



CuanTec

OPENING UP THE POTENTIAL OF THE SEA

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Welcome



A BLUE BIOTECH COMPANY, WITH A CIRCULAR ECONOMY SOLUTION

MISSION

Working with fisheries and natural food producers to maximize the value of all they harvest

Reduce the impact that food waste and plastic pollution have on our world

Going from This



To a clear Bioplastic film!



Plastic

Mass production of plastics after WWI

Polyvinyl Chloride – 1920

Phenol-furfural resins – 1923

Polystyrene – 1930

Polyethylene – 1933

Polyethylene terephthalate – 1941

Polypropylene -1954



Plastic's fantastic properties

- ⊗ Malleable
- ⊗ Durable
- ⊗ Long lasting
- ⊗ Stable
- ⊗ Chemical resistant
- ⊗ Lightweight
- ⊗ Multi-functional

Then we got carried away!



Plastic waste



Persistence within the Environment

- 🌱 Almost all produced plastics still exist
- 🌱 >8m tons annual end up in the ocean
- 🌱 Less than 50% recycled
- 🌱 Harmful to marine life
- 🌱 Breaks up, not down

Not Just Plastics

Food waste



1/3 food wasted in western world

- 🌱 Landfill costs in EU >£14bn by 2020
- 🌱 Waste (Scotland) Regulation – ban of biodegradable waste 2020
- 🌱 Production of noxious gases during breakdown
- 🌱 Impact on climate

CuanTec have a Circular Economy Approach to:

- 🌐 Valorising Fisheries and Raw Food Producer's waste streams to extract 🌐 BioChitin
- 🌐 Create natural Anti-Microbial coatings for food packaging – extending food shelf-life and minimising food waste.
- 🌐 Create compostable films and packaging as an alternative to single-use plastics.



We can BIOLOGICALLY extract chitin from existing waste streams of the food, feed and fisheries industry.



Novel Technology



CuanTec's Technology

- No use of Toxic, Harsh chemicals, by-products will be utilised.
- Biologically derived process
- Maintains Chitin's natural properties, allowing for the formation of biodegradable packaging



Traditional Extraction Process

- TOXIC Chemicals = TOXIC waste by-products
- 3x More Electricity used than the BioChitin Process
- Chitin NOT suitable for producing packaging



Anti-Microbial Coatings



- 🌐 In UK, £19bn seafood wasted annually because not used before end of 7 day shelf life
- 🌐 Fresh salmon is high value with a short shelf-life of 7 days
- 🌐 CuanTec will extend shelf-life by coating existing plastic film packaging with CuanTec BioChitosan
- 🌐 Overall reducing waste and over fishing

CuanSave™ Bio-Degradeable Packaging

CuanTec's process maintains chitin's natural properties allowing for the revolutionary formation of Bio-degradeable film.

- ⊗ Stand-alone compostable film, casings and laminates
- ⊗ Initial Prototypes produced are:
 - ⊗ Bio-degradable
 - ⊗ Optically clear
 - ⊗ Show flexibility
 - ⊗ Demonstrated anti-microbial efficacy
 - ⊗ Reduction of *E. coli* and *S. aureus*



CuanTec will continue.....

- 🌐 Working with fisheries, feed and food producers to maximize the value of all they harvest
- 🌐 Reduce the impact that food waste and plastic pollution have on our world



"Surely we have a responsibility to care for our planet. The future of humanity and indeed all life on earth, now depends on us." – Sir David Attenborough



www.cuantec.com



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Tapadh leibh airson ur aire!
Thank you for your attention!

