

Sustainability

Farm Assessment Tools and what they can tell us

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Innovation for Sustainable
Sheep and Goat
Production in Europe



National Sheep Association

THE ORGANIC
RESEARCH
CENTRE



ELM FARM



Sustainability

Bruntland 1987

Development that meets the needs of the present without compromising the ability of future generations to meet their own needs

FAO

...conserves land, water, plant and animal genetic resources,
is environmentally non-degrading, technologically appropriate, economically viable and socially acceptable...

Sustainability

Overused

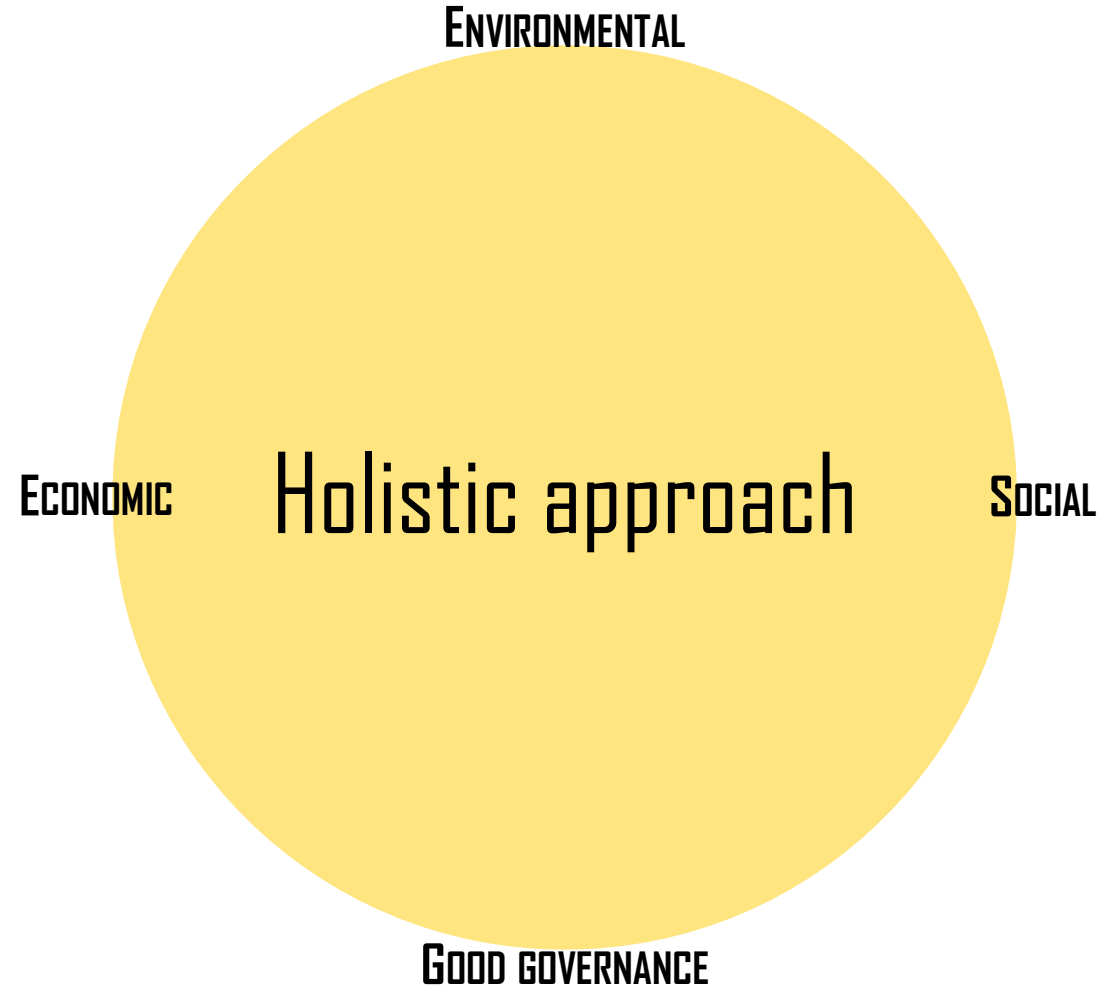
- Question what is being claimed
- Question how it was assessed

...the phrase is utterly meaningless because the body responsible for certifying palm oil is made up of some of the most destructive growers and producers... this is a henhouse insurance scheme run by foxes...



