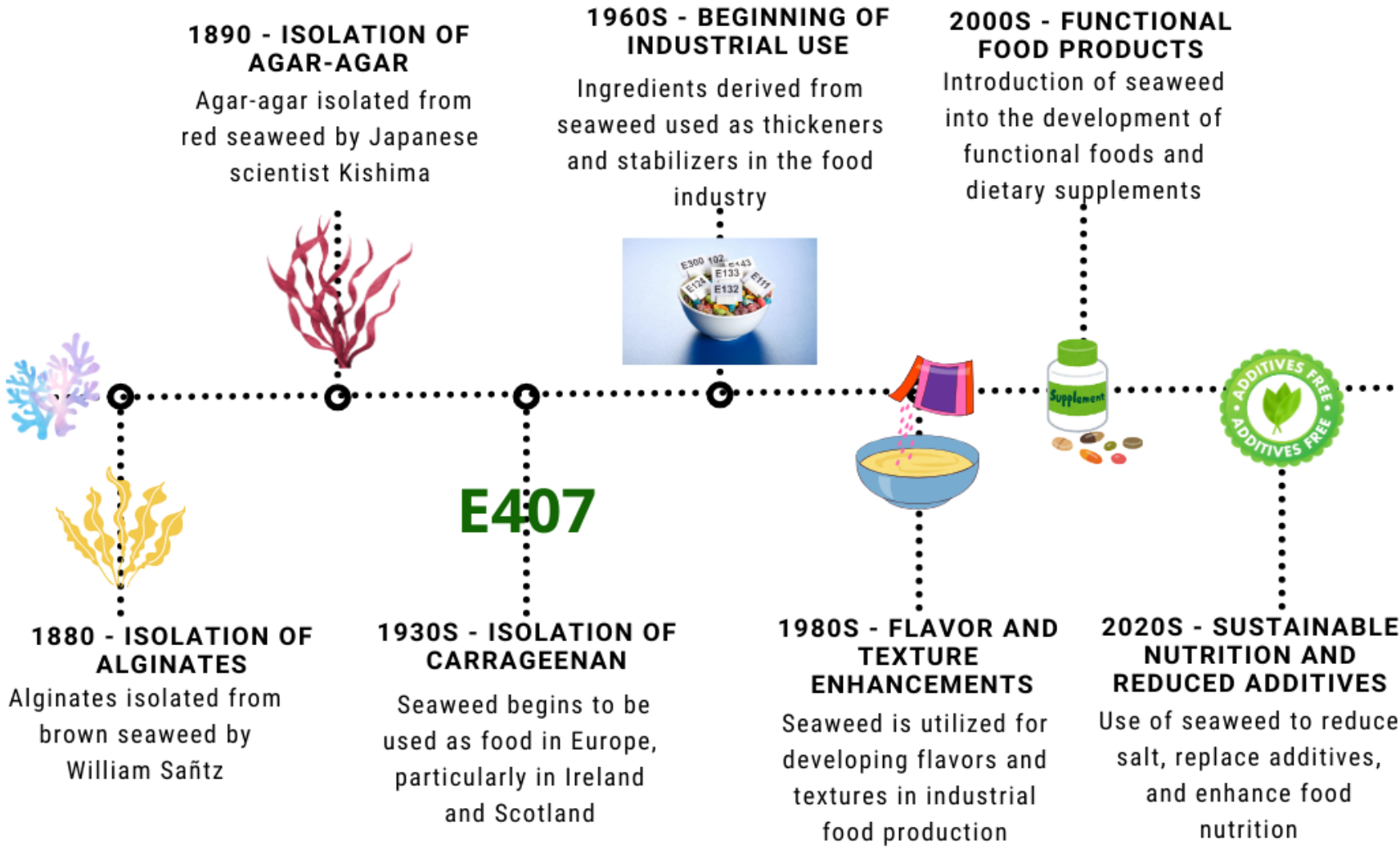
- **Consumption of seaweed**
- Seaweed as an ingredient for food products
- Research on seaweed





