

Land of Opportunity – Towards a New Land Use Strategy for Scotland

FAST FACTS

- In Scotland we often discuss who owns the land, but there is too little debate about how it is used.
- As Brexit and our departure from the Common Agricultural Policy approach, Scotland needs to have a wide-ranging national conversation about land use, including how we best direct taxpayers' money in a way which benefits our environment, population & economy.
- Land is an asset with multiple uses:
 - Some are priced through the market;
 - Some are distorted through subsidies;
 - Others, such as ecology and the environment are not priced at all.
- We need a mixed and layered funding mechanism capable of delivering the diverse range of outcomes we want to achieve.

CONTEXT

For 40 years land use and agriculture policy in Scotland has been dictated by the Common Agricultural Policy (CAP). Brexit means that Scotland is no longer part of the CAP. We need to decide what we do next.

What do we want to achieve in rural Scotland and how do we fund it? How do we help those agriculture businesses which can be profitable and competitive reach their potential? How do we address the many issues facing rural Scotland?

Even if Scotland becomes independent and re-joins the EU at a later date, we still need to develop a new agriculture and land-use road map. This is an opportunity to create a policy which works for and with rural Scotland, that can help incentivise agri-tech and maximise the potential of the Scottish rural sector.

Land use is a hugely important issue that we cannot afford to ignore. It affects everything from food pricing and availability to whether we can achieve our zero-carbon commitments.

Economic activity in rural areas is significantly influenced by state intervention and much is economically dependent on tax revenues raised outside of the geography where it is spent or invested.

As we move away from the CAP and EU we need a public conversation about how we use land to benefit the environment, the population and the economy.

Ultimately, we need an integrated approach which accepts that trade-offs must be made and that a one-size-fits-all approach will only replicate the mistakes of the past.

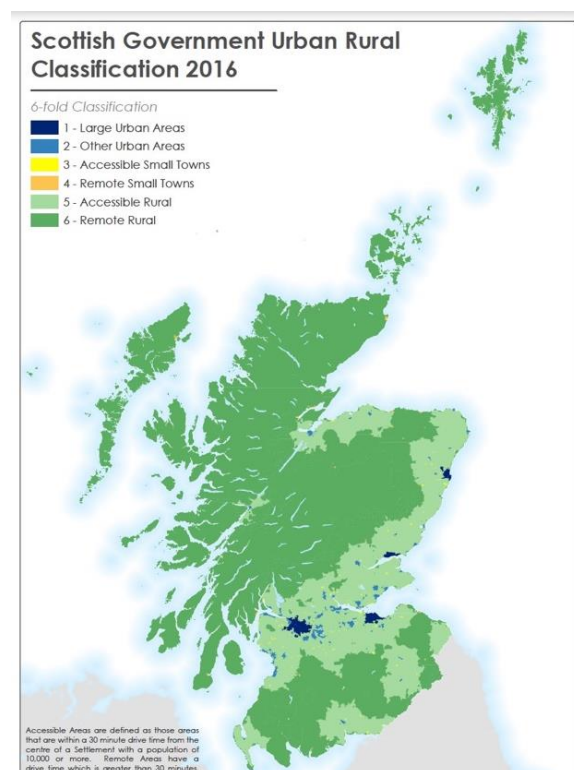
As a think tank, one of Reform Scotland's aims is to encourage open and broad debate. That is our

objective with this report. The answers to the issues raised will be found through further thought and discussion. Here, we highlight some of the problems and some potential solutions as a first step towards developing Scotland's post-CAP land-use policy.