Sustainability

4 pillars of sustainability



Sustainability Assessments on farm

- What questions are being asked
- What answers are being provided
- How are those answers arrived at

- What is the purpose



Regenerative agriculture

- a system of farming principles and practices that increases biodiversity, enriches soils, improves watersheds, and enhances ecosystem services
- aims to capture carbon in soil and aboveground biomass, reversing current global trends of atmospheric accumulation
- at the same time, it offers increased yields, resilience to climate instability, and higher health and vitality for farming and ranching communities
- the system draws from decades of scientific and applied research by the global communities of organic farming, agroecology, Holistic Management, and agroforestry



<http://www.regenerativeagriculturedefinition.com>

iSAGE Case Study: HM and the PG Tool

Savory Institute Holistic management courses available in the UK

Apply for Ecological Outcome Verification achieve premiums
Land to market scheme

EOV measures the health of the land as a living ecosystem. By recognizing both land regeneration targets and trends, EOV endorsement and associated incentives are bestowed as long as land health moves in a net positive direction

PG Tool – quick assessment



PG Tool - history

- **Public Goods Tool**
- Originally developed in 2012 as an assessment tool for organic farmers
- Subsequent research projects have developed it for use within a variety of systems



PG Tool - about

- Multi criteria, analysis based assessment
- Incorporates the 4 pillars approach
- Public good topics identified and arranged under pillar headings
- Provides a snapshot of current sustainability performance



PG Tool - structure

- Topics are divided into 13 areas (spurs) across the 4 pillars

ENVIRONMENTAL INTEGRITY	ECONOMIC RESILIENCE	SOCIAL WELLBEING	GOOD GOVERNANCE
Agricultural Systems Diversity	Farm Business Resilience	Social Capital	Governance
Agri-Environmental Management	Food Security		
Animal Health Management			
Animal Welfare Management			
Energy and Carbon			
Fertiliser Management			
Soil Management			
Landscape and Heritage Features			
Water Management			



PG Tool - how it works

- Farmers answer questions associated with the 13 spurs
- Each answer is ranked on a **1-5 scale**, cumulatively generating an overall average for each spur
- The results are presented in a radar diagram





PG Tool - conducting the assessment

Structure: On farm interview, between an experienced researcher and farmer / client

Duration: 3 – 4 hours
(including 30 min farm tour)

Goal: Promote discussion around sustainability and what works for an individual business