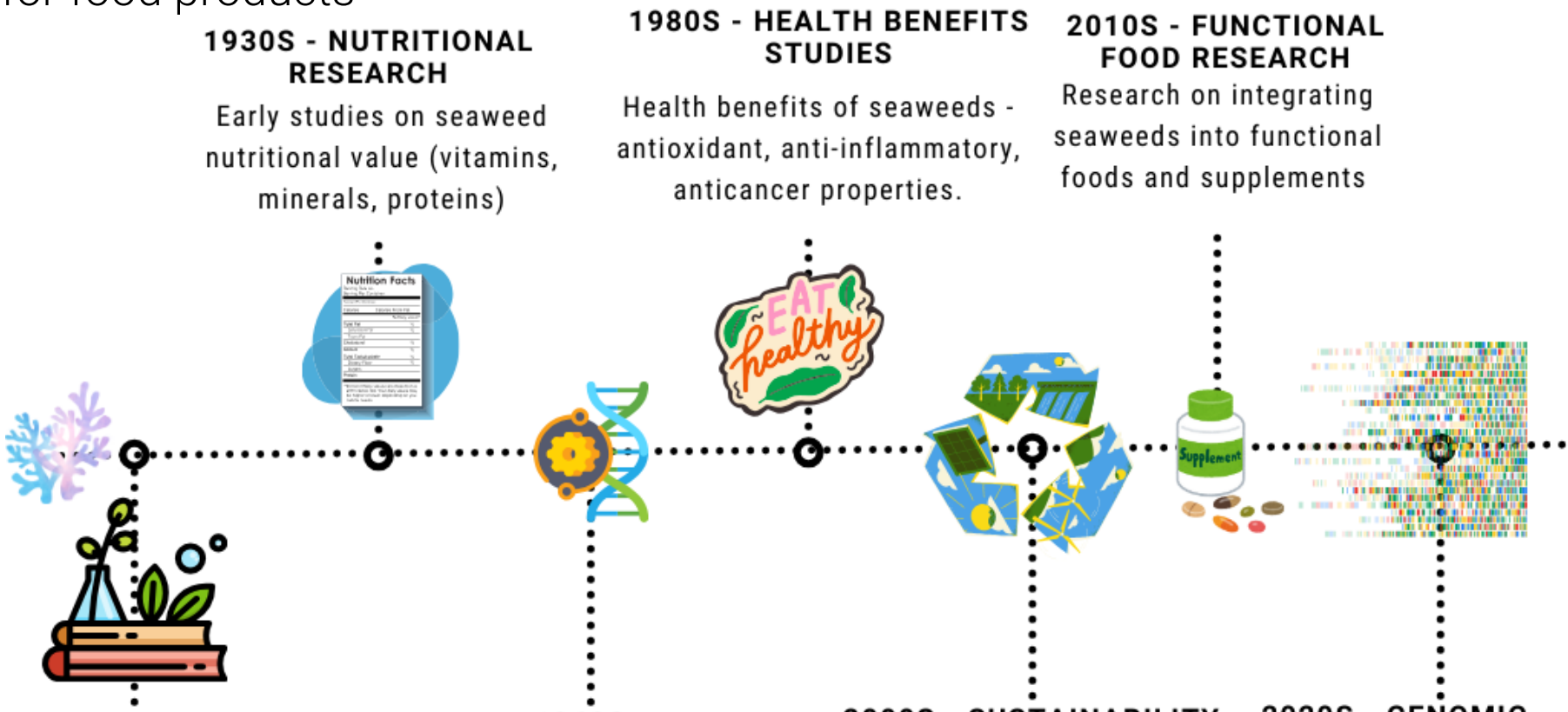
Background

- Consumption of seaweed
- **Seaweed as an ingredient for food products**
- Research on seaweed



Background

- Consumption of seaweed
- Seaweed as an ingredient for food products
- **Research on seaweed**



Objectives

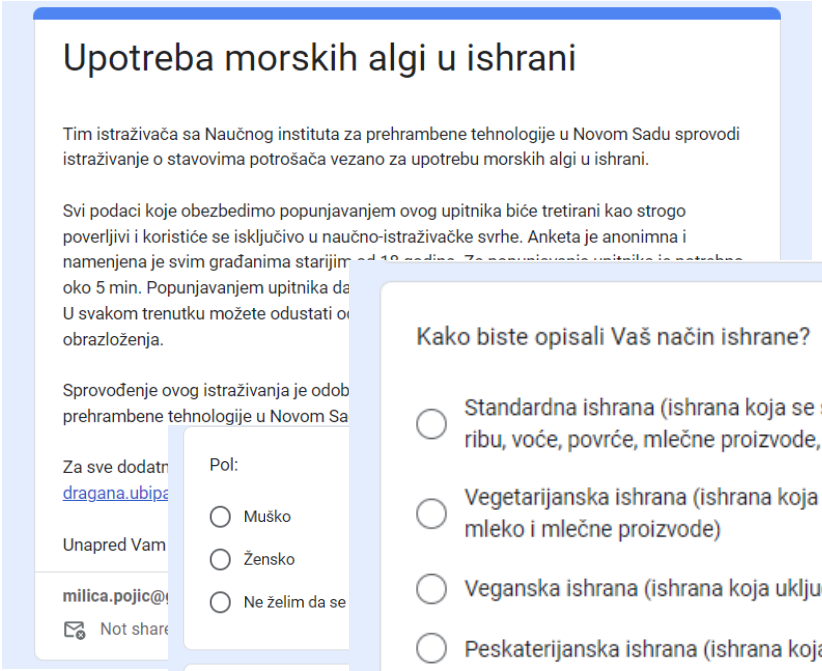
- Assess **dietary habits** and seaweed consumption behaviour in landlocked country
- Identify **barriers** to the consumption of seaweed in landlocked country
- Identify **consumer-friendly food products** that can include seaweed
- Explore the **potential** for increased acceptance and consumption of seaweed







