



Swansea University
Prifysgol Abertawe

Wave and Tidal Range Energy Devices Offer Environmental Opportunities as Artificial Reefs

Ruth Callaway

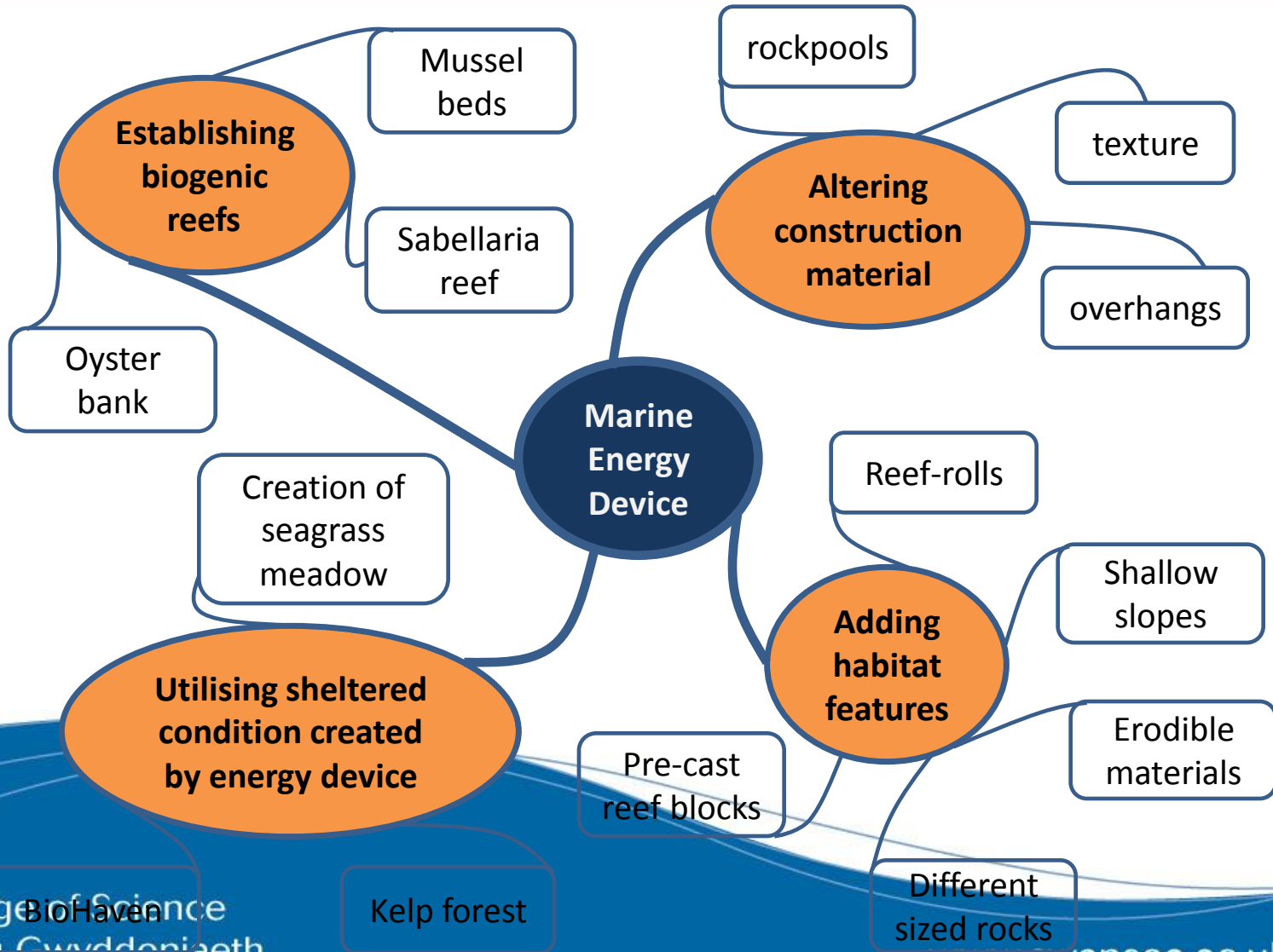
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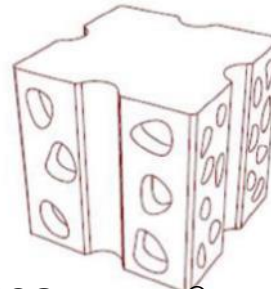
College of Science
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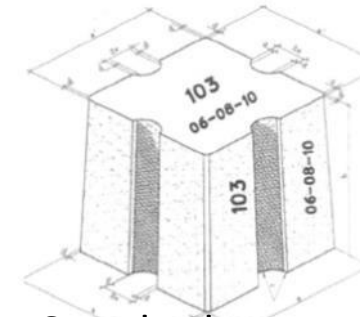
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Construction material