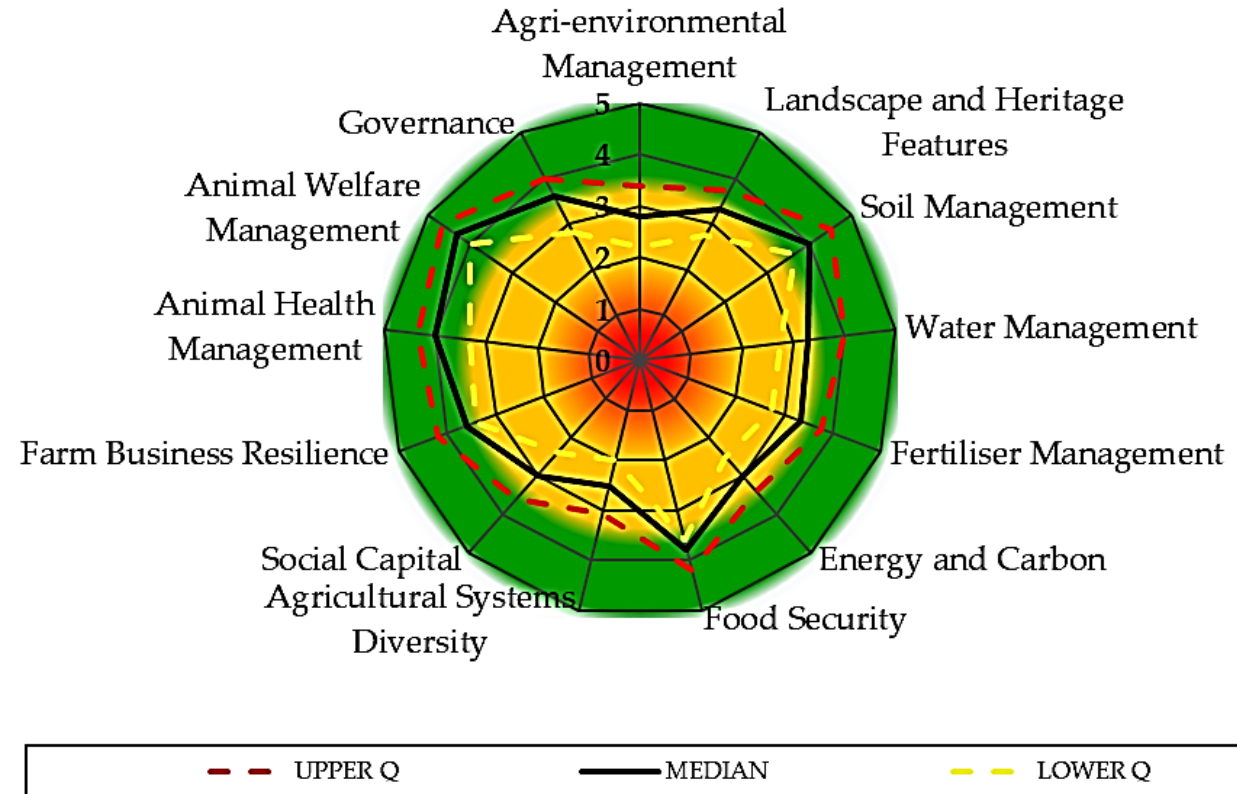
PG Tool - results

- Scores provide an indication of current performance
 - 1 = poor performance
 - 5 = very good performance
- Based upon industry recommendations and benchmarks
- Providing a holistic overview of the farm business



PG Tool - results

SHEEP INDUSTRY



PG Tool

- What is the purpose?
- Raise awareness
- Stimulate Discussion



PG Tool

- Acting on the results
- Where to get the information?



The iSAGE Toolbox

