A literature review of the social and economic impacts of land use change: A visual summary

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What is the research about?

This evidence review was commissioned by the Scottish Government to inform the development of mechanisms for integrated land use. This report therefore seeks to provide insights relevant to agriculture, forestry, peatland, and other policy areas and build understanding around possible land use change impacts for rural businesses, land managers, and local communities

Integrated land use: bringing together different land uses in a region
Land use change: both land cover and land management change

What did we do?

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We carried out a **literature review**, including international literature. We undertook key word searches in online databases **to identify academic and grey literature** that focused on:

- case studies of land use change in countries other than Scotland in the Global North
- review papers on the overarching topic of the 'social and economic impacts of land use change'.

We excluded papers published earlier than 2000, and those that focused primarily on the impact on ecosystem services or the results of large-scale models, seeking instead to identify evidence of social and economic impacts.

Driver of change → What was the land management change that led to land use/land use change? → **Outcome: socio-economic impacts** → Lessons from change process

We focused on a spectrum of land use change, where land had previously been used mainly for agricultural production.

Land use changes

- agroecology
- regenerative agriculture
- agroforestry and intercropping
- nature restoration or 'rewilding'
- land abandonment

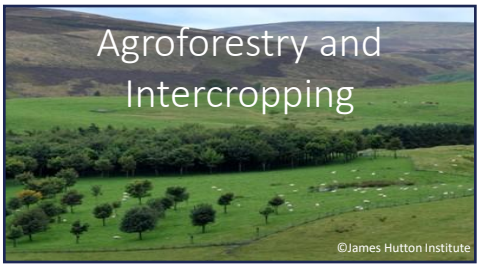
Land use change impacts

- changes to individual farm household incomes
- resilience in agricultural production
- rural economic opportunities (e.g. local food supply)
- population changes (including in-migration and population decline)
- influences on community cohesion, access to land, knowledge, and innovation

What are the main findings?

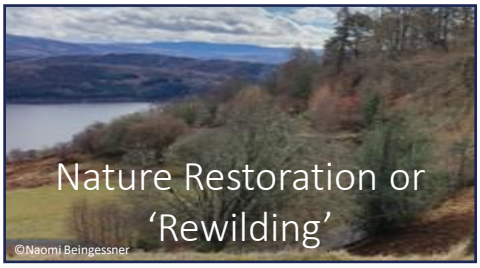
Provides a range of **economic benefits** including reduced input costs for farmers, enhanced production resilience, access to current/future payments for ecosystem services. **Social benefits** include farmer wellbeing, peer-to-peer engagement, and new knowledge creation. **Challenges** include a lack of advisory support, restrictions due to land rental prices, and changing farmer mindsets.

Considered to contribute to **social impacts** such as increased farmer self-efficacy and wellbeing, as well as **economic benefits** of farm profitability and economic resilience, but challenges arise with regard to its ambiguous definition.



Can provide **economic benefits** including reduced cultivation costs and enhance net value of production, but the high cost of establishing agroforestry is highlighted. **Social benefits** include reducing rural outmigration, encouraging the establishment of cooperatives, and greater value placed on local or 'indigenous' knowledge.

Provides apparent **economic benefits** including employment, new enterprises, and eco-tourism, as well as revenue-sharing opportunities for local communities, and compensation for land managers for wildlife related costs. **Negative impacts** include threats to local community land access, exacerbating inequalities, wildlife disturbance to crops and livestock, and uncertainty regarding community involvement and economic rationale.



Associated with largely **negative social and economic impacts**, including loss of traditional and farming knowledge, displacement of rural livelihoods and declining farm incomes, weakening community cohesion.

The report presents **5 case studies of land use change** in other countries**. Concerns** arise in case studies regarding **equity and social justice outcomes** associated with land use change. To avoid exacerbating inequalities, the literature highlights the importance of **maintaining social license** and the **social acceptability** of land uses through **community consultation and participatory approaches** to land use planning, as well as developing integrated and small-scale land use changes that provide **direct community benefits.**

Furthermore, the literature emphasises the **key role of financial and advisory support** for farmers and land managers seeking to undertake land use transitions towards more ecologically sustainable models such as agroecology and agroforestry.

Social license is the social acceptability or legitimacy of a particular activity, such as a land management approach or particular land use

What needs to change in the future?

Multifunctionality in land use and land management **requires policy and subsidy support**, including supporting farmer access to markets and value chains for products (e.g. agroecological agricultural produce), as well as knowledge networks and peer-support for innovation uptake. This has implications for the proposed Scottish agricultural support framework beyond 2025 and the four-tiered model.

Financial models should take account of the long-term nature and returns of alternative land management approaches, e.g. agroforestry systems.

Strategic land use planning is necessary to avoid high quality farmland from being used solely for solar energy, recognising the balance of policy priorities regarding net zero and food production.

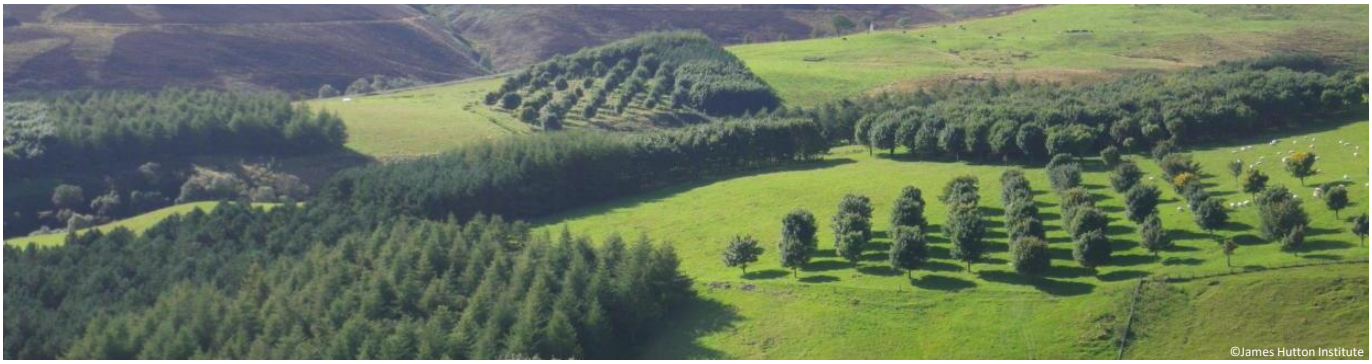
Land use changes should be introduced at a small scale, providing input to local economies and benefit sharing with communities, in order to build and maintain community trust and landscape integration.

Community-based impact assessments can help to avoid the negative impacts of land use change and **enhance positive impacts**.

The complex and divergent impacts on different groups must be considered (e.g. farmer vs. rural resident), and the inequalities that may arise through land use change for climate change mitigation (i.e. acknowledge and manage for the complexities of the Just Transition).

Avoid developing policy responses to land use change **based primarily on 'common perceptions of impact'**, due to the likelihood of misattribution of impact and influence of personal association (i.e. individuals' familiarity with land uses, or regional identity) rather than direct impact.

Support long-term, participatory, inclusive, action-based social science, as well as standardised data collection methodologies, **for the monitoring and evaluation** of the impacts of land use change.



This is a visual summary of the following report: 'A literature review of the social and economic impacts of land use change' by A. McKee and N. Beingessner, November 2023. DOI: 10.5281/zenodo.10143949

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