Introduction

The uplands are a key and well-loved feature of the iconic and cultural landscapes of Wales. They provide food, livelihoods, leisure opportunities and public goods and services for people, as well as vital habitats for wildlife. However, these areas face changes from a variety of sectors; some may appear threatening, while others offer opportunities to strengthen the resilience of our uplands. This publication will briefly describe the current policy, economic and environmental conditions that affect upland farming in Wales, before outlining the challenges, opportunities and potential ways forward.

What’s happening in Wales?

Key policies and legislation

With the United Kingdom’s relationship with the European Union being in a state of transition, many agricultural, economic and environmental policies are likely to be altered including the replacement of the Common Agricultural Policy (CAP). However, in the meantime, two major pieces of new Welsh legislation are particularly relevant to upland land managers: the Well-being of Future Generations (Wales) Act 2015 and Environment (Wales) Act 2016. These laws are intended to help Wales meet its commitment to sustainable development, which will also include how we manage land in Wales.

The Well-being of Future Generations (Wales) Act 2015¹ states ‘sustainable development’ must take account of economic, social, environmental and cultural well-being – with each factor being equally important. This will be especially important for farmers and landowners when dealing with (and receiving funding from) public bodies, which are governed by the Act. These include Welsh Government, Local Authorities, National Park Authorities and Natural Resources Wales (NRW). Any outputs delivered through public funding, such as flood management or carbon storage systems, will have to contribute to the Well-being Goals stated in the Act².

The Environment (Wales) Act 2016³ is likely to have a direct impact on land owners and managers as there will now be greater scrutiny of how Wales’ natural resources are faring through regular State of Natural Resources Reports (SoNaRRs). There will also be a more locally based approach to the management of natural resources through area statements. Climate change will be addressed by statutory targets for reducing emissions of carbon dioxide and other pollutants, and by carbon budgeting. Land agreements with NRW will be a continuing feature, along with a new duty to reverse the decline in biodiversity and ensure the long-term resilience of Welsh ecosystems. The first SoNaRR specifically highlighted the uplands as an area where policies should be concentrated to safeguard carbon stores, ensure wider resilience of habitats and their associated species, make better use of Wales’ natural assets, tackle climate change and reduce flooding risk.

Economy

Uncertainty currently surrounds the broader economy, as differing post Brexit claims and scenarios are put forward. As the majority of agricultural sectors in Wales, the uplands in particular, are dependent on publicly funded support (via the CAP), decisions about future financial arrangements are critical. In August 2016, the UK’s Chancellor, Philip Hammond, was reported as saying that agricultural funding currently provided by the EU would continue until 2020, while any long-term commitments, as well as how payments may be structured, were yet to be decided. Future arrangements are currently being consulted by the UK and Welsh Government.

For 2014-2020, Wales receives c. £225million per year from the EU towards direct support payments to Welsh farmers. Throughout this period farmers may also access £302 million of EU funds (topped up to £900 million by the Welsh Government) via the Rural Communities – Rural Development
Programme°. The extent of these payments highlight the value of public support to the rural economy in Wales.

Markets for agricultural products are also problematic, in particular for those that depend on export markets and where tariffs might apply in future. Other external financial costs and considerations will also continue to change, including farm inputs, fuel, pensions, loan and banking costs, wages and insurance. However, the upland economy as a whole also draws on (or has the potential to) a variety of other income streams, including leisure and recreational opportunities, rural tourism, renewable or low carbon energy development, non-agricultural or specialised products, and other diversification activities.

Environment, nature and climate

Global climate change is widely accepted as the major threat to communities, livelihoods and environments at local, national and international level. Most experts predict that severe weather events – like the so-called ‘once-in-100-years’ flooding, storm and drought episodes – will become more frequent in the future. In addition, species, habitats and special wildlife areas, many of which are already under pressure and declining (State of Nature 2016: Wales report°), are at major risk from the speed of this change. On top of this, nature and the environment are also affected by direct human activities, such as land use, including pesticide and fertilizer use, and building and development. Whilst some plants and animals are already at the edge of their ranges and may be lost if they are unable to adapt further, others will make use of new or alternate habitats becoming available as temperatures and conditions change. These changes may also provide opportunities for new farming and land use activities.

