Interreg

NEXT Black Sea Basin

Co-funded by the European Union

AlgaeRevive

Project: "Harnessing Algae Power for Pollution Reduction and Blue Growth"

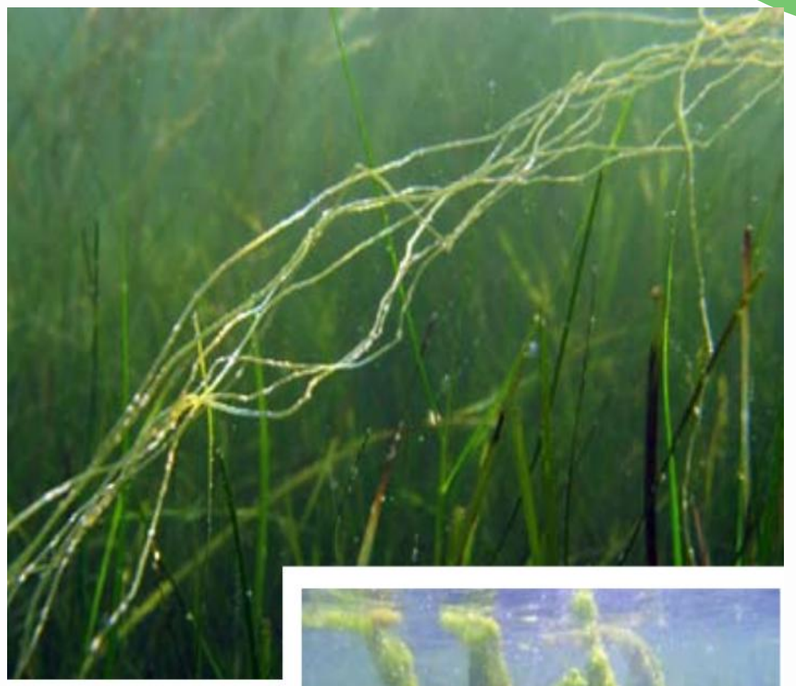
BSB00091 AlgaeRevive

Project coordinator : Via Pontica Foundation

Partners: Prof. Dr. Asen Zlatarov University; Tsotne Mirtskulava Water Management Institute, Georgia; Odesa State Agrarian University, Ukraine; Hellenic Agricultural Organization DIMITRA, Greece; Ovidius University, Romania.

Introduction

Water pollution is one of today's major environmental challenges. Algae offer sustainable and eco-friendly solutions.



Algae as Natural Purifiers

- Absorb nitrogen, phosphorus, and heavy metals
- Reduce the effects of eutrophication (algal blooms)
- Improve water quality in lakes and river
- Do not require chemicals or expensive technologies

Algae in Bioremediation and Ecosystem Restoration

- Bioremediation = use of living organisms to clean up the environment
- Microalgae can metabolize pollutants such as oil and pesticides
- Create a habitat for beneficial microorganisms
- Can be integrated into wastewater treatment systems