BACKGROUND

Farming

The total land mass of Scotland is approximately 7.8 million hectares. Rural Scotland accounts for 98% of the nation's land mass (70% in remote rural and 28% in accessible rural) and 17% of the population. This reflects the dispersed nature of the population in rural areas. In contrast, the rest of Scotland accounts for 83% of the population of Scotland but only 2% of the land mass.¹

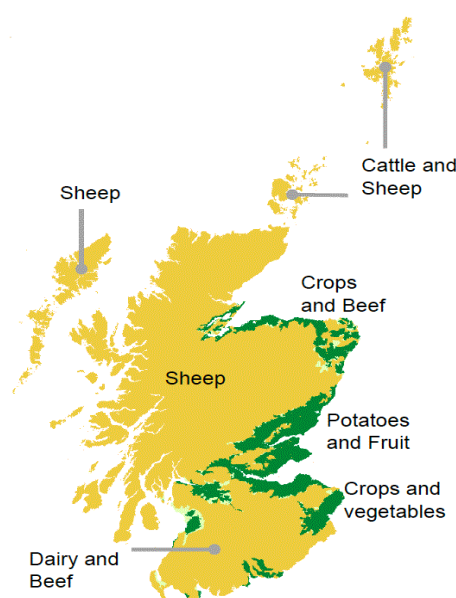


Agriculture represented 0.8% of Scottish GVA in 2018. (For comparative purposes it is 0.5% for the UK as a whole.)²

Around 67,000 people are employed in agriculture.³ This represents about 14% of all people employed in agriculture across the UK.⁴

It is estimated that a further 360,000 jobs (one in 10 of all Scottish jobs) are dependent on agriculture.⁵

Around 85% of Scotland has Less Favoured Area (LFA) status. This is an EU classification which recognises natural and geographic disadvantage.⁶ The map below highlights the main farming types found in each area. Yellow areas have limited growing conditions, usually hilly or rocky land suitable for sheep livestock. Light green areas have better soil and can support crops usually grown for animal feed. Dark green areas can support vegetables, fruit and cereal farming for human consumption and winter feed for beef farming.⁷



¹ Rural Scotland Key Facts 2018: <https://www.gov.scot/publications/rural-scotland-key-facts-2018/>

² <https://www.gov.scot/publications/agriculture-facts-figures-2019/pages/2/>

³ <https://www.gov.scot/publications/agriculture-facts-figures-2019/pages/2/>

⁴ <https://www.gov.scot/publications/agriculture-facts-figures-2019/pages/2/>

⁵ National Farmers Union Scotland <https://www.nfus.org.uk/farming-facts.aspx>

⁶ National Farmers Union Scotland <https://www.nfus.org.uk/farming-facts.aspx>

⁷ Scottish Agricultural Census 2019, Scottish Government

There were 15,434 non-LFA holdings and 35,723 LFA holdings in 2019.⁸

Type of holdings⁹

	Number of holdings	Area (ha)
Cereal	2,344	238,714
General Cropping	1,633	260,110
Horticulture	719	22,480
Pigs	260	10,607
Poultry	865	13,363
Dairy	665	105,988
Sheep & Cattle LFA	14,919	3,234,561
Sheep & Cattle nLFA	2,922	119,586
Mixed	4,363	282,027
Forage	20,920	1,272,497
Other	1,547	43,880
Total	51,157	5,603,812
Common Grazing		579,847

Barley and wheat continue to be the dominant crops. Barley comprises 62 per cent of the total cereals, while wheat is 23 per cent.¹⁰

Total cattle numbers have steadily declined to a 60-year low. In 2019, there were 1.73 million cattle in Scotland, a two per cent drop on 2018 and the lowest count since 1957. Cattle numbers in Scotland have been trending down since a peak in 1974 when there were 2.78 million cattle.¹¹

Environment

Scottish Natural Heritage's State of Nature: Scotland report 2019¹² notes that the changes in farmland management over the past 50 years that have had the greatest impact on Scotland's nature include the increased use of pesticides and fertilisers, continuous cropping, changed sowing seasons and the loss of non-cropped habitats.

It adds that changes in food production patterns can cause invertebrate (insect) declines and that

changes to ploughing, crop rotations, fertiliser use and livestock numbers have negatively impacted soil and water quality, carbon storage, and led to increasing greenhouse gas emissions.

