

# Rewarding Environmental Public Goods on Crofts – Case Study

This case study was prepared to inform the debate on future agricultural policy. It was developed as part of a study to explore how the resources currently spent on CAP basic and coupled payments, as well as agri-environment, could be redirected to improve delivery of environmental outcomes. The projections are based on a number of assumptions and are therefore considered for illustrative purposes only.

## Key messages

1. High Nature Value crofts already deliver many public goods. There can be opportunities to generate even greater benefits.
2. **Farm incomes can be maintained with agroforestry while increasing diversity in the landscape.** Income could be further enhanced by payments for public goods.
3. There could be opportunities to reward some expanded habitat conservation depending on what is already present.
4. **Large-scale nature restoration may increase net profit** while delivering multiple benefits. Income could be enhanced by rewarding the significant public goods delivered.
5. Environmental outcomes can help make land-based businesses **more resilient to climate change and future challenges.**

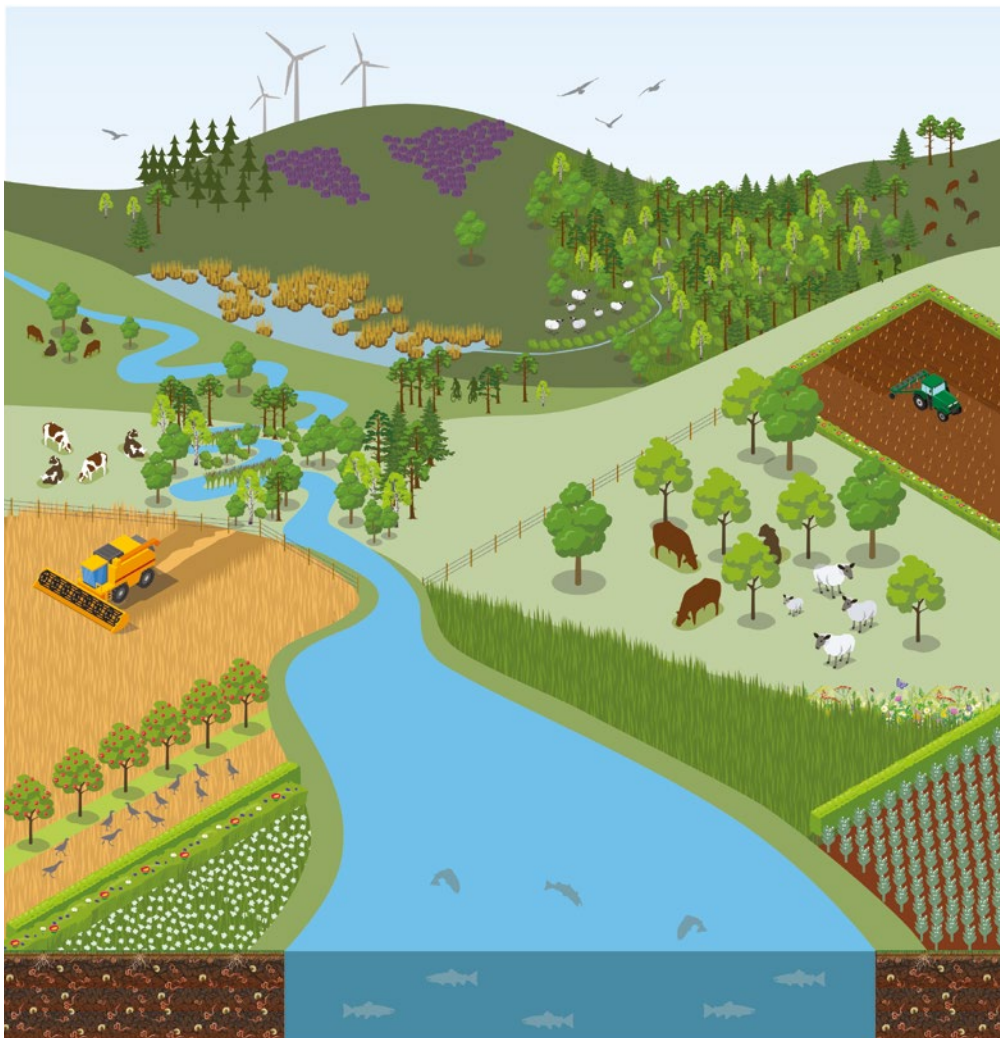


## What is a public good?

Public goods are all the things we enjoy and value in life, but we cannot buy the way we do with other goods.

Examples of public goods include biodiversity, flood protection, air quality, animal welfare, and cultural values.

