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| Searching for a Coordinator/Partner for | **The Green Deal – Farm to Fork** |
| Topic | **LC-GD-6-1-2020:** **Testing and demonstrating systemic innovations in support of the Farm-to-Fork Strategy** |
| Subtopic | Combination of sub-topic A and C |
| Organisation Details | RDI Unit of Limerick Institute of Technology (LIT) |
| How we can contribute to this topic | The sub-topic A focusses on reducing GHG emissions and increasing farm based carbon storage and part of subtopic C is reducing nutrient losses from fertilizers by having zero pollution of soil, water and air. Riparian buffers are well known for mitigating/reducing GHG emissions, promoting carbon sequestration and reducing movement of excessive pollutants into the water bodies. These ecosystems are ideally located between agricultural land on one side and stream/water body on the other side. These riparian ecosystems if properly designed can significantly reduce movement of excessive nitrogen and phosphorus into water bodies, known to cause algal blooms, fish kills and water quality degradation. The LIT scientists can work collaboratively with Teagasc for implementing these riparian ecosystems in Ireland. However, the LIT has started communications with Teagasc on these matters. The scientists from Teagasc and LIT can jointly design and monitor the performance of riparian buffers, located between farmland and a water bodies using field monitoring and computer modelling. A computer simulation model known as Riparian Ecosystem Management Model (REMM) developed by United States Department of Agriculture and Agricultural Research Service (USDA-ARS) can be utilized for predicting the long-term (50+ years) performance of nitrogen and phosphorus sink/source to the streams. The REMM model has to be calibrated and validated using hydrology and water quality data from Irish riparian buffers for predicting its long term performance. I have already worked with designing, monitoring and modelling the performance of riparian buffers as a part of PhD thesis at North Carolina State University, USA in collaboration with USDA-ARS, Tfiton, GA, USA.  |
| Other information |  |
| Previous Horizon 2020 projects |  |
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