

| TERRITORIES INVOLVED   | DESCRIPTION OF THE PROJECT  | RESULTS OBTAINED AND REPLICABILITY   | PROJECT CONTINUATION  |
|------------------------|---|--|---|
| EUSKADI                | <ul style="list-style-type: none"> <li>Le Jardin de Sandrine, (<a href="https://www.lejardindesandrine.com">https://www.lejardindesandrine.com</a>), is a small farm located in the Hautes Pyrénées which produces vegetables and fruit without chemical treatment, on 1000 m<sup>2</sup>. All the production is processed on site (chutneys, vegetable pâtés, juices, syrups, jams) and marketed in AMAPs or specialised shops.</li> <li>The market gardener installed a pico-methanisation unit (PUXIN equipment) in March 2019 on their farm to supply biogas to their fruit and vegetable processing laboratory and to recycle their production residues.</li> <li>As part of the ORHI project, support for the unit has been proposed:               <ul style="list-style-type: none"> <li>- Carrying out work to improve the operation of the unit: insulation, heating, safety,</li> <li>- Technical and biological monitoring over the period March 2020-March 2021 following the start-up of the unit in the spring of 2020.</li> </ul> </li> </ul> | <p>Some suppliers are now positioning themselves on the market for very small methanisation known as pico-methanisation. Few units are in operation in Europe and in France in particular. Feedback from known experiences shows that it is nowadays complicated to operate this type of unit. Several obstacles exist today:</p> <ul style="list-style-type: none"> <li>Regulatory: the existing constraints for the installation of these units, their operation and the recovery of digestate are not adapted to this scale of anaerobic digestion plants,</li> <li>Technical : The pico-methanizers are little or not heated or stirred, which strongly penalizes the biogas production performances, especially during cold periods. Problems of clogging have also been reported in the introduction of the material. Despite their small size, the operation of these units requires regular monitoring and the taking into account of safety constraints. New equipment is coming onto the market which, in the long term, could improve the technical reliability of pico-methanisation.</li> </ul> | <ul style="list-style-type: none"> <li>Biological monitoring continues on the characterisation of the digestate and the biogas produced.</li> <li>APESA will continue to monitor: the development of new pico-methanisation equipment that could improve reliability, The deployment of pico-methanisation units in France and around the world</li> <li>Poctefa territory includes many small farms and market gardeners who could valorise their organic waste by pico-methanisation, as close as possible to their production without competing with the territorial agricultural methanisers. The results of this project will be disseminated through the state of the art on pico and micro-methanisation as well as information days.</li> </ul> |
| LA RIOJA               |   |  |   |
| NAVARRA                |   |  |   |
| X PYRENEES ATLANTIQUES |   |  |   |
| OCCITANIE              |   |  |   |
| OTHER TERRITORY/IES    |   |  |   |

## PROJECT'S CONTRIBUTION TO THE FOLLOWING INDICATORS

| INDICATOR   | INITIAL VALUE (data or description) | FINAL VALUE (data or description)            |
|---|-------------------------------------|--|
| • Energy saving :                                     | Gas bottle saved : 12 X 30€         | Biogas : 8 m <sup>3</sup>                    |
| • Purchasing costs reduction (purchase of fertilizer) | Fertilizer : 700 €                  | Digestate produced : 700 kg                  |
| • Waste reduction                                     | 200 kg vegetable waste thrown away  | 200 kg vegetable waste converted into biogas |