



BlueRev



Revitalisation of European local communities with innovative business models and social innovation in the blue bio-based sector



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Bio-based revitalisation
of local communities



Bio-based revitalisation
of local communities

How to effectively communicate innovation in the bioeconomy sector when addressing consumers

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APRE overview



APRE, the Italian AGENZIA PER LA PROMOZIONE DELLA RICERCA EUROPEA, is the Italian NCP based in Rome, with an office in Brussels.

APRE provides information, training and assistance to Italian researchers and innovators to help them take full advantage of the collaboration and funding opportunities offered by European R&I programmes.

First and unique entity of its kind in Italy, APRE – Agency for the Promotion of the European Research APRE is an Italian no-profit research association that was created in 1989.

APRE strengthens the capability of the Italian scientific and industrial communities to participate in the Framework Programmes for Research and Innovation of the European Commission through:

INFORMATION



TRAINING



ASSISTANCE



BlueRev Main Objective

BlueRev aims to select a range of systems in the blue bio-based sector in **3 different pilot regions** (Denmark, Italy and Estonia), to **tailor value chains**, from valorisations of co-products as feedstock to processing/conversion to final products, in order to **revitalise local communities**, both in a territorial and social sense.

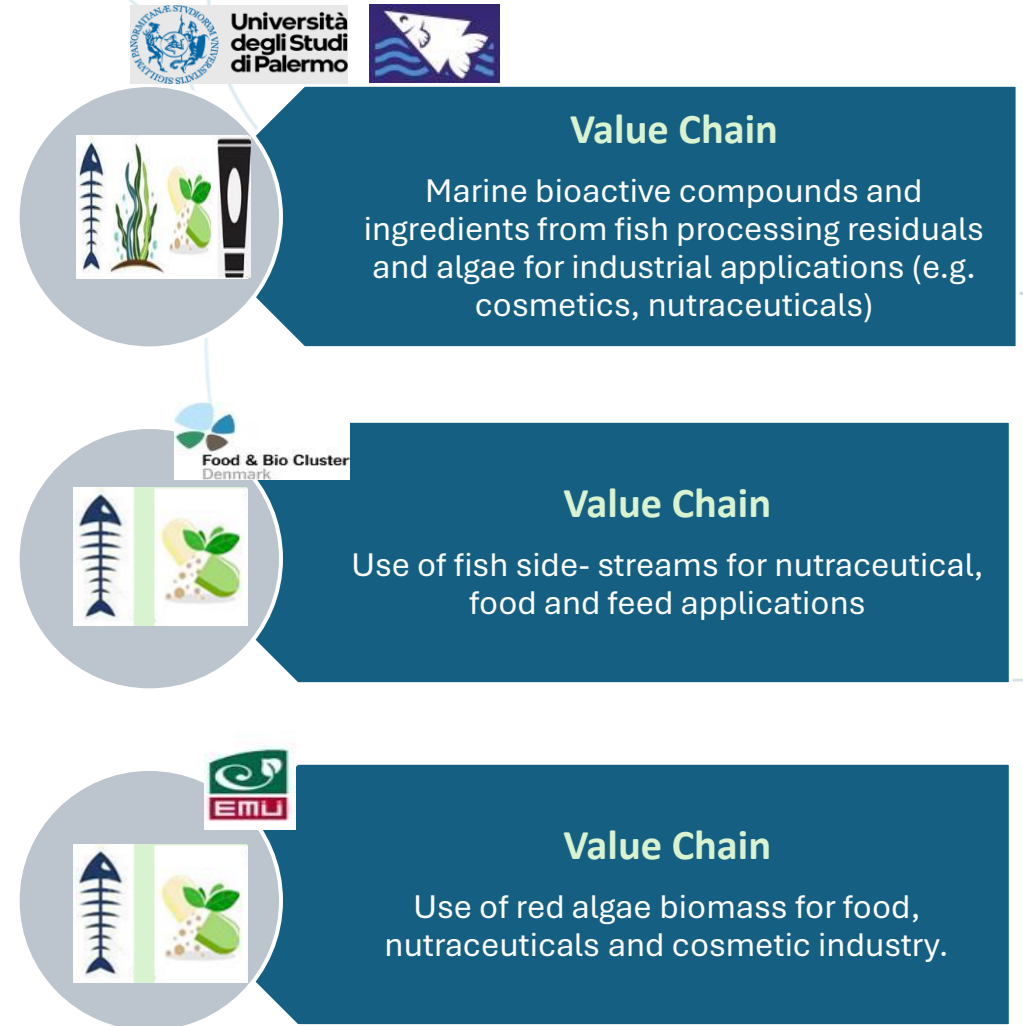


BLUEREV VALUE CHAINS



BlueRev will employ existing or advanced monitoring systems to assess the effectiveness of the value chains and come up with new solutions to improve **governance frameworks** and **business models**.

By engaging relevant actors it aims to increase **global awareness** and **promote innovation and best-practices** towards the development of blue bioeconomy.



The Support Tool

A web-based platform to promote cross-sector collaboration among stakeholders under the same online collaborative space.