1. Signposts to Sustainability

2. Sageguard:

2.1 Sageguard.net

2.2 Sageguard cards

Developing the Toolbox

- iSAGE partners select sustainability indicators that they feel are relevant
- Sustainability questions in the PG Tool

→ **Signposts to Sustainability**



1. Signposts to Sustainability

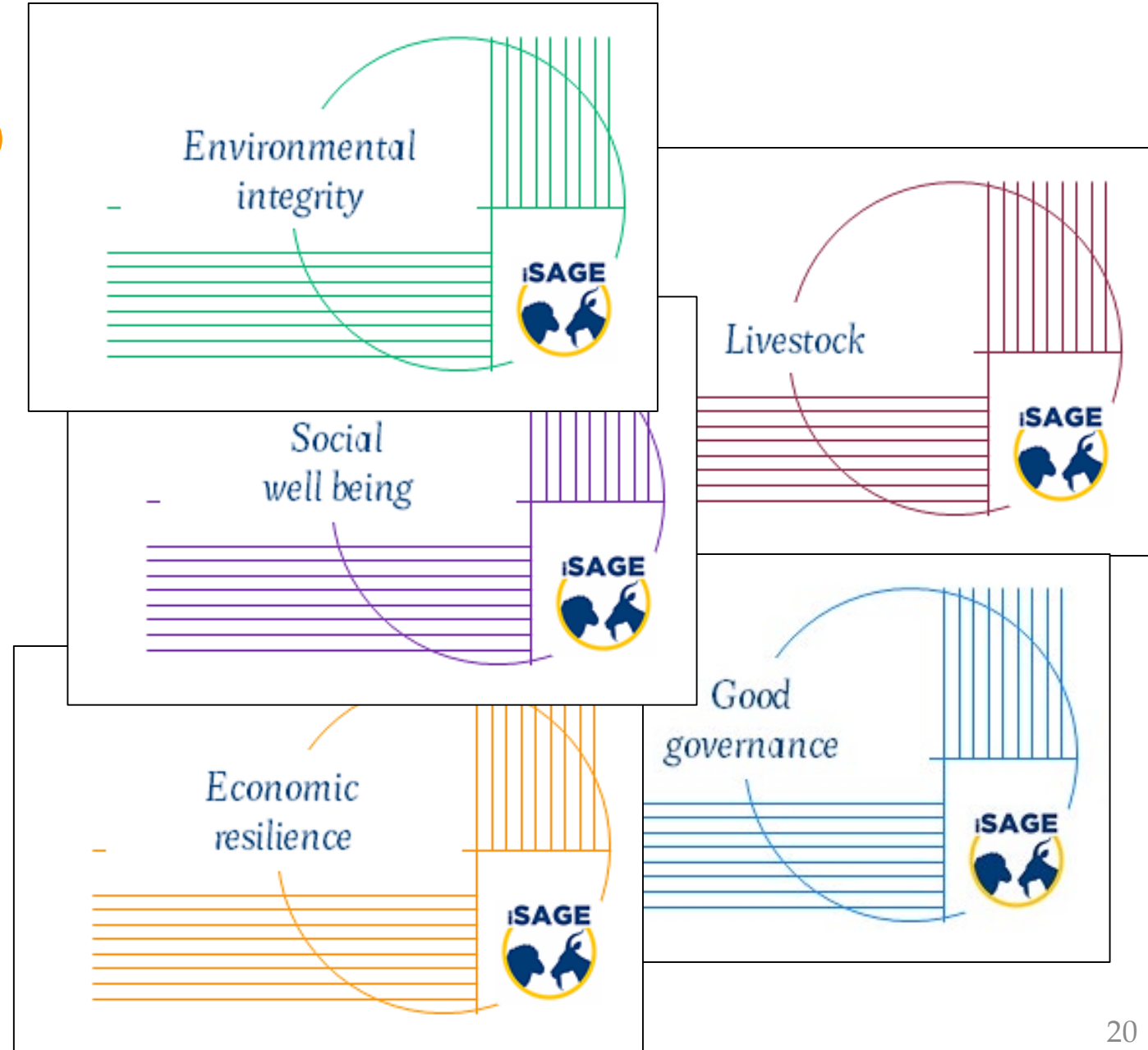
- PG Tool adapted for a quick online assessment
- Series of questions **Yes** **No**
 - + a third option when necessary e.g. unknown
- Basis for the iSAGE Toolbox