Questionnaire description


Upotreba morskih algi u ishrani

Tim istraživača sa Naučnog instituta za prehrambene tehnologije u Novom Sadu sprovodi istraživanje o stavovima potrošača vezano za upotrebu morskih algi u ishrani.

Svi podaci koje obezbedimo popunjavanjem ovog upitnika biće tretirani kao strogo poverljivi i koristiće se isključivo u naučno-istraživačke svrhe. Anketa je anonimna i namenjena je svim građanima starijim

oko 5 min. Popunjavanjem upitnika da

U svakom trenutku možete odustati o

obrazloženja.

Sprovođenje ovog istraživanja je odob

prehrambene tehnologije u Novom Sa

Za sve dodatn

dragana.ubipa

Unapred Vam

milica.pojic@

Not share

Pol:

Muško

Žensko

Ne želim da se

Godine:

18-24

25-34

35-44

45-54

55-65

preko 65

Kako biste opisali Vaš način ishrane?

Standardna ishrana (ishrana koja se sastoji ribu, voće, povrće, mlečne proizvode, žitarice

Vegetarijanska ishrana (ishrana koja uključu mleko i mlečne proizvode)

Veganska ishrana (ishrana koja uključuje sa

Peskaterijanska ishrana (ishrana koja uključ

Fleksitarijanska ishrana (ishrana koja povrer uglavnom sastoji od biljne hrane)

Makrobiotička ishrana (ishrana uključuje int i fermentisane namirnice)

(paleo, keto, mediteranska ishrana i sl.)

Da li ste upoznati da su morske alge dobar izvor **proteina, omega 3 masnih kiselina, joda, vitamina i antioksidanasa** važnih za uravnoteženu ishranu?



Da

Ne

Da li konzumirate morske alge?



Da

Ne

Kada čujete "alge i hrana" šta vam prvo pada na pamet?



- **Demographic information**
- **Dietary habits of respondents**
- **General knowledge on macroalgae**
- **Preferences for seaweed consumption**

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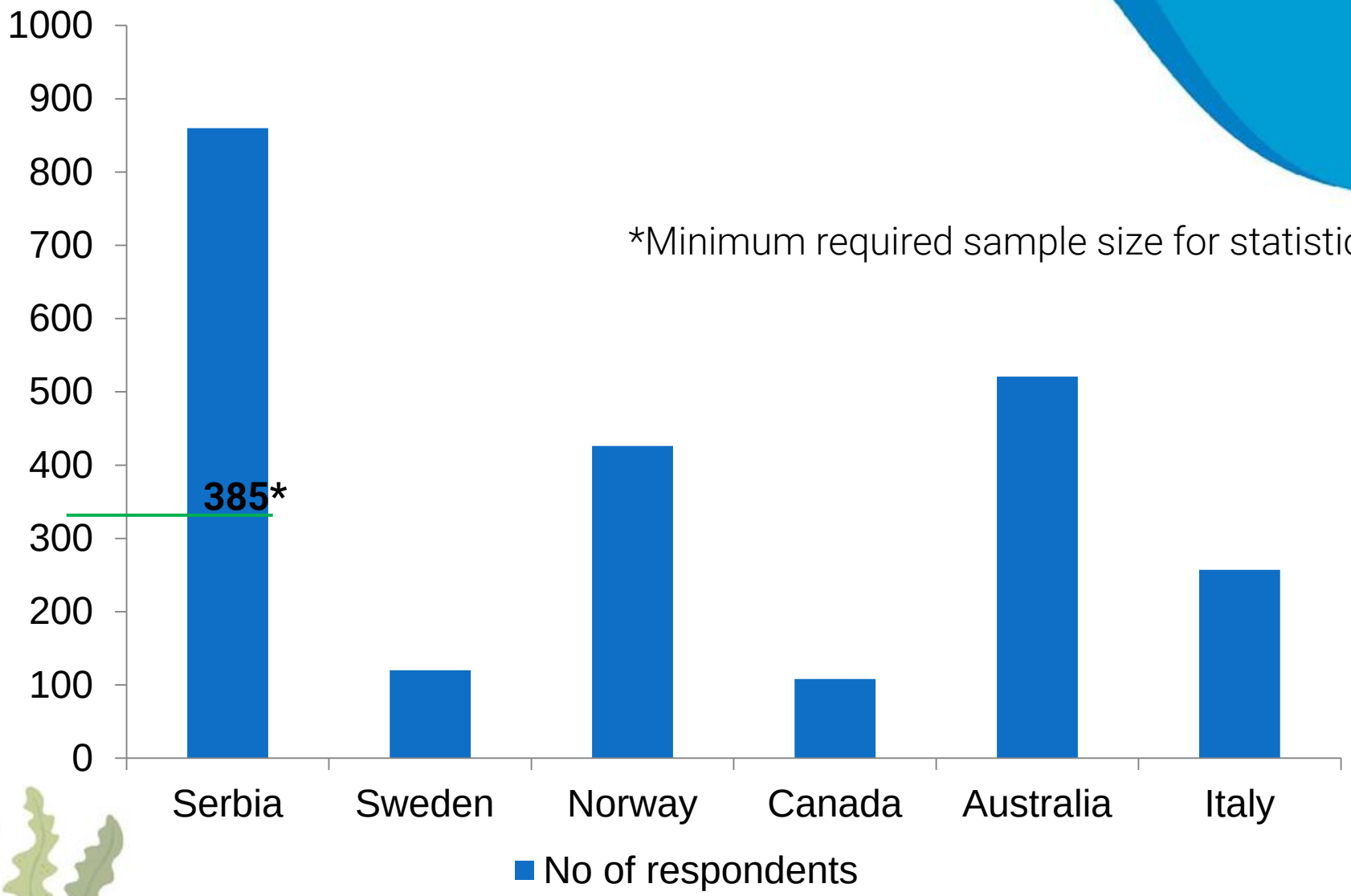
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Demographic information



