CONSUMER’S POSITIVE AND NEGATIVE PERCEPTIONS TOWARDS AQUACULTURE: A HYBRID DELPHI APPROACH

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(1) CREDA, (2) UPC, (3) UAB, (4)ICM.
Analysis of Aquaculture Perceptions as a tool to Increase its Value

Barcelona case as centre of reference for gastronomy and distribution
Value Chain Approach

Consumers trust the retailers → Advisors

Retailers rely on the wholesaler offer

Consumers’ Perceptions towards aquaculture

What we are presenting is a starting point...
Supported by:

- APROMAR: Asociación Empresarial de Productores de Cultivos Marinos
- TINAMENOR,
- STOLT SEA FARM
- MERCABARNA
- FUNDACIÓN ALICIA
- CLÚSTER ACUIPLUS
- SEA: Sociedad Española de Acuicultura
- EAS: European Aquaculture Society
Who?

- Lourdes Reig  
- Rosa Flos  
- José Maria Gil  
- Cristina Escobar  
- Maite Carrassón  
- Francesc Padrós  
- Maria Constenla  
- Francesc Piferrer
Where?

- **Barcelona and its urban area**
  - High fish consumption
  - High urban density
  - A reference in the sector of food and gastronomy
  - An example for Mediterranean area
  - High number of fish selling points
  - An important wholesaler (Mercabarna)
How?

Hybrid Delphi method which includes three qualitative techniques

1. Focus group (FG)
2. Nominal Group Technique (NGT)
3. Delphi Method

The two first steps are done in face-to-face groups meetings, the last one through personal contacts or e-mail.
Focus group (FG) with Nominal Group Technique (NGT)

8 participants per group & “silent” moderators

Silent generations of ideas (positive and negative) in writing

Round Robin recording of ideas on a screen

Serial discussion for clarification of ideas

Preliminary vote on item importance

Discussion of the preliminary vote
(the moderator cannot give any opinion)

Final vote

15 points (5 to 1) per participant were allocated to the 5 most relevant ideas, ranking them on a Best-Worst scale
Participants

**2 Focus Groups** with 8 participants per group

Participants are defined as FISH CONSUMERS →

Minimum Consumption ≥1 TIME PER MONTH

1. **FREQUENT** consumers (≥ 2 times/week)

2. **OCCASIONAL** consumers (< 2 times/week)
Fish consumption defined as:

Fish and/or Shellfish as a main ingredient

Participants

NO

NO

NO

YES!
NEGATIVE PERCEPTIONS. FREQUENT CONSUMERS

- General uncertainty and lack of information
- Chemical products are used for growth
- Worse taste*
- Less healthy*
- Quality can be influenced by animal feed
- Society tends to reject it
- It competes with small fishermen and enterprises
- It confuses the consumer
- Lack of space to grow

% of allocated points

* (compared to fishing)
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!!! Need to PROVIDE INFORMATION

% of allocated points

* (compared to fishing)
POSITIVE PERCEPTIONS. FREQUENT CONSUMERS

- Greater health control (including Mercury)
- Lower price
- Taste is acceptable
- It helps us enjoying non-local species
- It popularized species that would not be as reachable for consumers
- Steady supply
- It helps to achieve a balanced diet
- Fish are protected from other species
- Appropriate sizes and weight are available. "Standard format"
- Increases supply

% of allocated points

1st round 2nd round

0 10 20 30 40
**NEGATIVE PERCEPTIONS. OCCASIONAL CONSUMERS**

<table>
<thead>
<tr>
<th>Perception</th>
<th>1st round</th>
<th>2nd round</th>
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<tbody>
<tr>
<td>Lower quality and taste*</td>
<td></td>
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<tr>
<td>Different species taste the same because they are eating the same feed</td>
<td></td>
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<tr>
<td>Because of their feed, they carry on to us more chemicals (trash/rubbish)</td>
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<tr>
<td>It is not a natural process of growth. They grow faster</td>
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<tr>
<td>They do not live on their natural habitat</td>
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<tr>
<td>Lower variety of species</td>
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<td></td>
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<tr>
<td>Fish are stressed</td>
<td></td>
<td></td>
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<tr>
<td>Men exploit</td>
<td></td>
<td></td>
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<tr>
<td>Worse taste, because it is not so fresh</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Their development is lower (sizes)</td>
<td></td>
<td></td>
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</tbody>
</table>

More debate, richer arguments \(\rightarrow\) more CHANGES between the 2 rounds

% of allocated points

0 10 20 30 40
POSITIVE PERCEPTIONS. OCCASIONAL CONSUMERS

- Cheaper product
- It does not harm the environment
- Prices are stable and not related to demand
- It is a fresher product
- Better health control (including Anisakis)
- It popularized species that would not be as...
- It provides a greater fish supply
- Essential to preserve some species
- It does not harm other species
- It would feel positive if the feed would be...
- It provides employment
- The fish has more meat because of the feeding
- Steady supply
- Appropriate sizes and weight are available....
- Healthy product
- Farms can be visited with children (educational)
- It uses non-comercial species and surpluses...

% of allocated points

1st round
2nd round
Specific theme areas

- **Environment**
- **Health**: Food Safety + Diet
- **Information** (lack of) *unawareness*
- **Market**, being price the most important component, followed by supply attributes
- **Quality**: Product Attributes, except Price.
- **Social**, related to Social impacts or opinions that are caused by Aquaculture
- **Welfare**, related to Animal welfare
Negative 1st round
Negative 2nd round
Positive 1st round
Positive 2nd round

W
I
E
M
Q
H
S
Conclusions

✓ QUALITY issues are important for consumers. They play a negative role for Aquaculture.
  • Pretty linked to ANIMAL FEED and its Effect on Human Health.

✓ However, POSITIVE aspects for QUALITY were also pointed out (especially important Taste OK for Frequent consumers).

✓ MARKET plays the most important POSITIVE role for Aquaculture, with an important Price component.
Conclusions

✓ HEALTH CONTROL is a POSITIVE aspect for both groups

✓ Negative aspects of ANIMAL WELFARE important for occasional consumers.

✓ ENVIRONMENT is NOT a concern for any of the groups (considered positively by the group of occasional consumers)
Conclusions

✔ PROVIDE INFORMATION, especially about the animal FEED, however, also of interest: Rearing and Animal welfare

LACK OF INFORMATION IS SEEN AS A NEGATIVE FACTOR IN BOTH LINKS OF THE CHAIN

ENFORCE POSITIVE VIEWS AND EXPLAIN FALSE NEGATIVE VIEWS (especially to CONSUMERS)
Conclusions

☑ CHANGES IN OPINION show the influence of INFORMATION

TO BE CONTINUED...

☑ DELPHI QUESTIONNAIRE TO VALIDATE RESULTS

☑ 2ND PHASE QUANTITATIVE SURVEY
Many thanks!!!

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