[BlueRev Support Tool \(bluerevproject.eu\)](https://bluerevproject.eu)



WITH THIS SUPPORT
TOOL YOU WILL HAVE
ACCESS TO

Training Resources

Access comprehensive lessons, including videos and manuals, tailored to your needs. Enhance your knowledge and skills to drive sustainable growth in the bio-based economy.

Inspiring Multimedia Galleries

Explore a collection of best practices through captivating videos, documents, and text. Get inspired by success stories and share your own to inspire others.

Webinars

Attend live or recorded webinars conducted by industry experts. Stay updated with the latest trends, insights, and innovative approaches in the bio-based economy.

Interactive Community Engagement

Connect with a diverse network of stakeholders, including company managers, policy makers, trainers, and project partners. Engage in discussions, messaging, and forums to foster collaboration and exchange of experiences.

Cutting-edge Research Repository

Dive deep into the latest advancements, scholarly articles, and groundbreaking studies within the realm of the blue economy. Access an extensive repository of scientific publications and research papers contributed by our esteemed partners.

Unlock our content for free by registering now!

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TRAINING OBJECTIVE



TO PROVIDE KNOWLEDGE, TOOLS AND PRACTICAL EXAMPLES OF HOW EFFECTIVELY COMMUNICATE INNOVATION IN THE BIOECONOMY CONTEXT WHEN ADDRESSING CONSUMERS.

Raise awareness of small businesses on the **importance of communication**

Give advice based on **real-life scenarios** in the bioeconomy field

Show the most effective **channels/tools** to reach end-users



TRAINING OBJECTIVE



1. COMMUNICATION

What is it and why it is important for the bioeconomy sector



2. INNOVATION

How innovation in the bioeconomy sector should be effectively communicated to consumers



3. BARRIERS TO EFFECTIVE COMMUNICATION

What are the barriers when communicating bioeconomy content and where the EU stands