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Study population and sample size



*Minimum required sample size for statistical reliability

Demographic characteristics







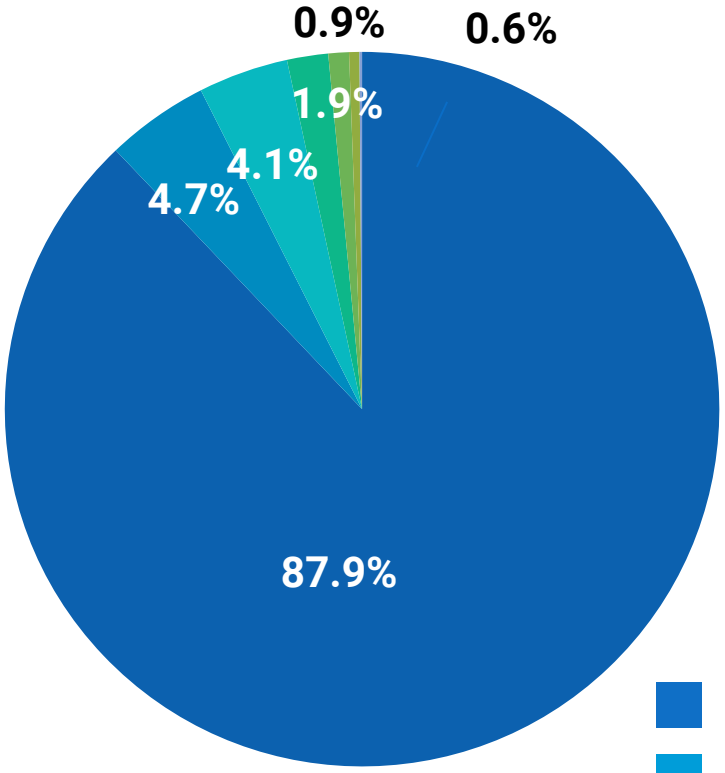
Total number of responders	860
Gender	%
Male	28.9
Female	71.1
Age distribution	%
18-24	19.7
25-34	20.0
35-44	23.6
45-54	21.7
55-65	12.0
over 65	3.0
Place of residence	%
Urban area (UA)	75.8
Small urban area (SUA)	6.0
Suburbs (SUB)	10.5
Rural area (RA)	7.6