In the context of agriculture, public goods generally refer to those activities for which there is no direct market.



## Illustration of Environmental Public Goods

**Biodiversity** e.g. soil biodiversity, pollinators, native woodlands, farmland birds

**Water Quality** e.g. soil health, riparian woodlands, healthy peatlands

**Flood Management** e.g. woodlands, farm wetlands, healthy peatlands, hedgerows, agroforestry, re-meandering rivers.

**Air Quality** e.g. woodlands

**Soil Health** e.g. min till, reversion to grasslands, hedgerows

**Climate Change Mitigation** e.g. legumes and herb-rich swards, woodlands, agroforestry, hedgerows, peatland restoration

**Climate Change Adaptation** e.g. natural flood management, agroforestry for shade and shelter

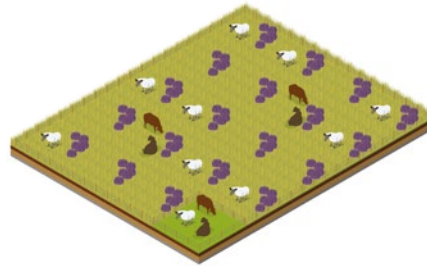
**Public Access to land** e.g. gates

**Landscape** e.g. diversity of habitats, linear features

# Findings

In addition to the status quo (baseline), the following are three alternative illustrations with an outline assessment of the potential to improve environmental outcomes and an indication of their financial impact. Further examples can be found in the full report.

**Baseline** represents the current situation of the crofts as it might look 12 years in the future, on a business as usual basis. Based on one croft in Skye.



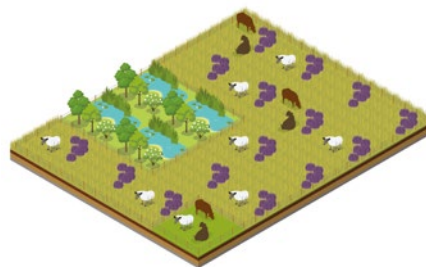
**Agroforestry**, based on wood pasture (100-200 trees/ha)\* and shelter belts (up to 2,500 trees/ha).

**Financial impact** ↔

Focused on shelter belts on the rough grazing land, and wood pasture on the improved land, it has limited positive effect on net profit due to the possibility of compensating by increasing stocking rates on the remaining grassland.

**Public goods** ↑↑

Brings diversity in the farmed landscape with potential benefits for biodiversity depending on the tree species mix. Potential for carbon sequestration and flood mitigation. Reduced run off and soil erosion. Improved animal welfare.



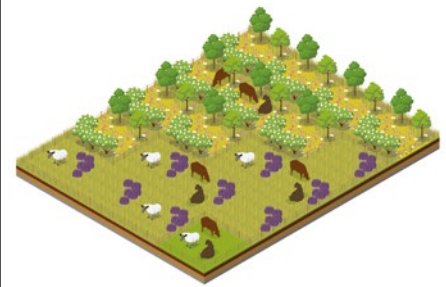
**Habitat conservation**, existing or new creation following prescribed management. Assumed 20% of land (permanent grass and rough grazing) no longer in agriculture.

**Financial impact** ↔

No impact on net profit. Likely to be focused on rough grazing, with limited impacts on output but with limited opportunities for savings on fixed costs.

**Public goods** ↑↑↑

These are High Nature Value crofts and provide already many public benefits e.g. habitats for golden and sea eagles, semi-natural grasslands with rare species. The objective on these crofts would be to maintain what is already there and assess any opportunity for expanding habitat conservation.



**Nature restoration** with limited management, and enabling natural processes to shape the landscape. Some grazing by herbivores to maintain clearings in trees/ shrubs. Groundworks may be needed for water courses. On rough grazing with 50% of farm assumed.

**Financial impact** ↑

Opportunities to reduce fixed costs and increase in net profit; the reduction outweighs projected reductions in other income generating a net gain overall.

**Public goods** ↑↑↑↑

Though these are High Nature Value crofts and provide already many public benefits, nature restoration involve upscaling wildlife habitat provision, which could include mosaics of habitats e.g. wetlands, peatlands, scrub and woodlands, species-rich grassland, re-meandering of rivers. Delivery of multiple benefits.

\* Wood pasture assumes planting 200 trees/ha and thinning to 100 trees/ha allowing both better trees to be retained for timber and for some revenue from thinning, using appropriate mixed native conifer and broadleaf, e.g. scots pine and birch, with more broadleaf than conifers to give light levels sufficient for grass growth.

**Key:** ↑ increase   ↓ reduce   ↔ no impact



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