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COMMUNICATION

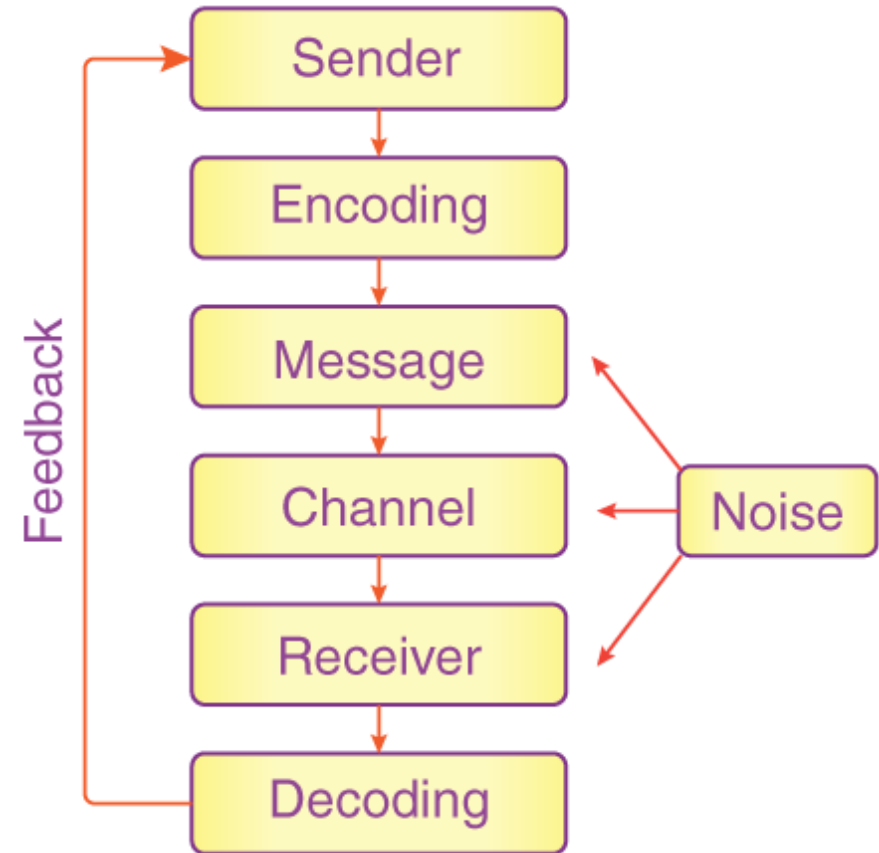
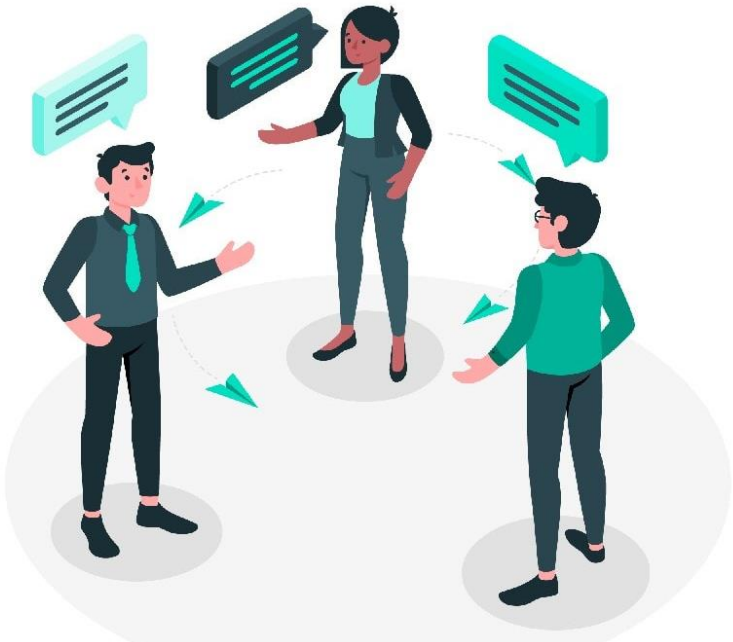


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THE COMMUNICATION PROCESS



The imparting or exchanging of information by speaking, writing, or using some other medium. The successful conveying or sharing of ideas and feelings.



TYPES AND ELEMENTS OF COMMUNICATION



VERBAL COMMUNICATION

includes **spoken words** or **sounds** made when communicating, in different scenarios like in person or over the phone. Most of the information given during a conversation comes from verbal communication.



NONVERBAL COMMUNICATION

encompasses any type of communication that is **expressed without making a sound**. It includes hand gestures, body language, facial expressions, eye contact, touch, heart rate, or the amount of space you give others while you communicate. Nonverbal communication can be both **conscious or unconscious**.