Dietary habits of respondents



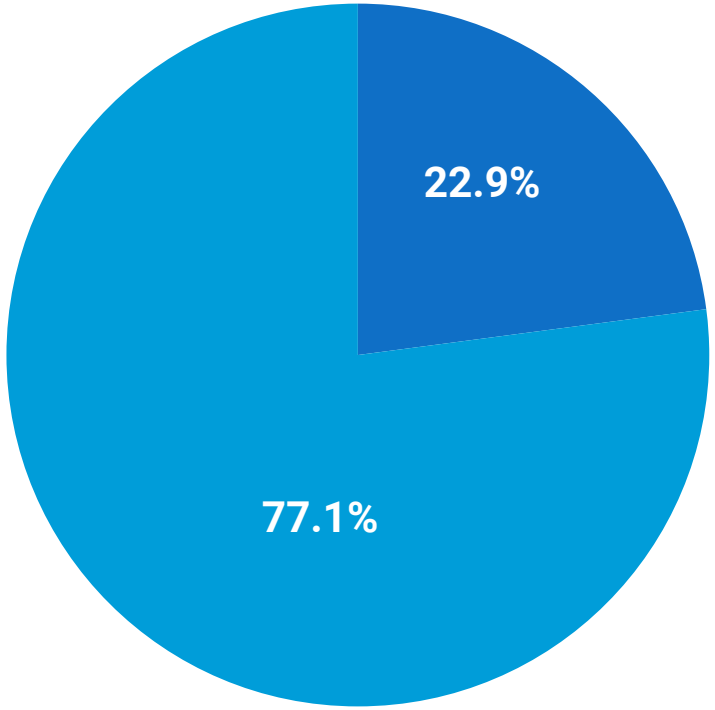
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Dietary patterns of respondents



- **Standard diet**
- Flexitarian diet
- Vegetarian diet
- Vegan diet
- Paleo, keto, mediterranean diet
- Pescatarian diet

Utilization of seaweed in the diet

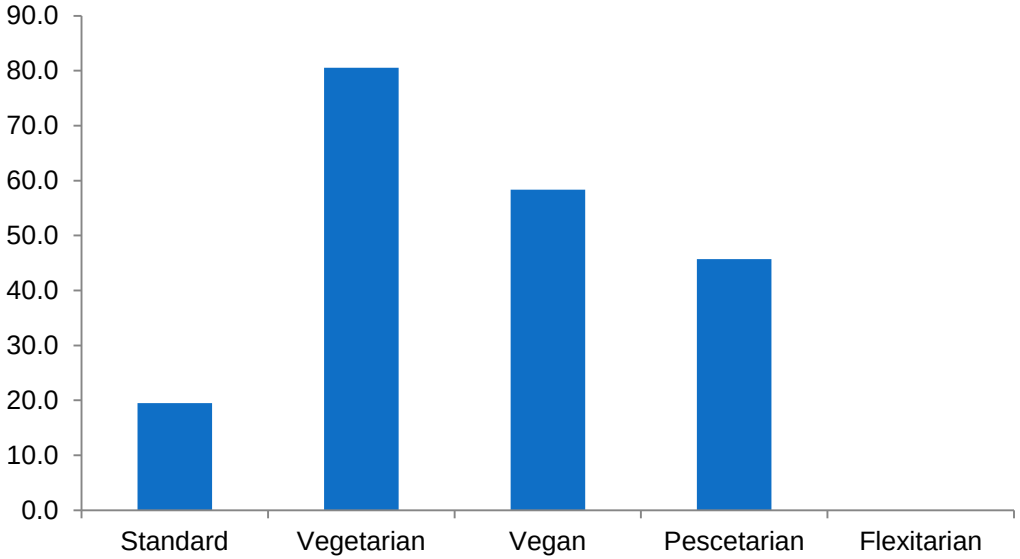


- Seaweed consumers
- **Non-consumers**

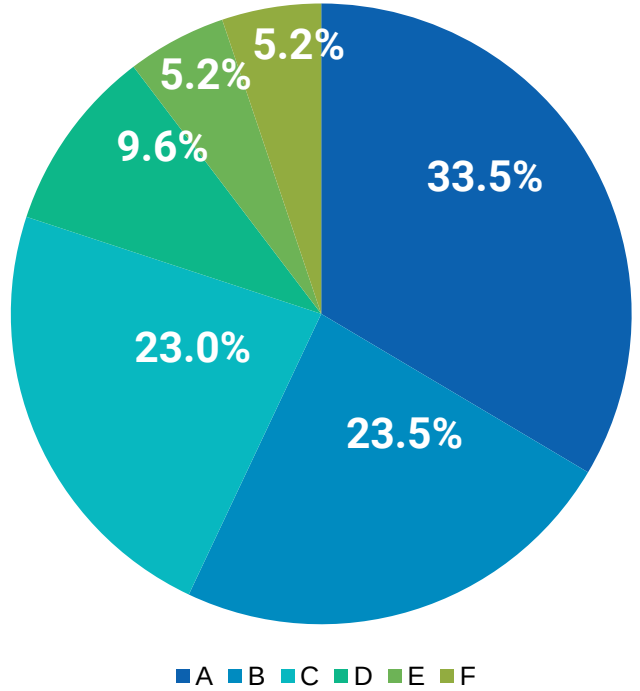
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Seaweed consumption vs different dietary styles



