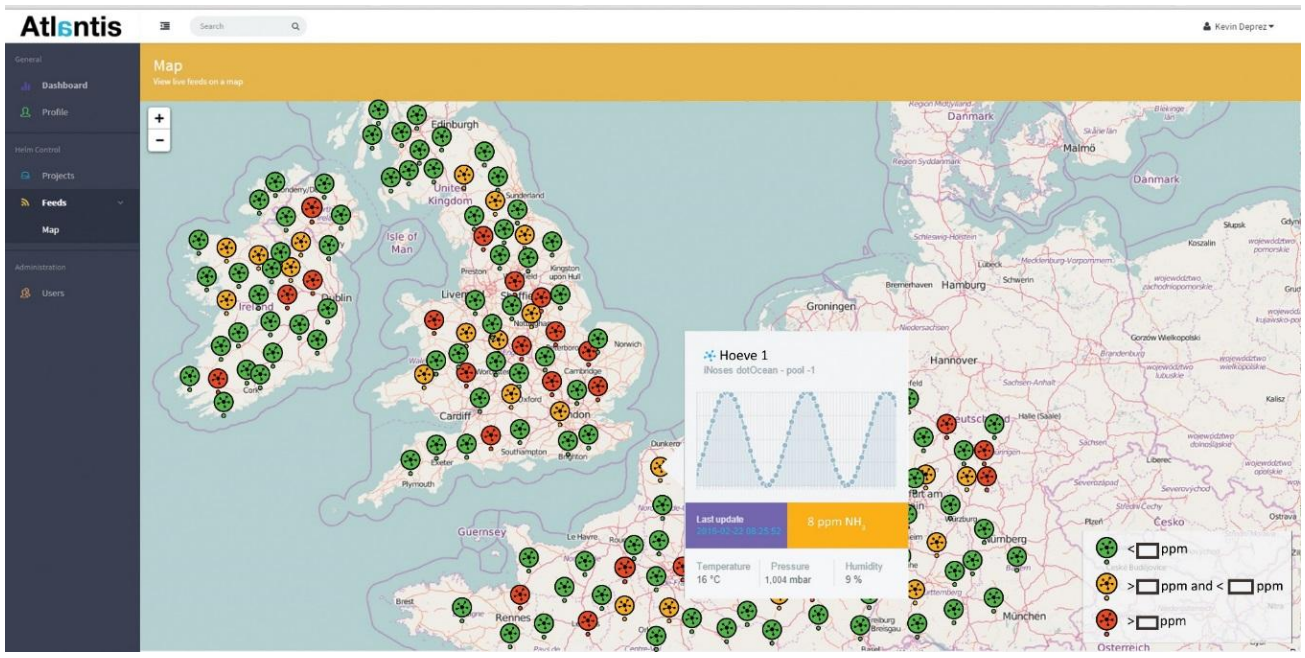
Livestock Lower Carbon Emission (LLCE)



Challenge: What challenge or problem are you addressing? What is the need for the project?

To facilitate the implementation of low-carbon, energy and climate protection strategies to reduce GHG emissions in NWE in livestock production systems. Farming is an important source of air pollution. Ammonia and methane are key gasses, harming directly and indirectly the environment. Direct measurement of the emissions, besides model predictions, is a necessity and is something that need to be developed by a diverse group of institutions and companies. With LLCE the ambition is to determine best-practices to reduce emissions, to disseminate them and to boost behaviour change towards the uptake of best management practices and low carbon technologies.

Objective of the project: what your project aims to achieve/change

Livestock production systems are an important emitter of GHGs, the challenge is to find ways to reduce GHSs to meet climate change goals. LLCE wants to measure the efficiency of reduction measures and to enhance the uptake of low emission practices, technologies and processes. To reach the objective 4 consecutive actions are scheduled.

Actions

A 1: Define low GHGs emission livestock technologies (stables, processes, feeding systems, nutrient management) across NWE.

A 2: Contact 100 different intensive livestock production patterns, and set-up a monitoring system in NWE. Set-up day-to-day monitoring on GHSs. Is in fact closing the GAP between tested lab low carbon technologies and practice.

A 3: Analyse the results, compare the different systems (emissions in relation with livestock housing system, feed composition and other indicators), identify success and fail factors for reducing GHG emissions. Summarize knowledge on cost-effective practice and techniques related to reducing emissions from livestock. Determine best-management practices towards reduced emissions.

A 4: Enhance the uptake of the best-practices that underpin tomorrow's businesses. Increase market penetration and create behaviour change for best-practices (technologies, products, processes).

Need for transnational cooperation

Certain models have been developed to reduce the emissions in livestock farming in each Member State. These are model predictions. There's a transnational concern to measure and monitor GHG livestock emissions across NWE in real time so NWE air quality will benefit on the long term. It's a necessity to work together, to exchange across borders, air quality is of transnational importance. A lot of synergies exists between regions and through exchanging best-practice whole NWE society will benefit.

What kind of partners you are looking for?

The monitoring will be executed by a gas detection system (iNose). The system consists of central unit, a couple of data loggers with smart chip and a processing and a visualization platform. More than one sensor can be installed at the central unit. Partners with experience in sensor selection (CH_4, NH_3, CO_2,..) are welcome. Several gas molecules can be measured at the same time. Dotocean's (= private project partner) software platform is a big data acquisition system with a user friendly web based visualization. Partners already: LP: AC3A (France) or VLM (Belgium) (to discuss further) Monitoring partner: dotocean.eu

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