WRITTEN COMMUNICATION

happens when a message is conveyed using **written words** or **symbols** (e.g.: emojis). This could include a text message, email or visual presentation.



LISTENING

is important in communication to be able to **form a good answer or response**. Listening is an **active process**: some people hear what others are saying, but do not actually take in the information.



ENVIRONMENTAL COMMUNICATION AND GREENWASHING



Antonopoulos and Karyotakis (2020) define environmental communication as “the **dissemination of information** and the **implementation of communication practices** that are related to the environment”.

VS

Lyon and Montgomery (2015) define greenwashing as «**a variety of misleading communications that aim to create overly positive beliefs among stakeholders about a company’s environmental practices**».

Industries related to the sustainable use of ocean resources, often exaggerate environmental commitments or misrepresent sustainable practices.



CASE STUDY: FALSE CLAIMS IN SEAFOOD SOURCING



In 2020, the international seafood company Thai Union was accused of greenwashing for its "SeaChange" sustainability strategy.

Investigations revealed that some suppliers were involved in **illegal, unreported, and unregulated (IUU) fishing practices**.

The Shark Guardian report found critical disparities between the company's commitments and promises and evidence of a **lack of progress in addressing either ocean sustainability or labour abuses**.



Transparent communication is essential to build trust with stakeholders.

FOUR LEVELS OF GREENWASHING



CORPORATE-LEVEL GREENWASHING

data and aspects related to the actual firm's image and reputation (current company name and logo, vision, standard adherence).

STRATEGIC LEVEL GREENWASHING

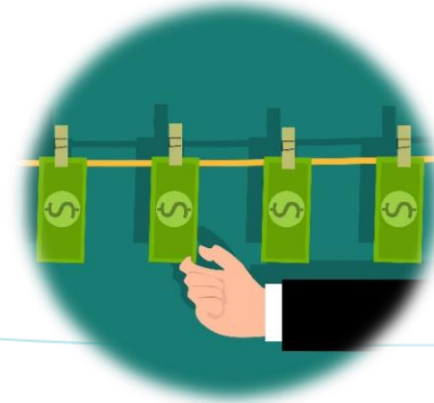
aspects related to the future firm's strategies (i.e., strategic public communication, medium-long-term goals, strategic plan for improvement or implementation of technology/processes, report communication).

DARK LEVEL GREENWASHING

misleading environmental communication finalised to hide illegal activities (i.e., money laundering, collusion, corruption, and investments with hidden aims).

PRODUCT LEVEL GREENWASHING

specific features of a product or a family of products (i.e., label, targeted advertising, packaging, and product certifications).



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INNOVATION



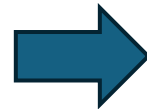
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WHAT IS INNOVATION IN THE BIOECONOMY SECTOR?



BIOECONOMY

“production of **renewable biological resources** and conversion of these resources and waste streams into value-added products”
(European Commission, 2012)



INNOVATION

“Implementation of **bio-based strategies aimed at improving the growth of renewable resources**”
(Dietz et al., 2018; SCAR 2015).



INNOVATION IN BLUE BIOECONOMY

- novel foods, food additives, animal feed, nutraceuticals
- pharmaceuticals and cosmetics
- green chemicals and materials
- enzymes for green industrial processing or decontamination



Algae is gaining widespread recognition in Europe as raw material for a wide range of uses (nutraceutical, as an organic sunscreen, for fertilizer and for treating wastewater).

Use of **machine learning and big data** to the blue bioeconomy to harness microbiomes' potential to support growth in aquaculture, fisheries, food processing, biotechnology and value from waste.



HOW TO EFFECTIVELY COMMUNICATE INNOVATION WHEN ADDRESSING CONSUMERS



Effectively communicating innovation in the bioeconomy sector to consumers involves a combination of clear messaging and trust-building strategies, aimed at achieving:

- Consumers' awareness
- Behavioral change (consumer makes more responsible choices)

HOW?