Reasons for low consumption of seaweed



A - **I lack information on seaweed in nutrition**
B - I don't know how to prepare them
C - I don't know where to buy them
D - They are expensive
E - I'm not keen to try new foods
F - I don't like taste or smell

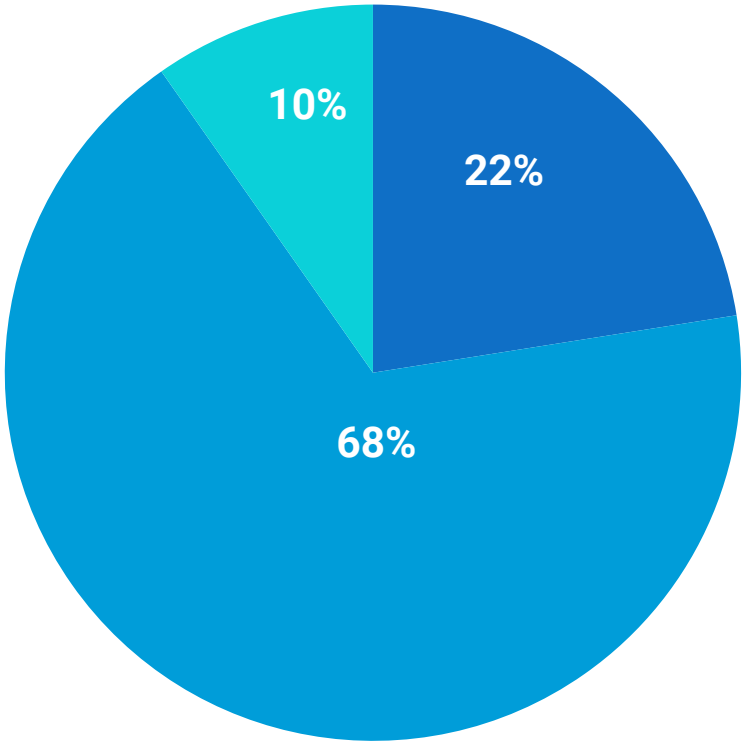
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General knowledge on macroalgae



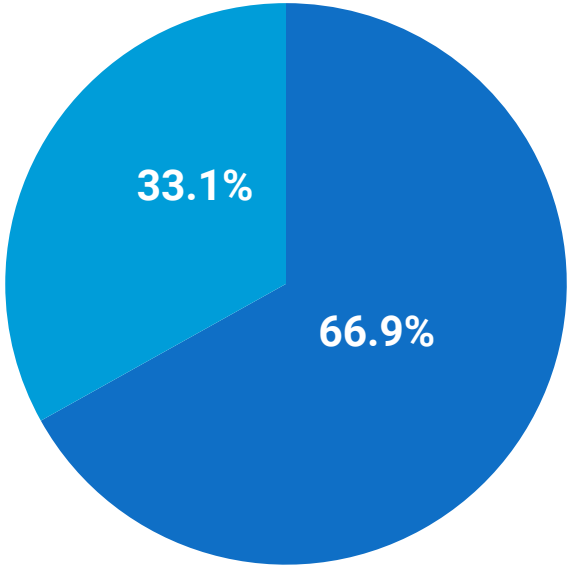
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Knowledge vs. seaweed consumption



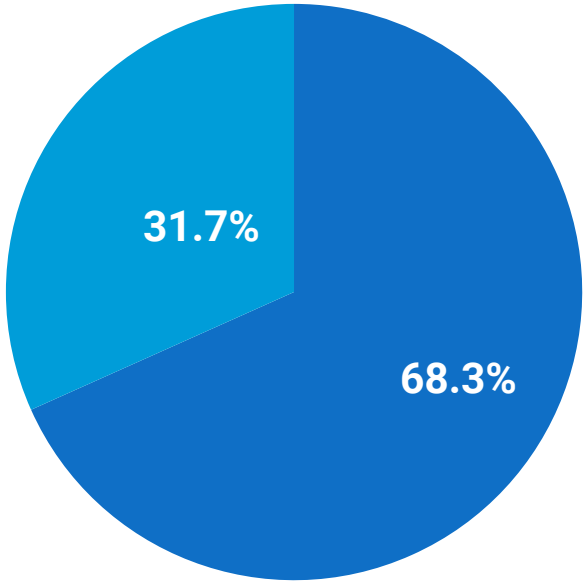
- Know and consume
- **Know and do not consume**
- Don’t know and don’t consume

Knowledge on nutritional benefits



- Informed
- **Uninformed**

Knowledge on additives from seaweed



- **Informed**
- Uninformed



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CULTURAL AND CULINARY ASSOCIATION

