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MARplas - Closing the Loop on Marine Plastic Waste.

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This paper presents the process and outcomes of *MARplas: closing the loop on Marine plastic waste*, Project (2019 – 2022) funded by Bord Iascaigh Mhara (BIM) and Environmental Protection Agency, Ireland under the STRIVE Green Economic programme. The project worked with community participants in 4 of Ireland's Fisheries Local Action Groups (FLAG) regions (FLAG North, West, South-West and South, using an Inclusive Design Thinking process for the circular economy that encourages and utilises co-design to develop and demonstrate innovative and novel approaches, in this instance towards the potential for marine plastic waste. MARplas' approach integrated the circular economy concepts and design processes promoted by the European commission, through a multi-stakeholder approach that also considered Ireland's sustainable development policies and aims. The project's ambition for a "beyond compliance approach" looked for opportunities for all sectors of society (citizens, researchers, industry and government) to collaborate towards shared aims and policy delivery. MARPlas explored the potential of moving beyond top-down policy approach through concrete, practical and creative processes of policy engagement and participation that are easily translated into locally-scaled action and national innovation. Utilising an adaptation of a novel, innovative and systemic methodology, the permaCultural resilience praxis (McKeown et al, 2022; McKeown, 2015), the project team undertook a focused creative and systemic investigation, harnessing the latent potential prevalent in all communities with professional design and innovation expertise. The project team's expertise was drawn from the from the following fields: fishing, sustainability, Marine Biology, Inclusive and Circular design, Engineering, Education and Community development, across academia, industry and civil society and local development with an 80:20 representation from self-identified female researchers and community members. The underpinning praxis, itself a circular economic process facilitates the maximum optimisation of local resources, by actualising local implicit knowledge within knowledge production and transfer processes while building capacity to reimagine locally engaged activities, through encouraging self-organisation and localised resilience by reimagining local and rural possibilities. The resultant knowledge exchanges and micro-enterprise prototypes including a transferable execution model utilised creativity, innovation and practical processes to develop home-grown locally-scaled solutions to global concerns from the inside out. MARplas contributes to a quadruple helix model of practice towards bridging academia, civil society, government and industry, through drawing on inclusive ethical design practices and community engagement and participation. In summation, this paper, presents MARPlas's approach (benefits and limitations) to the use of design-led peer-to-peer (P2P), disruptive innovation and collaborative systemic practices towards innovative sustainable economic models (co-operative development, peer2peer platforms and social enterprises) as well as harnessing latent potential and knowledge for local and national benefit.