Although Scotland has about 19% woodland cover, it is one of the most heavily deforested countries in Europe, with woodland cover well below the current European average of 37%.¹³

Just under a quarter (311,000ha) of Scotland's woodland is considered native. The remaining three-quarters (1.4 million ha) is mainly commercial forestry plantation dominated by conifers, which benefit a smaller range of largely generalist species.¹⁴

Scotland has 60% of the UK's internationally important peatlands, which have a key role in carbon capture and sequestration¹⁵

In 2017, 23.9% of Scottish greenhouse gas emissions came from "agriculture and related land use", second only to transport at 36.8%. The sector saw a 4.0 MtCO₂e (29.4 per cent) fall in net emissions between 1990 and 2017.¹⁶

The CAP and Scotland

The Common Agricultural Policy was launched in 1962. The UK joined the programme upon taking membership of the then EEC in 1973.¹⁷

According to the European Commission, the aims of the CAP are to¹⁸:

- support farmers and improve agricultural productivity, ensuring a stable supply of affordable food
- safeguard European Union farmers to make a reasonable living

⁸ <https://www.gov.scot/publications/agriculture-facts-figures-2019/pages/2/>

⁹ <https://www.gov.scot/publications/agriculture-facts-figures-2019/pages/3/>

¹⁰ <https://www.gov.scot/publications/final-results-june-2019-agricultural-census/pages/3/>

¹¹ <https://www.gov.scot/publications/final-results-june-2019-agricultural-census/pages/8/>

¹² <https://www.nature.scot/state-nature-scotland-report-2019>

¹³ <https://www.nature.scot/sites/default/files/2019-10/State-of-nature-Report-2019-Scotland-full-report.pdf>

¹⁴ <https://www.nature.scot/state-nature-scotland-report-2019>

¹⁵ <https://www.nature.scot/state-nature-scotland-report-2019>

¹⁶ <https://www.gov.scot/publications/scottish-greenhouse-gas-emissions-2017/pages/3/>

¹⁷ <https://blogs.lse.ac.uk/brexit/2017/01/06/britain-will-break-free-of-the-common-agricultural-policy-but-we-still-need-to-subsidise-farmers/>

¹⁸ https://ec.europa.eu/info/food-farming-fisheries/key-policies/common-agricultural-policy/cap-glance_en

- help tackle climate change and the sustainable management of natural resources
- maintain rural areas and landscapes across the EU
- keep the rural economy alive by promoting jobs in farming, agri-foods industries and associated sectors.

Previously the CAP provided income support to farmers by supporting the prices they were paid for produce. However, this system was criticised for encouraging overproduction and “wine lakes” and “butter mountains”. As a result, the policy was reformed to break the link between production and subsidy.¹⁹

The EU now pays farmers direct income support based on their farm size. This is often referred to as Pillar 1. The aim of the expenditure is to:²⁰

- function as a safety net and make farming more profitable
- guarantee food security in Europe
- assist farms in the production of safe, healthy and affordable food
- reward farmers for delivering public goods not normally paid for by markets, such as taking care of the countryside and the environment.

In 2018 the EU spent €41.74 billion on income support. Taken together with €14.37 billion on rural development measures (national and regional programmes to address specific needs) and €2.7 billion on market measures (to address issues such as sudden drops in prices as a result of a health scare or over-supply), the EU spent €58.82 billion supporting farmers in 2018. That represented about 36% of the EU’s €162.11 billion budget.²¹

Scottish farmers also benefit from Pillar 2 support, which is delivered by the Scottish Rural Development Programme. It funds economic, environmental and social measures for the benefit of rural Scotland. Pillar 2 requires co-financing from member state governments. This stream of funding can help supports rural communities, rural businesses, farmers, crofters and other land managers.

The Scottish Government is also responsible for administering the Pillar 1 payments to farmers, crofters and landowners in Scotland.²²

Scotland was allocated €4.1 billion of Pillar 1 funds and €478 million of Pillar 2 funds for the CAP programme 2014-2020. This represents around 17% of the total UK CAP budget. In Scotland, 86% of land is designated as Less Favoured Area (LFA), accounting for 56% of the UK’s total LFA.²³

	Total agricultural land ('000ha)	% of land designated as LFA	Total % of UK LFA
Scotland	6,184	86%	56%
Wales	1,903	81%	16%
Northern Ireland	1,058	69%	8%
England	9,575	18%	18%

EU regulations allow for the transfer of funds from Pillar 1 to Pillar 2 and the Scottish Government chose to transfer 9.5% of the Pillar 1 budget to Pillar 2. This means that in the 2014-20 CAP period a total of €367 million was transferred, leaving Scotland with a Pillar 1 budget of €3.7 billion.

