The challenges of protecting rural coastal communities from climate change and human impacts
A Case Study: Maharees Conservation Association CLG

Overview. The Maharees tombolo separates Brandon Bay and Tralee Bay and connects the two villages of Fahanmore and Kilshannig to the mainland (total population 293). Natural hazards and human activities are adversely impacting the long term health of the dune ecosystems and the preservation of the tombolo structure. Socio-economic forces have resulted in a transition away from primary modes of production (farming and fishing) the last two decades to tertiary goods and services focussed on tourism and visitors to the area. The lack of an integrated, fit-for-purpose plan to manage human activity (pedestrian paths to access beach and related activities of parking, camping, unregulated access, dune scrambling, and fires) has led to destablisation of the fragile dune system. The forudenes are also suffering chronic erosion from Atlantic storms.

The local community mobilised to form the Maharees Conservation Association (MCA) in February 2016 to design short- and long-term coastal management solutions. The MCA has successfully engaged with all the relevant stakeholders to conduct coastal protection activities (beach cleans, dune vegetation planting, signage and access fencing, straw bales, dune fencing, cultural & heritage walks, public committee meetings, fundraising events, media, and partnerships & outreach). In March 2018 the OPW announced they would be funding €150,000 a Coastal Erosion & Flood Risk Management Study for the Brandon Bay-Maharees priority area. This is a major step to implement long term measures to mitigate coastal hazards. This study will be supported by researchers in NUIG Geography as an OPW funded project (2015-2017).

There is a growing policy shift away from the sectoral management of coastal and marine resources to a more integrated ecosystem approach that recognises interdependencies between the multiple activities that compete for limited space among the land-sea margin. We advocate that both market and non-market Ecosystem Goods and Services (EGS) in coastal-urban communities should be determined to estimate the full value of their functional systems to partially remediate existing bias in cost benefit analyses (CBA) that, hitherto, handicap rural communities in funding competitions allocating resources for coastal protection compared with more urbanized coastlines. Full value auditing will justify, at least fiscally, investment in preserving biodiversity and EGS and promote their conservation and sustainable use. This research will be conducted by teams in NUIG and IT Tralee. The benefits of empowering coastal communities and involving them in decision making (bottom-up) results in policy and binding legislation that is more likely to be acceptable to these rural communities. Likewise, the survival of rural coastal communities depends on empowering people to make change locally and providing them with tools to adapt to climate change impacts.

The Maharees Conservation Association CLG: examples of direct and indirect impacts

Dune vegetation planted during 2017 has survived the winter storms of December 2017 - February 2018 and will reduce the risk of the blowouts from moving landward and breaching the dune system to the road.

Dune restoration has occurred within 12 months of soft interventions (restrict access and parking, bales, planting, education boards, warning signs).

The one access road into Maharees has not been blocked since the fences were installed in April 2017. New fencing was installed February 2018.

The Maharees, and the Brandon Bay Maharees Coastal Cell, are protected under the Coastal Protection Designation (March 2018).

The Fishies Project: Transition year students from Mean Scoil na nIodhach Tralee are making and selling keyrings made from beach plastics collected in Brandon Bay.

November 2017: The MCA wins the Clean Coasts Ocean Hero Award Group of the Year.

In December 2017 Kerry County Council announced a Coastal Erosion & Flood Risk Management Study application has been submitted to the OPW for the ‘Brandon Bay Maharees Coastal Cell’. In March 2018 it was announced the application was successful. The study will be 90%, OPW funding and is estimated to cost €150,000. OPW requires that proposals and funding applications for structural measures to prevent or mitigate erosion should be done in conjunction with an appropriate coastal erosion risk management study which fully investigates, substantiates and demonstrates the merits of any measures being proposed. This is a major step to a long term solution.

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