ECONcrete®

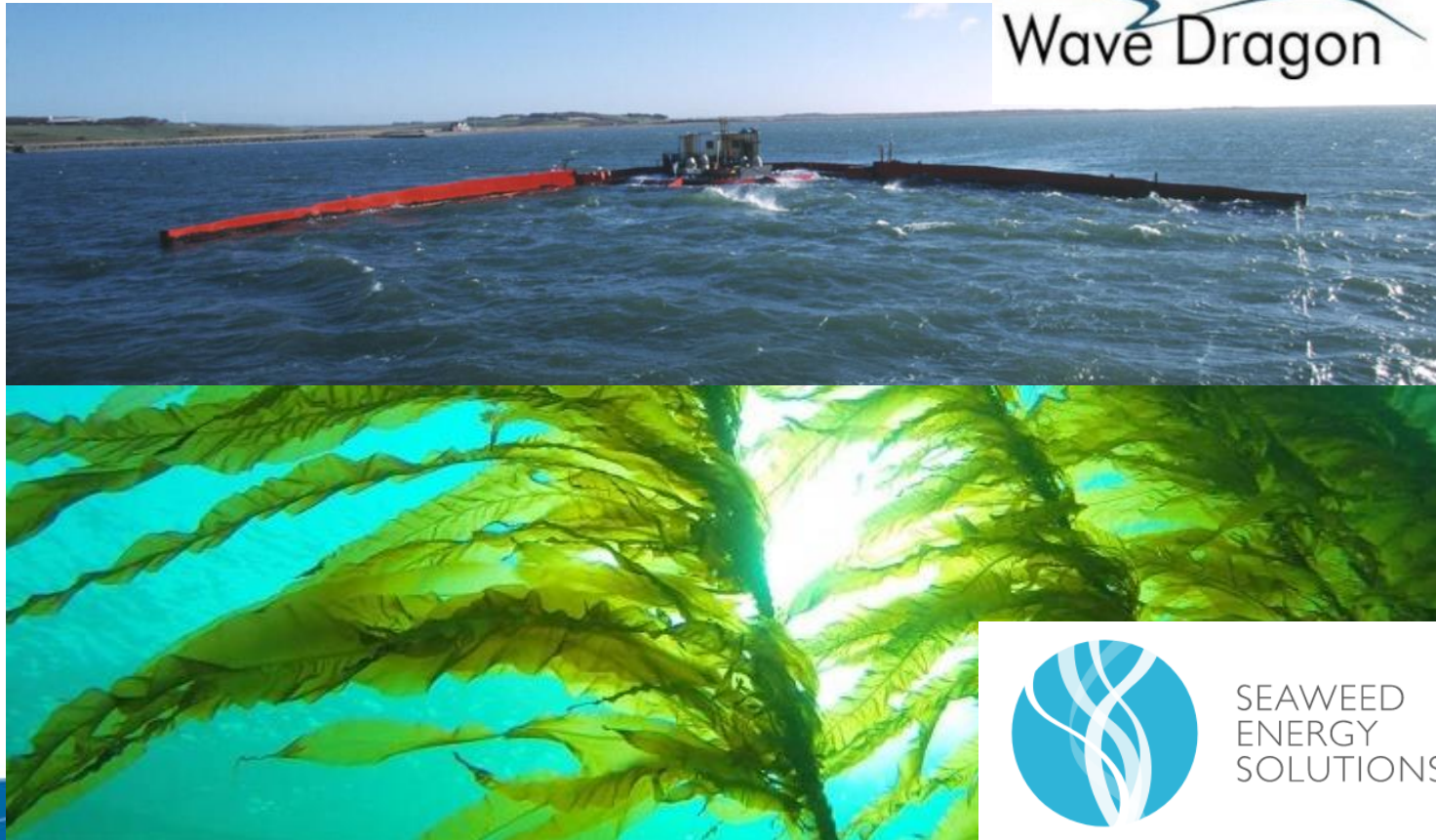


Standard concrete



S. Ido, P.-F. Shimrit 2015. Blue is the new green – Ecological enhancement of concrete based coastal and marine infrastructure. *Ecological Engineering* 84: 260–272

Utilising sheltered conditions



Wave Dragon



SEAWEED
ENERGY
SOLUTIONS

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<https://maribe.eu/>

Biogenic reefs in coastal environments



Conclusion

- Any device will create new habitat for marine organisms.
- While it is desirable to keep some parts free of colonisation, other areas may be suitable for reef creation and biodiversity enhancement.
- There is a wealth of potential methods to enhance biodiversity linked with artificial infrastructure such as wave and tidal range energy devices.
- Research programs such as SEACAMS (Wales, UK), or ECOSTRUCTURE (Ireland/Wales) assist developers with research.