¹⁹ <https://www.instituteforgovernment.org.uk/explainers/common-agricultural-policy>

²⁰ European Commission

²¹ https://ec.europa.eu/info/food-farming-fisheries/key-policies/common-agricultural-policy/cap-glance_en

²² <https://www.gov.scot/policies/agriculture-payments/rural-payments/>

²³ Scottish Affairs Select Committee:

https://publications.parliament.uk/pa/cm201719/cmselect/cmselect/1637/163705.htm#_idTextAnchor003

The following figure from SPICe highlights how Scotland has allocated its CAP funding.²⁴



Agriculture in Scotland is dependent on these subsidies. The following table from the Scottish Government's Agricultural Facts and Figures report 2018 highlights the level of income and subsidy per farm and by type in Scotland for 2017/18:²⁵

Farm Type	Farm Business Income £/farm	Subsidy & payments £/farm	Subsidy & payments as a ratio of output	Subsidy & payments as a ratio of FBI
Cereals	35,240	33,892	0.16	0.96
General cropping	66,088	37,853	0.10	0.57
Dairy	73,144	39,703	0.07	0.54
LFA sheep	18,231	45,680	0.52	2.51
LFA beef	24,734	45,255	0.28	1.83
LFA mixed cattle & sheep	32,649	58,924	0.35	1.80
Lowland cattle & sheep	31,745	36,164	0.20	1.14
Mixed	29,051	37,829	0.18	1.30
All	35,385	42,819	0.20	1.21

The Scottish Government has commented that the data showed that over 60 per cent of farms in the survey were making a loss without subsidy, with the average business making a loss of £7,400 without support.²⁶

The figures in the table highlight that farms most likely to make a loss without support are those in Less Favoured Areas.

The impact of the CAP

Since the UK's entry into the CAP the consequences have been mixed in terms of land use, even when judged against the existing objectives - and particularly when measured against environmental objectives which have emerged over the decades.

While consumers have benefited from cheap, affordable food, better food security and a wider offer all year round, the environment has suffered.

There has also been waste created by over-production, which resulted in the need to change from production-based incentives towards a wider basket of desired outcomes.

²⁴ Thom. I & Kenyon. W, European Union funding in Scotland, SB 18-61, SPICe

²⁵ <https://www.gov.scot/publications/agriculture-facts-figures-2019/pages/14/>

²⁶ <https://www2.gov.scot/Topics/Statistics/Browse/Agriculture-Fisheries/Publications/FBI>

Although the CAP enabled poorer countries to improve agricultural efficiency, in the UK it has arguably resulted in declining productivity in certain regions.

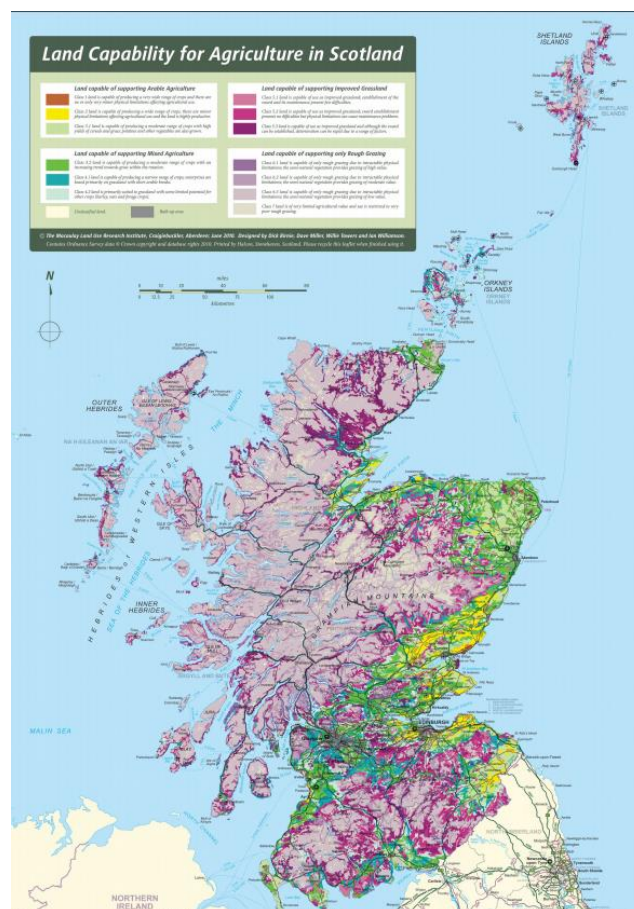
However, perhaps the biggest criticism is that it does not sufficiently consider the differences between land capability in the various regions and the regions' relationship with their more densely populated neighbours. Furthermore, it is designed and managed in isolation from other land uses and broader regional economic dynamics.