1. Signposts to Sustainability

4 dimensions of Sustainability and Livestock

- Environmental integrity
- Livestock
- Good governance
- Economic resilience
- Social well being

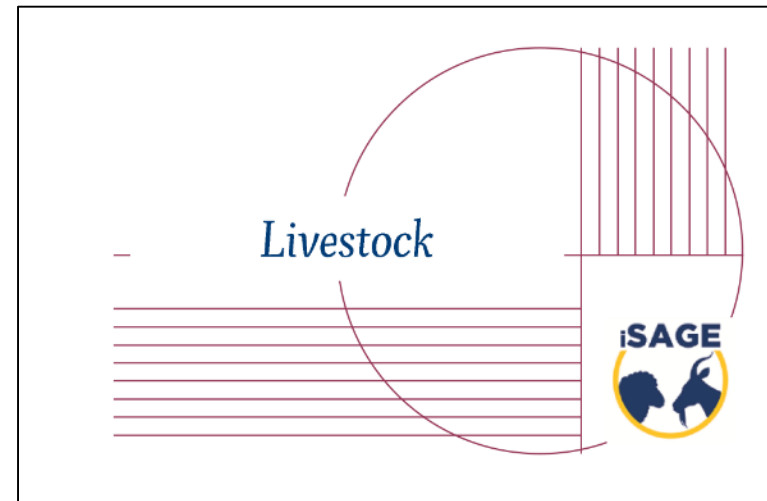


1. Signposts to Sustainability

Each dimension has three associated themes

Livestock

- Animal Health
- Animal Welfare
- Livestock Management

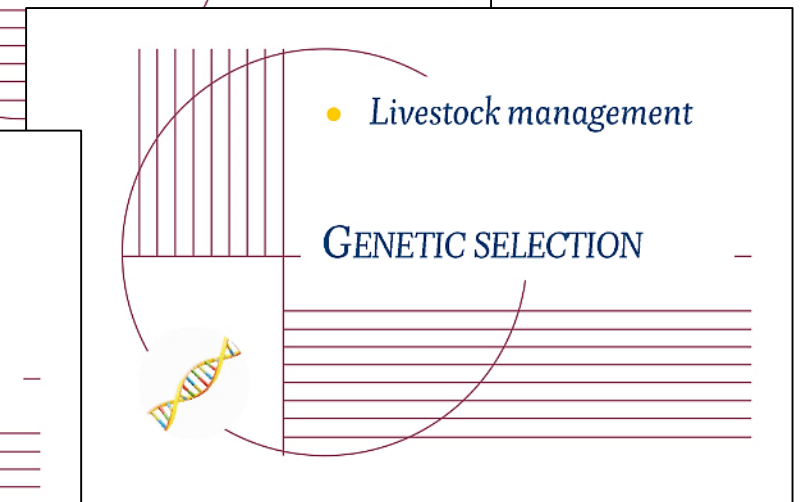
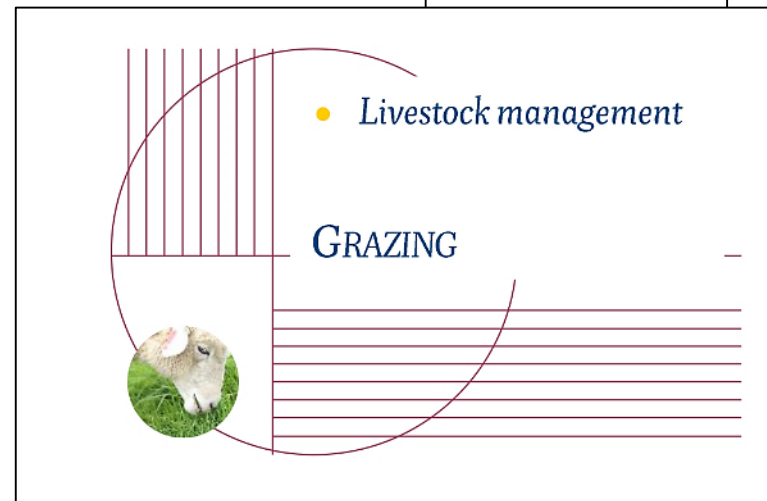
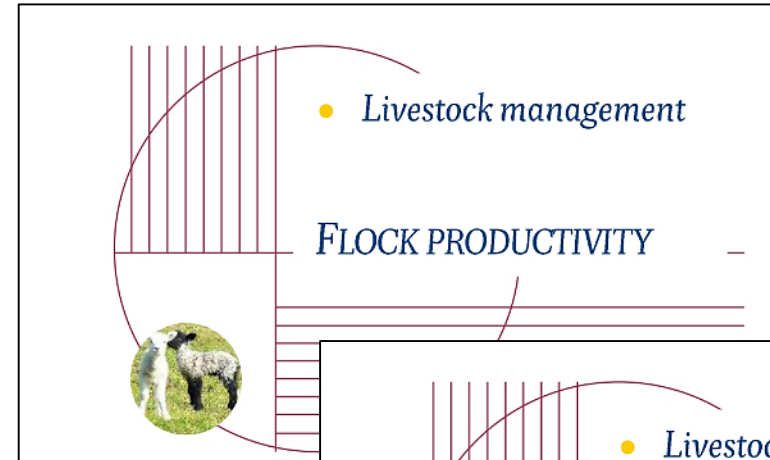


1. Signposts to Sustainability

Each theme has 3 sub themes

Livestock management

- Flock productivity
- Genetic selection
- Grazing



1. Signposts to Sustainability

Series of indicators associated with each sub theme

Flock productivity

- Lambing success
- Weaning success
- Culling practices



1. Signposts to Sustainability

Answer the question associated with the indicator

Lambing success

✓ Do you lose over 5% of lambs between birth and weaning

YES



NO



1. Signposts to Sustainability

Dimension	Theme	Sub Theme	Indicator	Questions
Environmental Integrity	Ecological	Soil	Erosion	Are there signs of erosion on your farm?



2.

Sageguard

- Decision support tool
- Find information to help move towards a more sustainable system
- A set of links to further information provided for each sub theme/ question



2.1 Sageguard.net

- Home page describes how to use the Toolbox
- Choose where to start
 - Explore dimensions or themes
 - Find help with an issue



Toolbox for sheep and goat systems sustainability

SAGEGUARD
Environmental integrity
Livestock
Good governance
Economic resilience
Social well being

Enter your search query

2.1 Sageguard.net

Soil

- Environmental integrity, Ecological
- ◇ soil erosion, soil compaction, soil quality

Water

- Environmental integrity, Ecological
- ◇ water use, water availability, water quality

Atmosphere

- Environmental integrity, Ecological
- ◇ direct pollutants, indirect pollutants, management of pollutants

Farmland biodiversity

- Environmental integrity, Landscape
- ◇ flora and fauna, diversity of production, trees and hedgerows

Cultural heritage

- Environmental integrity, Landscape
- ◇ historical features, genetic diversity, traditional livestock management

Environmental management

- Environmental integrity, Landscape
- ◇ conservation plan, ecosystem connectivity, ecosystem enhancing practices

Fertiliser

- Environmental integrity, Farm inputs
- ◇ soil testing, fertiliser plan, nutrient balance