PERSONAL IMPACT

Explain how innovations improve consumer lives (e.g., healthier products, environmental benefits).

SUSTAINABILITY

Stress the environmental benefits, like reduced carbon footprint and resource conservation.

ECONOMIC ADVANTAGES

Emphasize cost savings, better product quality, or improved availability.



PRACTICAL EXAMPLES



MULTI-CHANNEL APPROACH

- **Social Media** to share stories, infographics, and videos.
- **Blogs and Articles** to deepen people's knowledge of science and benefits.
- **Webinars and Q&A** to answer consumer questions directly.



ENGAGING CONTENT

- **Visuals and Infographics** to explain processes and benefits.
- **Videos and Animations** to illustrate innovations' positive impact.
- **Interactive Content** (like quizzes) to educate consumers.



TRANSPARENCY AND TRUST

- **Transparent Information** to show how products are made and the science behind them.
- **Certifications**
- **Testimonials and Case Studies** to build credibility.

USING ALGAE AS BIOFUEL

Algae is RENEWABLE

- Algae has evolved over billions of years...
- Grows indoors or outside.¹
- In fresh or saltwater.²
- Doubles in size in less³ than 24 hours.

Algae is GREEN

Biofuel is better for the environment...

- Produced from the waste of living things.⁵
- Renewable resource.²
- Less greenhouse gas emissions.³

A downside: Some biofuel crops require a lot of space.

however, algae crops could be placed next to greenhouse gas emitters to absorb the CO2 gas.³

Algae is VERSATILE

Algae has many different uses...

- Can be converted into biofuels.³
- Used as a fertilizer.⁴
- Take contaminants out of wastewater.⁷

Algae as a Biofuel in Three Steps⁶

1. Grown in algae farms (ie. hot springs, lakes, saline lagoons, reservoirs, or other algae efficient habitats).
2. Broken down using solvents and pressed using a technique called expression, which enable us to extract and harvest the oil.
3. Taken to an integrated biorefinery to be further processed. A chemical reaction then occurs and substances are added to the mix to create biodiesel and glycerol. The last step separates the glycerol in the mix and you are left with clean usable biodiesel.

Algae is ENERGY

Fun Facts

- There are over 20,000 known types of algae.⁷
- Fossilized algae is used to make dynamite.⁸
- There could be algae on two of Jupiter's moons.⁸
- Algae containing a red pigment can turn snow pink resulting in 'watermelon snow'.⁹

Algae: The Future of Biofuels!

Sources:

1. G. Brennan. 2010. "New Algae Biofuel Works". New York: World. Web. April 3, 2017. Available at: <http://www.nytimes.com/2010/04/03/science/03algae.html>
2. A. K. S. 2017. "The Future of Algae Biofuel". Cambridge: Cambridge University Press. Available at: <https://www.cambridge.org/core>
3. Algae Biofuel. n.d. "Algae Biofuel". Available at: <http://www.algae-biofuel.com/>
4. A. K. S. 2017. "The Future of Algae Biofuel". Cambridge: Cambridge University Press. Available at: <https://www.cambridge.org/core>
5. G. Brennan. 2010. "New Algae Biofuel Works". New York: World. Web. April 3, 2017. Available at: <http://www.nytimes.com/2010/04/03/science/03algae.html>
6. G. Brennan. 2010. "New Algae Biofuel Works". New York: World. Web. April 3, 2017. Available at: <http://www.nytimes.com/2010/04/03/science/03algae.html>
7. G. Brennan. 2010. "New Algae Biofuel Works". New York: World. Web. April 3, 2017. Available at: <http://www.nytimes.com/2010/04/03/science/03algae.html>
8. G. Brennan. 2010. "New Algae Biofuel Works". New York: World. Web. April 3, 2017. Available at: <http://www.nytimes.com/2010/04/03/science/03algae.html>
9. G. Brennan. 2010. "New Algae Biofuel Works". New York: World. Web. April 3, 2017. Available at: <http://www.nytimes.com/2010/04/03/science/03algae.html>

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BARRIERS TO EFFECTIVE COMMUNICATION



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BARRIERS TO EFFECTIVE COMMUNICATION ON BIOECONOMY



Consumers are exposed to **commercial practices** that are confusing and weaken motivation to buy sustainable products (ex: greenwashing).