ARE WE IN A CRISIS?

Total income from farming in Scotland was estimated to be £791 million in 2019. However, this falls to £263million without support payments.²⁷

Not all farming in Scotland is uneconomic without subsidy, but it tends to be concentrated on the 15% of Land which is not defined as Less Favoured Areas in Scotland (as shown in the map).²⁸

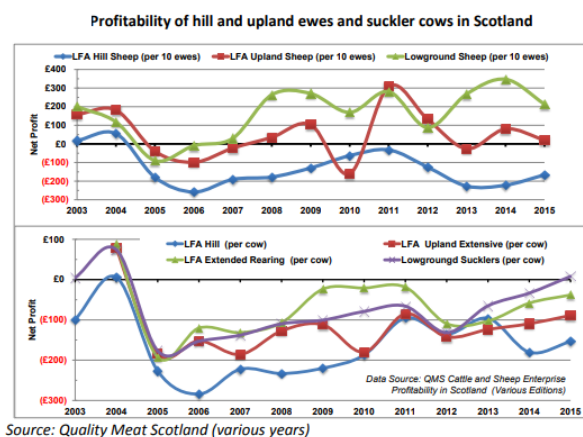
In the other 85% of Scotland's agricultural land, profitability as opposed to subsistence requires diversification of income or off-farm income.



The following charts illustrate the profitability challenges being faced by upland ewes and suckler cows.

²⁷ <https://www.gov.scot/publications/total-income-farming-estimates-scotland-2017-19/pages/2/>

²⁸ Hutton Institute map - https://www.hutton.ac.uk/sites/default/files/files/soils/lca_map_hutton.pdf



It is arguable that the over-reaching desire to manage outcomes through the CAP has made rural economies slow to react to changing markets and consumer demands, and perhaps has contaminated decision-making in all rural economic activity.

Rural economies have suffered from declining diversification as certain non-land-based economic activities, such as textiles and extractive industries, have disappeared.

The result has been a decline in population, combined with a hollowing out of demographics, and an under-investment in the modern infrastructure needed to support new economic activity.

Land prices have, unlike their commercial property equivalents in urban regions, arguably become detached from their productive economic value. In particular, agricultural land prices have been distorted and inflated by tax treatment, which has encouraged buyers to attribute value driven more by a desire to shelter inter-generational wealth transfer from tax (both agricultural business property relief and inheritance tax).

The consequence of this is a great deal of agricultural land which comes on the market is not purchased by those who would seek to work the land.

Agricultural debts are at an all-time high - total lending to Scottish agriculture from banks and mortgage companies reached £2.34 billion in 2018.²⁹ Compound this with a poor stock of affordable housing to buy or rent and the situation is very precarious indeed.

However, the picture is regionally varied. Better, more fertile land and sectors are able to compete and meet the changing challenges, but many poorer regions are unable to absorb change.

The current system is a cascade down from policies designed at a European level, adjusted at a UK level, then devolved to Holyrood, but struggles to involve local authorities, where perhaps knowledge of the land capability and its role within the local economy can best be ascertained. Planning at the local authority level is a patchwork of responsibilities, and excludes elements concerning extractive industries and forestry.

Greater policy integration is required, including housing, business, land use and enabling infrastructure. Even at the Scottish Government level these considerations are split between different Cabinet Ministers, with inevitable contradictions and inconsistencies.