Opportunities offered by upland farming:

In the face of these changes, the uplands are perfectly placed to provide a variety of locally and globally valued goods and services:

- **Communities** – it is in the interest of all aspects of maintaining the uplands to have thriving local communities offering a variety of services;
- **Food production** – pasture-fed beef and lamb can already be sold as premium products, but other food products and commodities may also be feasible;
- **Wildlife** – the uplands are home to a range of iconic wildlife. These include species such as curlews and hen harriers and habitats including ffrrdd, blanket bog and heather moorland. Further loss of upland wildlife will be prevented by managing the uplands sustainably;
- **Ecosystem services** – a variety of extremely valuable services are offered by sustainable management of the uplands and their habitats:
  - appropriate land use can help store drinking water and reduce flooding incidents in lower-lying areas
  - carbon storage in peat bogs and woodlands can slow the effects of climate change
  - enhanced biodiversity and habitat conservation can provide a store of genetic diversity, and help to protect populations of valuable species, such as pollinators;
- **Leisure and recreational** activities and rural tourism - access for walkers, bikers, horse riders and, in appropriate areas, well planned extreme events or competitions, if sustainably managed, can contribute to the local diversification of livelihoods and farm businesses;
- **The upland landscape** itself is an outstanding cultural resource, both for local inhabitants and for visitors;
- **Education** – opportunities for educational experiences are very wide, from curriculum-related children’s education through Duke of Edinburgh-style adventure training to professional training for conservationists.

Images: Mountain: Guy Rogers, Curlew: Ray Kennedy, StreamGraham Eaton, rspb-images.com
Potential ways forward

Farming for wider value and longer timescales

Farmers and land managers will be able to take advantage of many of these opportunities by building on the skills and expertise that many have already developed, specifically by concentrating on:

- locally adapted, extensive mixed grazing systems;
- low input, small-scale cropping;
- protection of wildlife, by providing and maintaining a mosaic of different habitats;
- sustainable management of natural resources;
- care of landscape and cultural features - including aspects of the natural and built environment e.g. ffridd, dry stone walls and traditional barns.

The possibility of payments for ecosystem services (PES) is currently being explored. Extensive and ecologically-friendly land management methods could mean that upland farmers may be at an advantage when it comes to implementing these ideas once policy and funding decisions are made.

There are some issues that are particularly relevant to upland areas:

Challenges:

- Financial - securing adequate funding to support sustainable land management. Much of farming depends on support from the CAP, and in response to change, including a reduction in public funding, there is a danger that intensifying farming practices is seen as the only option.
- Common land issues – some of the opportunities require large scale agreement, where co-operation between commoners, who have a particularly useful role because of the often large areas farmed, is essential;
- Differences between land requirements and landlord’s rules – where land is rented, landowners and tenants may have differing priorities, for example concerning stocking systems or specific farm practices.

The future of upland farming in Wales faces difficult challenges, but opportunities are available; some of which upland farmers may be particularly able to take advantage of. The uplands are a valuable resource, providing social, economic, environmental and cultural benefits, and one that is beginning to be appreciated on a wider scale.
How it already works on two Welsh farms:

**Hafod Las**

Located on the remote slopes to the south of Ysbyty Ifan, Hafod Las is home to Guto Davies and his young family. The 245ha upland farm is part of the National Trust’s Ysbyty Estate, most of which lies within the boundary of the Migneint-Arenig-Dduallt Site of Special Scientific Interest, Special Areas of Conservation and Special Protection Areas. Of particular interest here is the blanket bog, dry heath and purple moor grass (Molinia caerulea) habitat which provides breeding and foraging habitat for numerous bird species as well as storing carbon and water.

