

Circular Business Model Guidelines for Fishing Gear Producers and Assemblers

Source: Adapted from ‘Opportunities for circular business models and circular design related to fishing gear’ by M Charter & Whitehead, 2021
(chapter in development for 2023)

Circular Business Models	Focusing Points to be Considered	Notes
Produce on Demand	<p><i>Produce fishing gear close to fishers utilising just-in-time production</i></p> <p><i>Use 3D printing to produce sub-assemblies and components close to fishers</i></p> <p><i>Provide 3D printing devices to fishers to produce fishing nets module, sub-assemblies, and components on board ships to enable the repair of gear</i></p> <p><i>Use emerging digital technologies to reduce cost and time</i></p> <p><i>Adopt eco-design strategies to reduce resource consumption</i></p> <p><i>Combine with other Circular Business Models (CBMs) for additional revenue streams e.g. reuse, repair, refurbishment, reconditioning or remanufacturing</i></p>	
Product Life -extension	<p><i>Design new products for long lifetime</i></p> <p><i>Use durable materials like Dyneema® as raw materials</i></p> <p><i>Combine with other CBMs for additional revenue streams e.g. repair, refurbishment, reconditioning or remanufacturing</i></p> <p><i>Combine with modular design to facilitate high quality and commercially viable reuse</i></p> <p><i>Adopt eco-design strategies to reduce resource consumption across products’ life cycle</i></p>	
Facilitated Reuse	<p><i>Reuse components like weights and buoys of fishing gear through repair</i></p> <p><i>Reuse components for example weights and buoys of fishing gear without repair</i></p> <p><i>Combine with other CBMs for additional revenue streams</i></p> <p><i>Adopt eco-design strategies</i></p>	
Product Modular Design	<p><i>Design fishing gear to be modular</i></p> <p><i>Produce fishing gear to enable key components to be easily removed and replaced</i></p> <p><i>Combine with other CBMs for additional revenue streams</i></p> <p><i>Adopt eco-design strategies</i></p>	
Incentivised Return	<p><i>Establish take-back systems</i></p> <p><i>Offer incentives to customers to return fishing gear, materials, or components</i></p> <p><i>Recycle materials or remanufacture the items after collection from customers</i></p> <p><i>Increase the collection ratio</i></p>	
Lease Agreement	<p><i>Lease fishing gear (sell a service, not sell ownership) → fishing gear producer retains ownership</i></p>	

Performance based (Pay for Success)	<p><i>Provide fishing gear solution that is available 24/7, 365 days a year with lower capital investment to fishers</i></p> <p><i>Ensure that fishing gear is returned at end-of-life to meet future EPR requirements</i></p> <p><i>Sell defined level of product performance or results rather than the fishing gear itself</i></p> <p><i>Retain ownership</i></p> <p><i>Make sure fishing gear are returned at end-of-life</i></p> <p><i>Be careful about irregular catch productivity that may hamper regular cash flow and profit</i></p>
Sharing Platforms	<p><i>Provide shared access or collaborative consumption opportunities for fishing gear among fishers</i></p> <p><i>Increase utilisation rate of fishing gear through planned use amongst multiple fishers</i></p> <p><i>Offer fishers access to fishing gear through service agreements, rather than outright ownership</i></p> <p><i>Provide repair, refurbishment, reconditioning, remanufacturing, and recycling services between producer/assemblers and fishers through using digital platforms</i></p> <p><i>Create opportunity for fishing co-operatives to rent fishing gear locally</i></p> <p><i>Ensure transparency over insurance claims related to maintenance and damage issues</i></p>
Peer to Peer (P2P) lending	<p><i>Lend fishing gear between fishers without direct financial transaction</i></p> <p><i>Ensure transparency over insurance claims related to maintenance and damage issues</i></p>
Refurbish, Repair, Remanufacture, and Recondition	<p><i>Make improvement to fishing gear and components through refurbishment</i></p> <p><i>Provide repair services to a ensure returned faulty fishing gear is returned to a usable state</i></p> <p><i>Ensure that 2nd, 3rd, etc life fishing gear is returned to its original level of functional performance by rebuilding or repairing major components that are close to failure</i></p> <p><i>Ensure that 2nd, 3rd, etc life fishing gear is returned to its original level of functional performance through a warranty to ensures that is equal or better than that of the newly manufactured product</i></p>
Recovery of Secondary Materials / By-products	<p><i>Create fishing gear produced from secondary materials from recovered waste by recycling</i></p> <p><i>Disassemble components and materials to create or reform into new products</i></p> <p><i>Produce low-grade plastics products by downcycling</i></p> <p><i>Produce high-grade plastics products by upcycling</i></p>