Government policy

As a result of Brexit, the EU CAP will cease to apply, but the EU (Withdrawal) Act 2018 and the Direct Payments to Farmers (Legislative Continuity) Act 2020 mean that existing CAP architecture and rules are transferred into domestic law. The Agriculture (Retained EU Law

²⁹ <https://www.gov.scot/publications/bank-advances-scottish-agriculture-2018/>

and Data) (Scotland) Act 2020, gives Scottish Ministers the opportunity to modify that retained EU law.³⁰

The Scottish Government has set up the Farming and Food Production Future Policy Group to consider the future direction of Scottish rural support policy. The group is to “focus on the period beyond 2024 and will test proposals to support farming and food production as a key part of a flourishing rural Scotland, including the impact on climate change, the loss of biodiversity and maintaining the rural population”.³¹

NEXT STEPS

The aim of this paper is to contribute towards a wider discussion about land use and Scotland’s post-CAP future.

If we are to take this opportunity to design and justify how taxpayers’ money should be spent, or why they need to pay more for food, then we need to design a common currency whereby options and interdependencies can be evaluated and arbitrations made.

As part of this wider discussion there are certain questions that need to be asked:

What are we trying to deliver?

Do we want to see a more balanced and environmentally sustainable use of our natural resources and diversify the outputs from these resources? However, it is likely that this will accelerate the decline of some traditional activities, such as some livestock farming for which domestic consumption markets are declining in the younger generation, and export will be increasingly difficult.

We need to be able to economically transition this accelerated land-use change by helping older farmers to retire with dignity, allowing access to the next generation of younger farmers and land managers. This is particularly true in marginal livestock agriculture in LFAs.

We want to encourage the agriculture sector to invest in new technology and science to improve productivity. One could imagine a target unsubsidised product price and subsidy geared to help those get there that can, but that changes the land use of those that can’t.

Agri-tech is a big opportunity for Scotland, depending as it does on the harnessing of bio-technology, genetics and supply of sustainable cheap energy to manage the growing environment. Scotland is very well suited, and should be a leading exponent. It also has a high-value labour component.

We want to enhance forestry and peatland restoration to enhance our carbon-absorption capacity.

We want to better protect our bio-diversity and water management and quality.

To these perhaps we should add re-balancing our rural economies and creating employment opportunity for the next generation, and reversing centuries of urbanisation and its incumbent congestion and carbon footprint per square mile. It is possible the move to working from home, as a result of the pandemic, will help in this regard, but requires investment in connectivity infrastructure.

We want to relocate some energy consumption closer to the source of its generation, thus avoiding distribution losses on grids and alleviating imbalances. Historically, Scotland

³⁰ <https://www.gov.scot/news/continuing-cap-for-scotland-farmers/>

³¹ <https://www.gov.scot/news/farming-and-food-production/>

produced all of its energy in the Central belt (with the exception of Dounreay) because that is where the feedstock of coal and shale was found. Along with transport, this explains why most of our population is concentrated in this region. Today most of our energy is generated to the north and south of the Central Belt, but we have depopulated those areas.

We need a mixed and layered funding mechanism tailored to deliver the diverse nature of the outcomes we desire to achieve. It should include:

1. Revenue raised at the point of consumption, such as varying VAT based on carbon footprint of product or service.
2. Forcing manufacturers and service providers to pay for disposal of waste, including packaging delivered to consumers.
3. Environmental offset payments from more-polluting urban areas to rural regions that provide the solutions and carbon offsets.
4. Market-based carbon credit mechanisms, such as those which already exist for heavy energy-consuming industries, but broadened to cover manufacturing and service distribution sectors and high packaging using sectors.
5. Review of agricultural property tax and inheritance tax rules which have artificially inflated land values far beyond their economic productive value and are detrimental to stimulating change of land use.

The following are a range of frameworks, each approaching the question from slightly different perspectives, which could help these goals be realised:

Natural Capital

This framework seeks to put a monetary value on the impairment/consumption of the value of the natural capital from undertaking a certain land use.