Hafod Las is part of the Glastir Advanced agri-environment scheme which is a vital component in ensuring the farm’s economic viability. The scheme helps to restore and maintain valuable wildlife habitats by paying for cattle and sheep grazing on the purple moor grass dominated ffridd, along with annual rush cutting to create more open conditions for ground nesting birds such as curlew.

A management agreement with Natural Resources Wales contributed to the blocking of approximately 25,000m of man-made ditches on the ffridd and mountain land at Hafod Las. This work has helped to restore natural drainage patterns, encourage re-vegetation, enhance water quality, reduce erosion and alleviate downstream flooding, or in other words blocking the drains provided society with a wide range of environmental benefits in return for public funding.

**Troedrhiwdrain**

Brian and Sorcha Lewis farm sheep and cattle at Troedrhiwdrain, a 580ha organic upland farm owned by Dŵr Cymru / Welsh Water through the Elan Valley Trust. The farm is partly designated as Site of Special Scientific Interest, Special Areas of Conservation and Special Protection Areas in light of its high nature value, and plays an important role in managing drinking water. Over the last 10 years Brian and Sorcha have improved the farm’s productivity, whilst successfully retaining and incorporating many important wildlife habitats.

Troedrhiwdrain is included in the Glastir Advanced scheme, an important source of income, and management includes mixed grazing and vegetation cutting to restore and manage traditional hay meadows and moorland habitat. This in turn benefits scarce wildlife such as golden plovers (Pluvialis apricariae) and curlews (Numenius arquata) which breed on the hills and the rare mountain bumble bees (Bombus monticola) that depend on the flower rich meadows.

With the view of improving the value of their stock and developing new markets for their produce, Sorcha is working with Wildlife Trusts Wales and others to develop a conservation certification for meat produced on conservation rich farmland. Both Brian and Sorcha are passionate about preserving hill farming, as these communities directly manage much of our important wildlife species, habitats and upland resources.
Glossary of terms and abbreviations

**Area Statements**: are tools to implement the Environment Act on the ground, at a local level. NRW will work with local communities to look at their area and create a statement that outlines the priorities, risks and opportunities for the natural resources in that area. They can be used by land managers to guide their activities.

**Biodiversity**: the variability among living organisms from all sources including terrestrial, marine and fresh water. In Welsh law, biodiversity is also defined as a natural resource (animals, plants and other organisms)

**Carbon budgeting**: an amount of carbon dioxide that a country, company, or organisation has agreed it will produce in a particular period of time.

**Ecosystem**: a system involving the interactions between a community of living organisms in a particular area and its nonliving environment.

**Ecosystem and public services**: outputs, conditions, or processes of natural systems that directly or indirectly benefit humans or enhance social welfare e.g. the storage of drinking water in peat bogs. Ecosystem services can benefit people in many ways, either directly or as inputs into the production of other goods and services.

**Natural Resources**: include but are not limited to animals, plants and other organisms, air, water, soil, and minerals (for full definition, see Environment Act, Section 2)

**Payments for ecosystem services (PES)**: are payments to farmers and other land managers who have agreed to manage their land to provide some sort of ecosystem service.

**Site of Special Scientific Interest, Special Areas of Conservation and Special Protection Areas**: Protected sites for nature.

**Renewable or low carbon energy**: Renewable energy is energy from a source that is not depleted when used, such as wind or solar power. Low-carbon energy comes from processes or technologies that produce power with substantially lower amounts of carbon dioxide emissions than is emitted from conventional fossil fuel power generation.

**Resilience of ecosystems**: If an ecosystem is resilient, it is able to deal with disturbances, either by resisting them, recovering from them, or adapting to them, whilst still being able to deliver services and benefits now and in the future.

**Sustainable development**: is development that meets the needs of presentation generations without compromising the ability of future generations to meet their needs, and contribute to the achievement of Wales’ well-being goals.

**Well-being goals (Welsh Government Wellbeing of Future Generations (Wales) Act)**:

Links
7. SoNaRR Chapter 4 - https://naturalresources.wales/media/679405/chapter-4-resilience-final-for-publication.pdf