



## Engaged Research Case Study Template

<b>Project Title (8 words max)</b>	<b>ZECOS (Zero CO2 Emission Certification System)</b>
<b>Environmental protection</b>	
<p><b>Project synopsis (100 words max)</b> Please give a very short description of the societal challenge, the action taken, and the intended/ achieved result.</p>	<p>A community collaboration with environmental researchers and private partners to design a set of community resources and an accreditation system for communities to reduce greenhouse gas emissions.</p> <p>This project is designed to quantify financial savings and greenhouse gas emission reductions resulting from communities' active participation in sustainable development, especially in relation to energy production and consumption. Together the project team is working to create a model for a certification system designed to assist communities working towards the ultimate goal of zero emissions and to create an EU-wide standard and accreditation system for communities engaged in greenhouse gas emission reduction.</p>
<b>Higher Education Institution:</b>	University of Limerick
<p><b>Engaged Research Partners</b> (civic, civil society organisations, Social enterprises, public or professional service or product users, policy makers, members of the public).</p>	<p>Ballynagran Zero Carbon Community, Co. Wicklow; Institute for Applied Material Flow Management (IfaS), Germany; TUV Rheinland Energy and Environment GmbH, Germany; Energy Agency, Trier, Germany; MosArt Environmental Design Agency, Ireland; Odisse, Belgium; European Academy of Renewable Energy, UK.</p>
<p><b>Engagement (research method or activity) (100 words max)</b></p>	<p>A citizen science and data collection methodology was used. Data collected from the community residents allowed the researcher to measure the energy requirements and carbon intensity of the community.</p>
<p><b>Project outputs and outcomes: (600 words max)</b> Please describe briefly the target audience and activities that occurred and short terms results. This information could include:</p> <ul style="list-style-type: none"> <li>• who you worked with;</li> <li>• issue to be addressed</li> <li>• what actions you took;</li> <li>• the geographical location;</li> <li>• any shorter-term outcomes or changes in local situation and circumstances, knowledge and skills attitudes or behaviour, policy, practice, organisational development etc, decision-making.</li> </ul>	<p>The outputs are as follows:</p> <ul style="list-style-type: none"> <li>• Through the development of appropriate methodologies to measure the energy requirements and carbon intensity of the community, a carbon account and a material flow account of the community was completed.</li> <li>• Participation in the Global Protocol for Community-Scale Greenhouse Gas Emissions (GPC) Pilot project produced a complete inventory of Greenhouse Gas emissions that occur as a result of the activities of residents within the community.</li> </ul>



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	<ul style="list-style-type: none"> <li>Community projects included the building of a local wind turbine, adoption of a CO2 Emission Certification System and significant reductions in the community's CO2 emissions.</li> </ul> <p>The outcomes are as follows:</p> <ul style="list-style-type: none"> <li>The successful trial of a community stakeholder model to develop effective strategies to reduce Greenhouse Gas Emissions.</li> <li>Development of a greenhouse gas (GHG) management system named Zero Emission Management System (ZEMS) applicable by each kind of community in the EU.</li> <li>The project reviewed and assessed the effect that targeted policies can have on the sustainability of this Irish rural community using the published Sustainability Evaluation Metric for Policies Recommendation (SEMPRe) Model. The SEMPRe Model was adapted to quantify the effectiveness of candidate policies selected as appropriate for rural communities to increase the Sustainable Development Index (SDI) of the community. Futures Scenarios, both technological and behavioural, have been developed to guide the BEP+C.</li> </ul>
<p><b>Longer term anticipated areas for Impact</b> (Choose from below):</p> <p>Economic Policy &amp; Public Service Societal Engagement Health &amp; Wellbeing Professional services Environmental New knowledge Human Capacity</p>	<p>Policy and/ or Product Development Capacity Building Environmental Economic</p>
<p><b>Funding source:</b></p>	<p>Horizon 2020</p>
<p><b>For more information contact:</b></p>	<p>Dr Bernadette O'Regan UL Engaged Research Project overview available at: <a href="http://www.ul.ie/engage/node/761">http://www.ul.ie/engage/node/761</a> <a href="http://www.ul.ie/research/blog/accreditation-low-carbon-communitiess">http://www.ul.ie/research/blog/accreditation-low-carbon-communitiess</a> <a href="http://www.zecos.eu/">http://www.zecos.eu/</a></p>