By putting a quantification to the impact on the environment of alternatives, it can help make arbitrations and/or inform financial incentives and penalties for undertaking that activity.

This approach has many positive attributes, not least that it seeks to define a common measure of impact in a currency which can be broadly understood, particularly in financial markets.

It does however have its detractors, including those uncomfortable at the concept of “offsetting” environmental impacts, claiming that it allows polluters to avoid reducing or stopping activity and instead compensate for it.

Carbon tax and credits for heavy industry and energy production which have existed for over a decade in Europe are an example of such offsetting. Many critics would say that this market has not functioned correctly and the credit price has been too low. Another conceptual problem is that it supposes an accepted measure of the “Opening Balance Sheet”, in other words what is the state of our natural environment today?

Eco System Services

This is a framework to define how nature provides four categories of service:

- Provisioning services such as food, water, wood, genetic resources and medicines.
- Regulating Services such as climate regulation, natural hazard regulation, waste management, pollination etc.

- Habitat services to protect migratory species and maintain viability of gene-pools.
- Cultural services such the non-material benefits people derive from eco systems.

While it does provide a platform to define the benefits of bio-diversity, it is not clear how to integrate it with a natural capital approach.

Environmental Barnett Formula Mechanism

Effectively this is a redistribution mechanism which recognises that nations and regions within the UK provide different but inter-connected benefits to each other, and that the costs of delivery may not match local ability to fund them from tax raised in that region.

In a world where the impact on the environment needs to be factored into decision making, but where the environment is not defined by the population and political boundaries of our taxation system, there is a need to think about how such mechanisms can be used to bind us together behind a desired outcome, and to fund the cost of addressing it.

Hypothecation

There are broadly two categories of desired outcomes:

1. Evolving changes in land use (mostly current expenditure)
2. Investing in structural change in rural economies (infrastructure investment)

The challenge in the second of these is that it requires infrastructure investment whether in built, electronic communication or natural capital. This can be difficult to achieve when most infrastructure investment is targeted at highly populated, and voting, urban communities.

Even when rural economies do get windfall revenues, such as with community benefits from wind farm developments, they are often inefficiently distributed and concentrated such that they are not invested in infrastructure that would improve opportunities in the future. If we are to justify a regional environment Barnett Formula to more urban regions then we must ensure that these monies are hypothecated for investment in infrastructure in rural Scotland.

One suggestion is to set up a separate development funding bank, a partnership between public and private banking sectors, and link it to the distribution of farm subsidies. The objective would be to target public spending and lending to activities which have a chance of being competitive and environmentally sustainable.

Level playing field

We cannot penalise or restrict local activity which has an undesired environmental impact while condoning or allowing the importation of product from another geography that is not subjected to the same controls.

An example would be American Liquified Fracked Shale Gas being shipped up the Forth estuary to Grangemouth, while such exploitation is banned in Scotland - this is an inconsistency which has never been adequately reconciled.

Likewise, discriminating against intensive dairy and poultry/egg production in the UK while permitting (in trade agreements) the importation of such products from overseas, on the grounds of prioritising cheap food over environmental consequences, is not acceptable.

A public conversation on land use

Regardless of the path chosen, what is clear is that Scotland needs a serious discussion and debate about land use and the choices we might make.

This is likely to be a difficult and heated exchange, but is necessary none the less. It needs all sectors involved, including renewable energy, tourism and housing, as well as the traditional sectors of agriculture, forestry, water, and the environmental. It should include local and national organisations and regulatory bodies such as the Scottish Land Commission, SNH, SEPA, and national and local planning authorities.

The private sector, including landowners, must also engage constructively. Given Scotland's concentrated land ownership and often fragile ecological and economic communities, all major land owners - be they private, public or business - should be required to develop land-use ambition statements which then be subject to public and planning scrutiny.

It is important that the metrics that underpin the conversations be piloted and refined, their limitations acknowledged, and their concepts widely communicated.

Decisions should be devolved down to bodies which are best placed to understand the particular regional circumstances, ensuring that there is democratic accountability.

Hopefully the suggestions and pathways outlined in this discussion paper can help encourage greater debate on our path towards Scotland's new land-use strategy.