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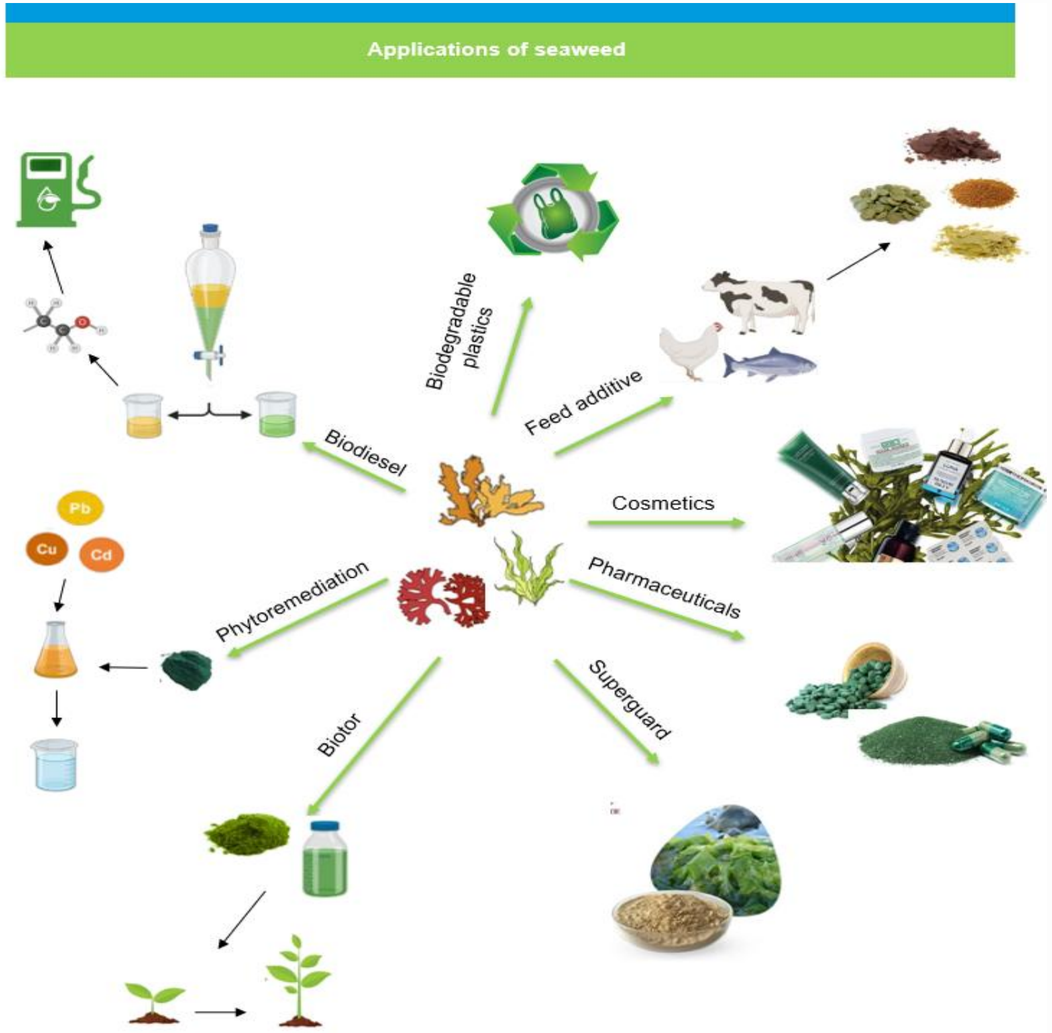
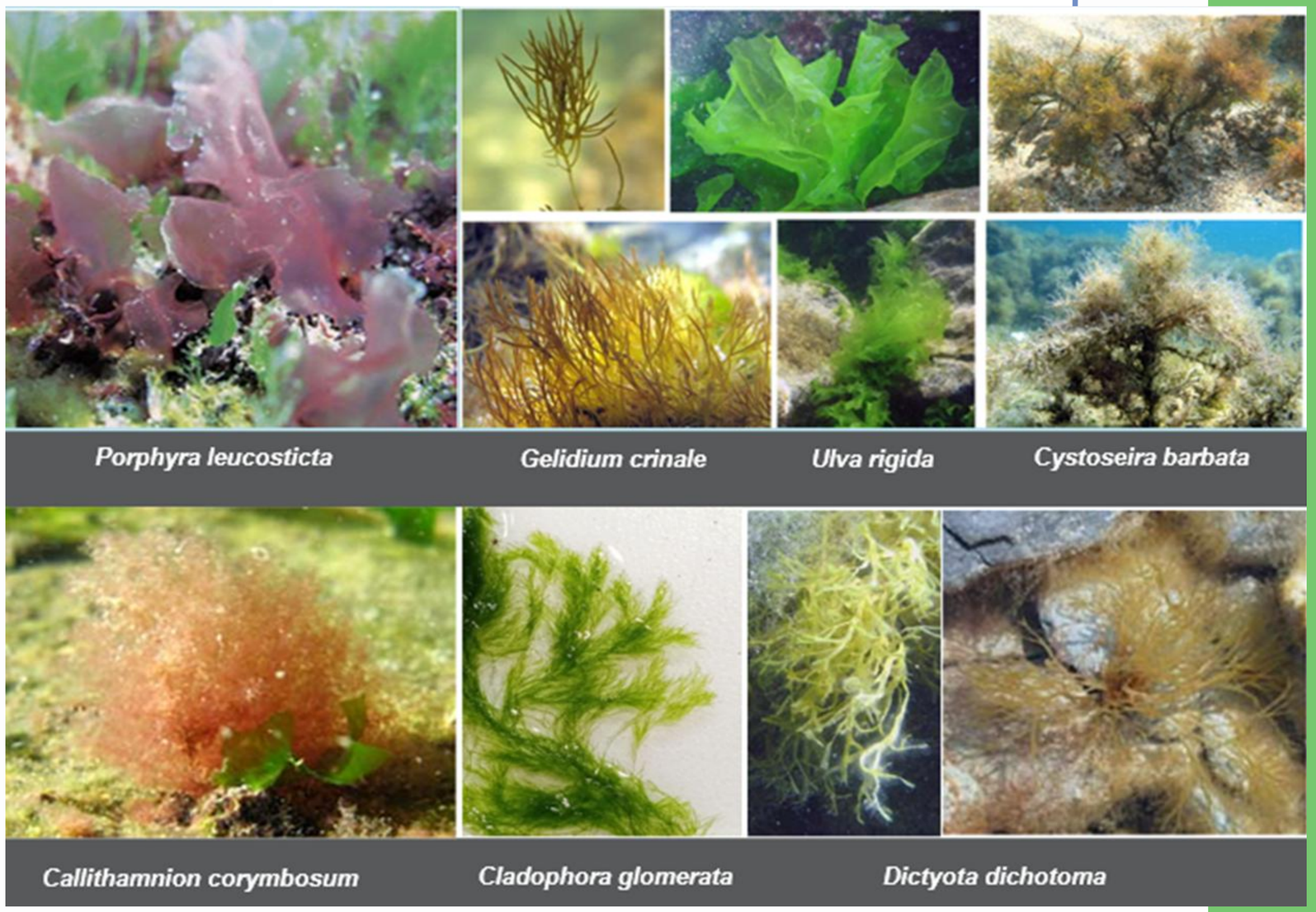
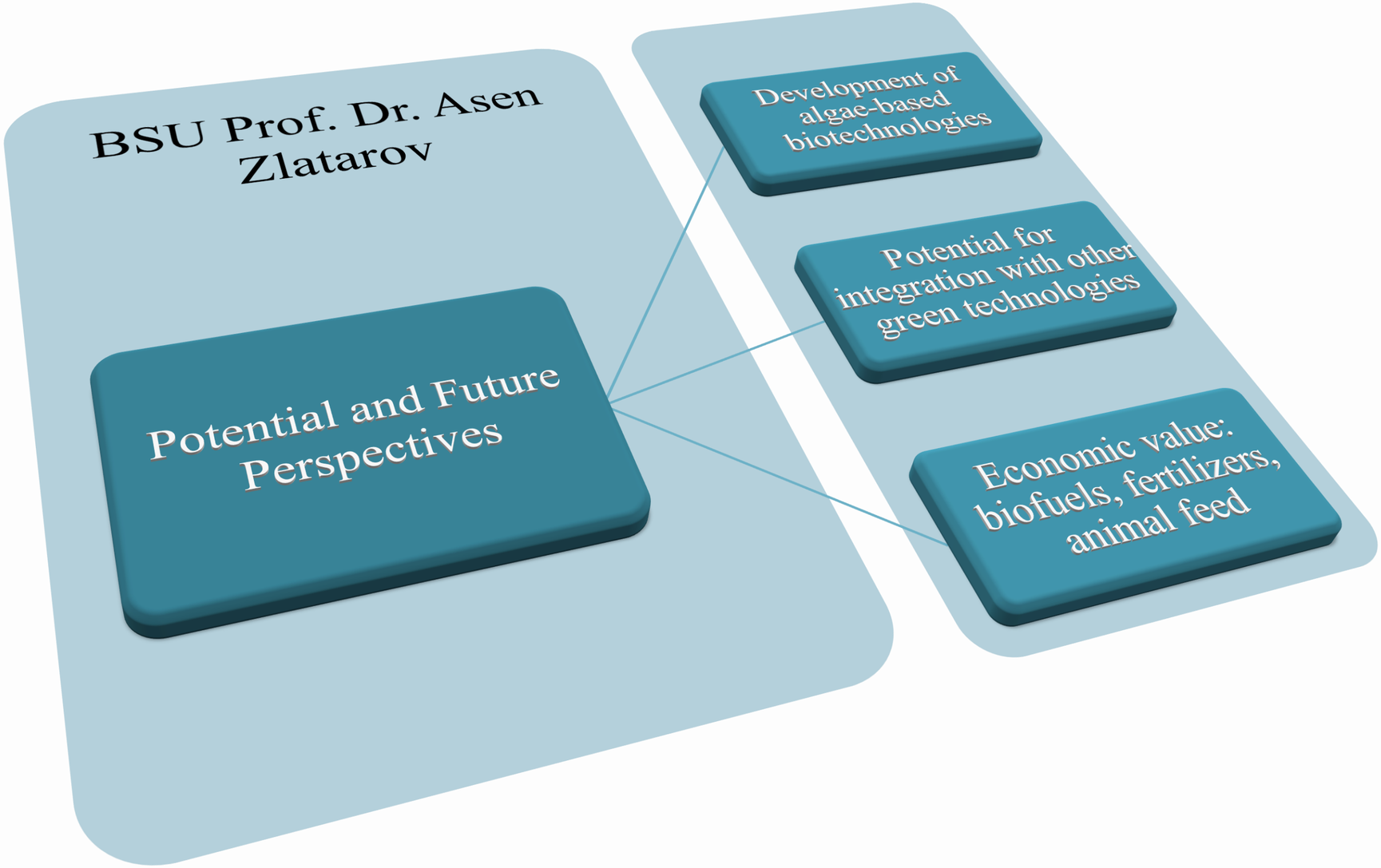



Porphyra leucosticta
Gelidium crinale
Ulva rigida
Cystoseira barbata
Callithamnion corymbosum
Cladophora glomerata
Dictyota dichotoma


BSU Prof. Dr. Asen Zlatarov
Potential and Future Perspectives
Development of algae-based biotechnologies
Potential for integration with other green technologies
Economic value: biofuels, fertilizers, animal feed

Conclusion

- Algae show great potential in addressing water pollution and supporting ecosystem restoration.

- They offer a cost-effective, efficient, and eco-friendly solution compared to traditional methods.

- However, further scientific research and practical development are essential to enable their wider application.

THANK YOU FOR YOUR ATTENTION!