Energy and carbon

- Environmental integrity, Farm inputs
- ◇ renewable energy, vehicles, carbon



2.1 Sageguard.net

Soil

Def

- **Compaction**

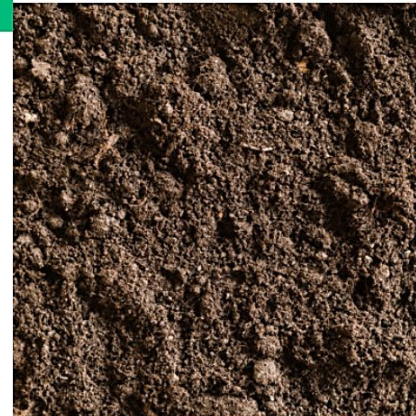
- link
- link
- link

- **Erosion**

- link
- link
- link

- **Quality**

- link
- link
- link



☐ Environmental integrity, Ecological

☐ soil erosion, soil compaction, soil quality

Water

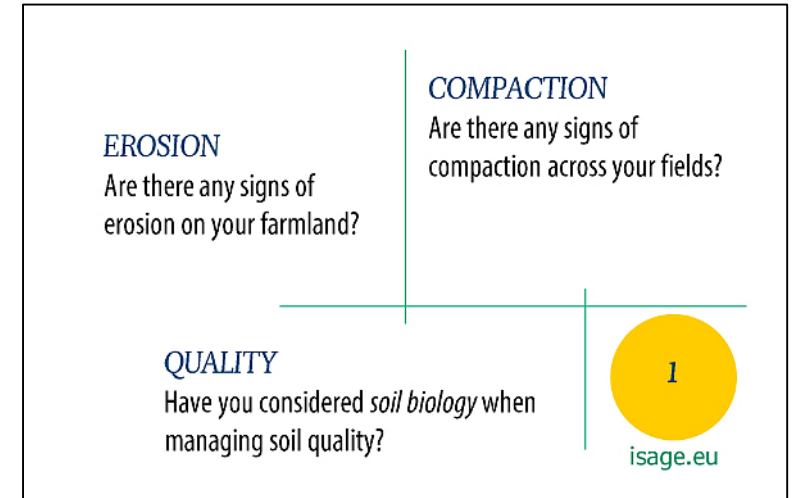
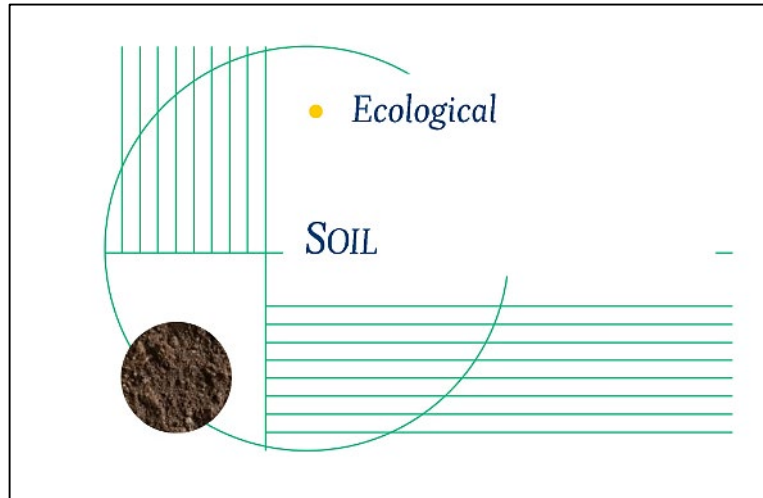


2.2 Sageguard cards



- An offline resource set of cards arranged in a similar manner to Signposts to Sustainability
- Designed to provoke thought and discussion

2.2 Sageguard cards



A photograph of a rocky coastline with a large circular overlay on the left side. The overlay contains the text 'Sustainability on your farm' and 'Each farm has a unique set of circumstances...'. The background shows a rocky shore with seaweed and a sheep in the foreground.

Sustainability on your farm

Each farm has a unique
set of circumstances...

Further information

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WP5 survey



CALLING ALL UK SHEEP FARMERS!

Have you got 15 minutes for a cup of tea?
If you do, please give OUR SURVEY a go
while the kettle boils!



www.surveymonkey.co.uk/r/UK_Sheep_Breeds-iSAGE

Thankyou!





**INNOVATIONS TO IMPROVE
SHEEP AND GOAT SUSTAINABILITY**

ROUNDTABLE AND TRAINING DAYS

3 - 6 December 2019

Wood Hall Hotel & Spa West Yorkshire

iSAGE Roundtable and Training



Up-to-date ideas from key voices in the industry
addressing the future of the UK sheep and goat farming
Results from iSAGE on-farm research



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BOOKING www.isage.eu