

BLUE BIOTECHNOLOGY – CHALLENGES AND PERSPECTIVES



BLUE BIOTECHNOLOGY – A POTENTIAL FOR SYNERGY

Webinar, Burgas, 25.08.2023



Interreg - IPA CBC
Bulgaria - Turkey

PARTNERSHIP

**CB 005.3.12.001 “Cross-border
Regions Collaborate for BLUE
GROWTH” (BLUE GROWTH COLLABs)
project**





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Biotechnology is the application of science and technology to living organisms as well as parts, products and models thereof, to alter living or non-living materials for the production of knowledge, goods and services.

Biotechnology goes along with coastal protection through nature-based solutions.

OECD GLOSSARY OF TERMS





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Blue biotechnology in Bulgaria is among the emerging sectors of the blue economy, but its potential needs further assessment.

WORLD BANK
REPORT, 2019

In Turkey sectors, such as offshore wind, seabed mining, and biotechnology, which are now expressed with small values, will show a significant growth by 2030.

WWF, 2015





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Reuse of sea shells is not a new idea. Shells are recognized as a valuable resource from ancient times – used as tool, ornaments, insignia and marks of social status.





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The use of shells of marine organisms faces the challenge of intensive energy consumption, subsequently generation of CO₂ emissions.

Fresh water consumption for cleaning the shells to reduce the salt of the final product is also an issue (0.2 – 0.8 m³ per ton of shells)

TRUE
or
FALSE?





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A variety of heavy metals may be discovered in the shell waste which can be released in the water column.

Extraction of different substances for the nutrition and pharmaceutical industries is an extensive and very expensive process.

TRUE
or
FALSE?





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Most of the solutions related to the use of shells as biomaterials are in their initial phase. For example stability of chitosan based materials is questioned due to its hydrophilicity and PH sensitivity.

High chloride content limits the use of waste shells in construction materials as it causes faster corrosion.

TRUE
or
FALSE?





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**SO, DOES IT MAKE SENSE
TO WORK ON IT?**

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THANK YOU SO MUCH!

**I HAD MY INSIGHTS DURING
THE PRESENTATION.**

DID YOU?

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