Challenges are also linked to the **regulatory field** in enforcing existing consumer protection rules in this area. Lack of standards and guidelines for food producers and consumers are limiting the market demand.



There is a **scarcity of necessary investment measures**. For example, the utilization of all fish raw materials faces obstacles upstream due to a lack of information on collecting fish skins and uncertainty about what to do with leftover bones and heads from primary processing.

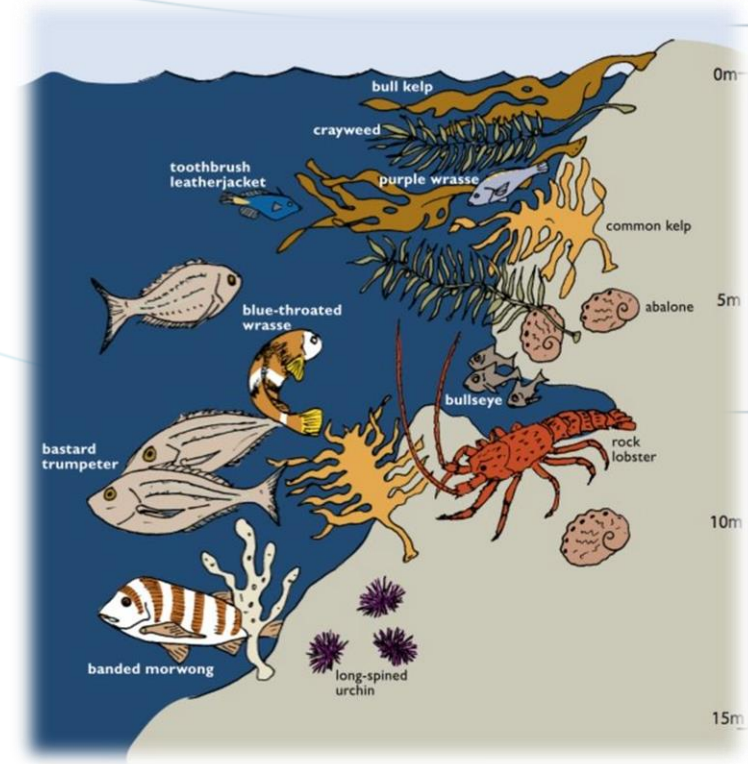
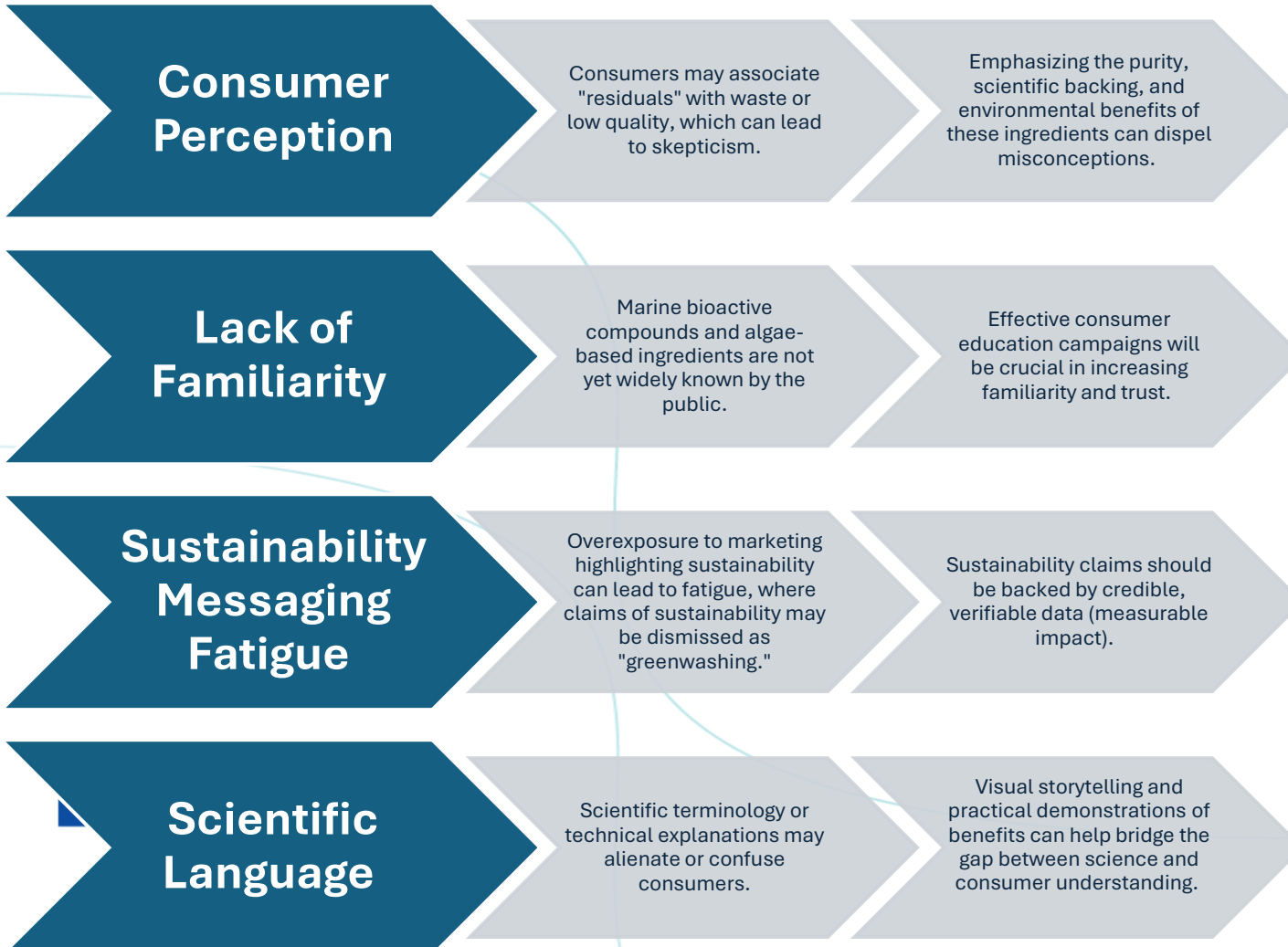