Sushi	n=114
Japanese cuisine, Japan	n=42
Chinese cuisine	n=23
Sea	n=68
Salad	n=39

HEALTH AND NUTRITIONAL PERCEPTIONS

Healthy	n=61
Omega-3	n=6
Greenery	n=27

CONSUMER UNFAMILIARITY

Spirulina	n=18
Nothing	n=18
Unfamiliar	n=10

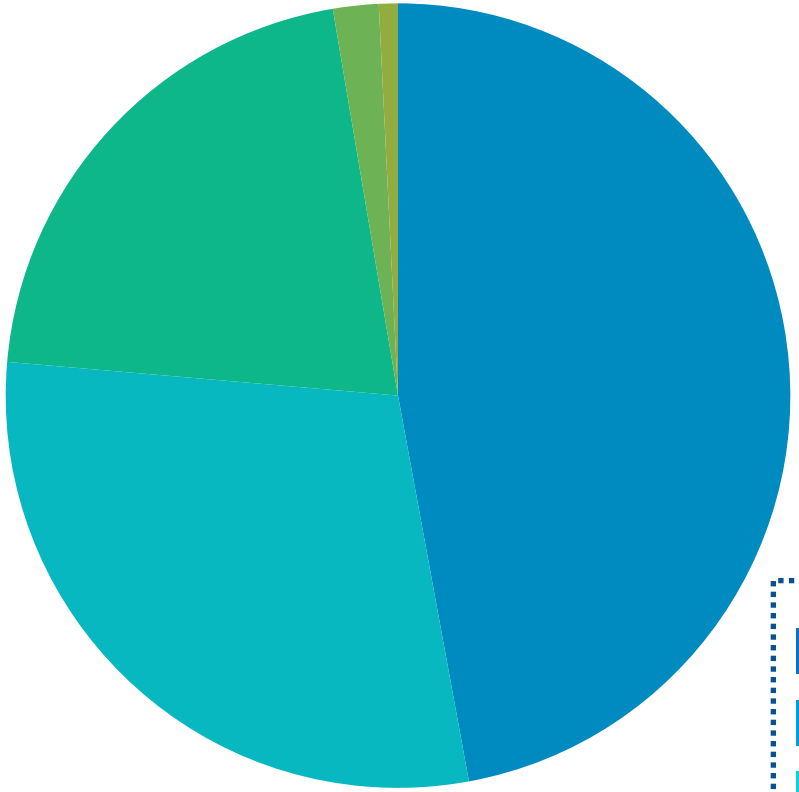
FOOD NEOPHOBIA AND NEGATIVE SENSORY PERCEPTIONS

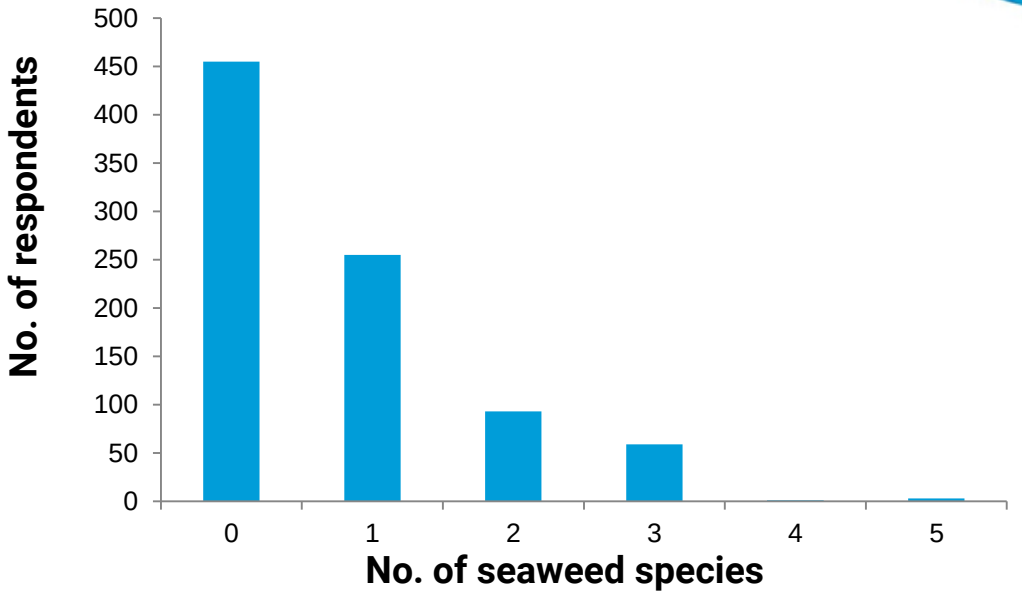
Disgust	n=21
Tasteless	n=20
Slimy	n=19

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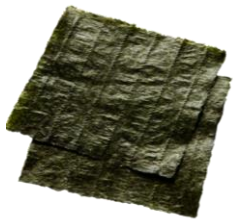
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Awareness of seaweed types





