Research Questions

How might the resilience and sustainability of UK dairy systems and their associated value chains be affected by interactions between future policy, economic, environmental, biological and social drivers? (WP1)

To what extent might interventions driven by these drivers enhance or reduce the resilience and sustainability of ecosystem services provided by dairy systems (WP2) and the animal health and productivity of these systems (WP3)?

How can business and social innovation help manage complex future interactions in farmed social-ecological systems to enable sustainable production of food and ecosystem services in dairy systems with local (WP1) and global (WP4) supply chains?

Outputs

1. Stakeholder analysis report
2. Report on drivers affecting UK dairy sector
3. Scenarios + short film reflecting future threats
1.1. Priority list of interventions
1.2. Paper on social structures for social innovation
1.3. Paper on interactions between drivers
1.4.1. Evidence-based scenario films
1.4.2. Paper on mixed methods scenario development
2.1. Paper(s) response of ecosystem services to land management interventions
2.2. Paper(s) resilience and sustainability of long-running ‘natural experiments’ using EO
3.1. Prioritized list of diseases
3.2. Longitudinal assessment of disease change correlated with short-term and long-term changes
3.3.1. Paper(s) on interactions between environment, disease and likelihood of farm level change
3.3.2. Recommendations to dairy industry on ways to reduce disease impacts and increase resilience
4.1. Global scenarios and an assessment of the scalability of explored interventions within UK context
4.2.1. Recommendations for policy, business and farming practice to dairy systems resilience and sustainability
4.2.2. International LEN to disseminate best practice for resilient and sustainable dairy systems internationally

Phase 1: Analysis and Scoping (yr 1)

1.1 Stakeholder analysis
1.2 Evidence synthesis
1.3 Systems modeling
1.4.1 Landscape Enterprise Network interviews
1.5 Social Innovation Labs

Phase 2: UK case study (yr 2 & 3)

WP1: Social innovations for dairy system futures

WP2: Understanding ecosystem service dynamics

2.1 Experimental setup
2.2 Ecosystem services data collection
2.3 Ecosystem service modeling
2.4 Remote sensing monitoring

WP3: Understanding animal disease dynamics

3.1 Disease scoping
3.2 Disease monitoring
3.3 Disease modeling

Phase 3: International case study (yr 4)

WP1: Social innovations for dairy system futures

1.4 Landscape Enterprise Network interviews
1.5 Social Innovation Labs

WP4: Upscaling resilience & sustainability

4.1 System modeling
4.2 Upscaling