Lack of **bioeconomy teaching modules, difficulties finding skilled labor, and unsatisfactory rural working conditions**. Challenges include an ageing and static staff, a shortage of skilled employees, and a diminished interest in working within rural areas.

COMMUNICATING INNOVATION OF MARINE BIOACTIVE COMPOUNDS



When introducing marine bioactive compounds from fish processing residuals and algae, especially for industrial applications such as cosmetics and nutraceuticals, significant barriers to consumer acceptance need to be addressed:



THE EU COMMITMENT TO OVERCOME BARRIERS

According to the European Commission, to develop a sustainable and circular bioeconomy, policies must be evidence-based and coherent across different sectors.

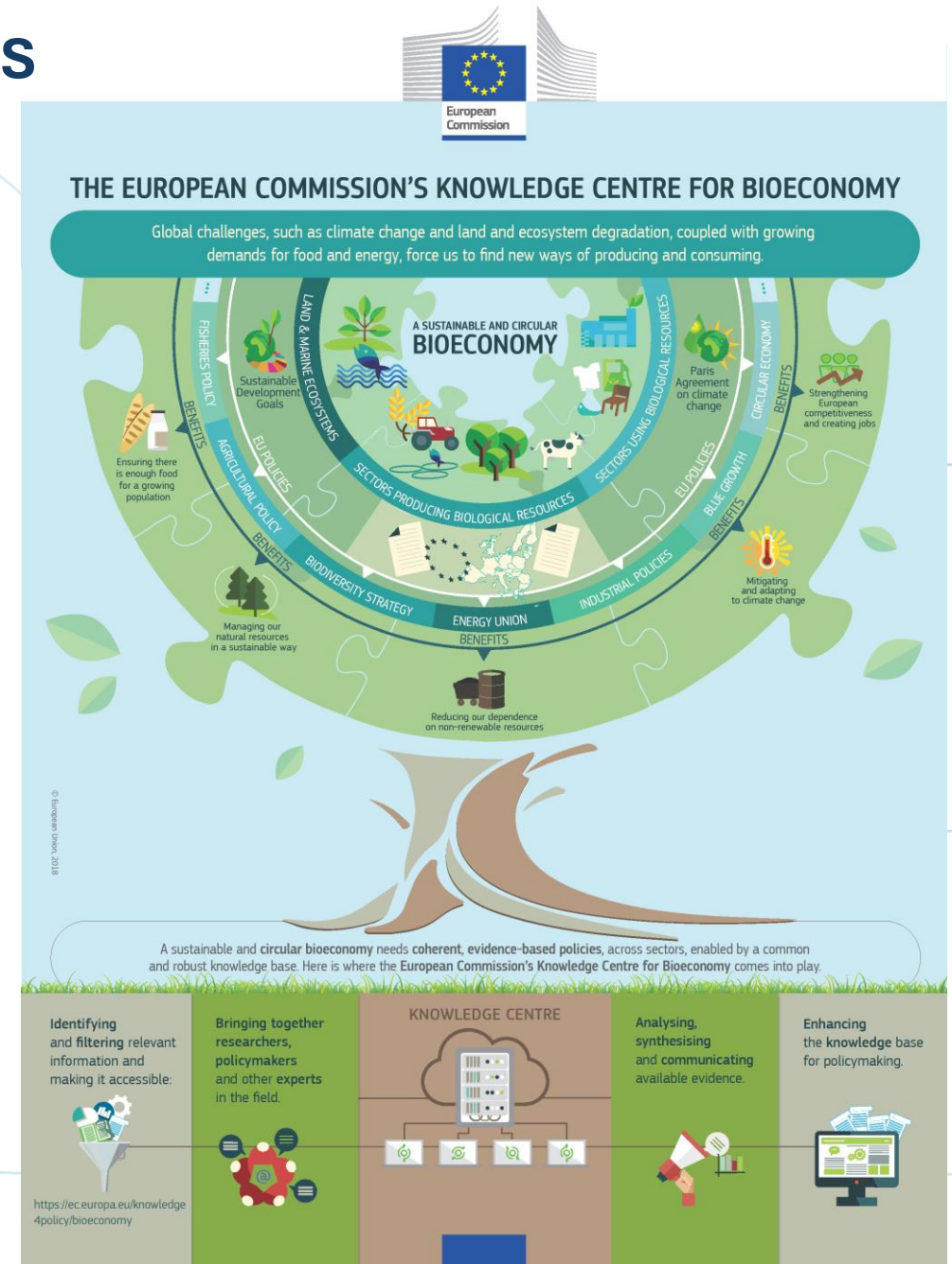
For this, a common and robust knowledge base is needed and an effective communication is essential.

The **European Commission's Knowledge Centre for Bioeconomy**:

- Identifies and filters relevant information and makes it accessible.
- Brings together researchers, policymakers and other experts in the field.
- Analyses, synthesises and communicates available evidence.

It also includes:

- Dedicated page on **trends in the bioeconomy**
- Dedicated page on **country dashboards** to see the strategy and other policy initiatives dedicated to bioeconomy in each country





BLUEREV COMMITMENT TO OVERCOME BARRIERS: TRAININGS



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