- **None of the listed**
- Nori
- Kombu
- Wakame
- Spirulina
- Kelp







Chlorella, red seaweed, green seaweed, brown seaweed, Euscheuma, Arame, Hijiki, Schizochitrium, Dulse, Dashima

Preferences for seaweed consumption

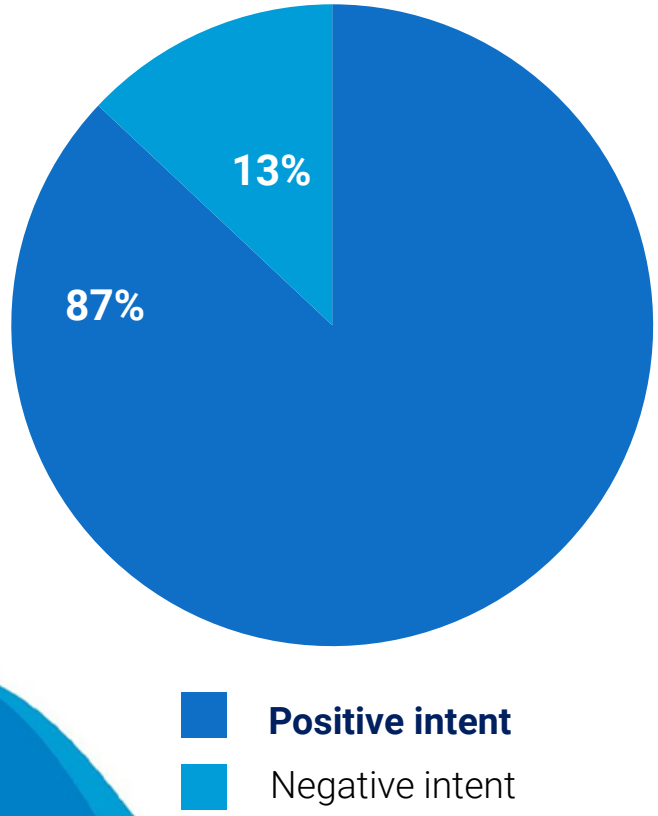


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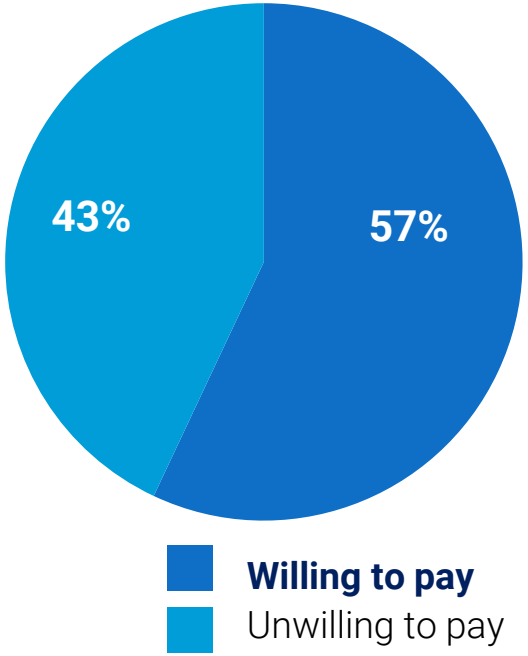
Purchase intent for seaweed products

- considering they are vegan, with reduced salt content, without additives, and sustainable





Willingness to pay for seaweed-enriched products



Preferred food products for seaweed consumption

https://akua.co/





https://kuzefukuandsons.com/

- Spread, sauces, dressings
- Meat products
- Bakery products
- Dairy products
- Dietary supplements
- Pasta



https://koppertcress.com/



https://www.welshcheesecompany.co.uk/



https://seagateproducts.com/



https://www.seamorefood.com/

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Conclusion ....regarding seaweed and their consumption

- A lot of **barriers and lack of knowledge** have been registered:
  - A lack of information,
  - Preparation difficulties,
  - Aversions to sensory properties - taste and smell.
- **Cultural associations**, particularly with sushi and Asian cuisine, influenced perceptions.



- **Positive purchase intent** was registered after being informed about the benefits
- The most favoured seaweed-based food products were **spreads & sauces**, and **dietary supplements**.
- Different opportunities for **education and promotion** of seaweed has been identified (e.g. Educational and culinary programs, public campaigns, digital content).

Thank you!

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