Environment and Rural Affairs Monitoring & Modelling Programme (ERAMMP)

SLM Theory of Change

ERAMMP Report-108:
Development of a Theory of Change for the Sustainable Land Management Framework: Narrative Report

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Funded by:

Llywodraeth Cymru
Welsh Government

Canolfan Ecoleg
a Hydroleg y DU
UK Centre for
Ecology & Hydrology

Version History

Version	Updated By	Date	Changes
1.0.0	Author Team	30/09/2025	Publication

Mae'r adroddiad hwn ar gael yn electronig yma / This report is available electronically at: **www.erammp.wales/108**

Neu trwy sganio'r cod QR a ddangosir / Or by scanning the QR code shown.

Mae'r ddogfen yma hefyd ar gael yn Gymraeg / This document is also available in Welsh

Series/Project	Environment and Rural Affairs Monitoring & Modelling Programme SLM Theory of Change
Report Title	ERAMMP Report-108: Development of a Theory of Change for the Sustainable Land Management Framework: Narrative Report
Client	Welsh Government
Client reference	C208/2021/2022
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How to cite (long)	Hart, K., Short C., Baldock D., Morse A. (2025). *Environment and Rural Affairs Monitoring & Modelling Programme (ERAMMP)*. ERAMMP Report-108: Development of a Theory of Change for the Sustainable Land Management Framework: Narrative Report. Report to Welsh Government (C208/2021/2022)(UK Centre for Ecology & Hydrology Project 06297/06810/08435)
How to cite (short)	Hart, K., Short, C., Baldock, D., Morse, A, (2025). ERAMMP Report-108: Development of a Theory of Change for the Sustainable Land Management Framework: Narrative Report. Report to Welsh Government (Contract C208/2021/2022)(UKCEH 06297/06810/08435)
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Abbreviations Used in this Report

CAP	Common Agricultural Policy
CBAM	Carbon Border Adjustment Mechanism
CLA	Country Landowners Association
CPRW	The Welsh Countryside Charity
EC	Enabling Condition
EU	European Union
FUW	Farmers' Union of Wales
FWAG	Farming and Wildlife Advisory Group
IO	Intermediate Outcome
LEAF	Linking Environment and Farming
M&E	Monitoring and Evaluation
NFU	National Farmers' Union
NGO	Non-Governmental Organisation
N0x	Nitrogen oxides
NRW	Natural Resources Wales
PEDW	Planning and Environment Decisions Wales
RAMSAR	Wetland area of international importance designated under the Ramsar Convention on Wetlands
RPW	Rural Payments Wales
RSPB	Royal Society for the Protection of Birds
RSPCA	Royal Society for the Protection of Cruelty to Animals
SFS	Sustainable Farming Scheme
SLM	Sustainable Land Management
SMNR	Sustainable Management of Natural Resources
TFA	Tenant Farmers' Association
ToC	Theory of Change
UKCEH	UK Centre for Ecology & Hydrology
UN	United Nations
UNECE	United Nations Economic Commission for Europe
WG	Welsh Government
WTO	World Trade Organisation
WWF	World Wide Fund for Nature

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1 INTRODUCTION

The purpose of this project is to develop a Theory of Change (ToC) for the Welsh Government's Sustainable Land Management (SLM) Framework, within the context of the Agriculture (Wales) Act 2023. Section 2 of the Act sets out how Welsh Ministers are required to exercise a series of functions in relation to agriculture, or other activities carried out on land used for agriculture or in relation to ancillary activities "in the way that they consider best contributes to achieving the sustainable land management objectives so far as consistent with the proper exercise of their functions". For convenience, this is referred to here as the "SLM duty". Section 4 of the Act also stipulates that Welsh Ministers must set out a statement setting out indicators and targets for measuring progress towards achieving the SLM objectives in accordance with the SLM duty (at least one for each of the four SLM objectives).

A comprehensive and clear ToC is essential for informing policy development, delivery and evaluation, particularly for such a large-scale, wide-ranging Act. Welsh Government officials responsible for the various elements of the schemes introduced in pursuit of the Act's objectives will be able to use the ToC to ensure that all schemes are appropriately aligned with these objectives.

In its simplest form, a ToC identifies the main elements required to achieve an identified change (or outcome) and how different factors might influence that change, considering any associated assumptions and risks. There are various ways to do this. For the purposes of the SLM Framework a ToC has been developed, drawing on established models drawn from the literature. It largely follows the guidance developed for Defra[1], due to the fact that this has been developed specifically to address complex multi-dimensional policies. Some modifications have been made, including in the terminology, to make it more self-explanatory and adapt it to the Welsh situation. Further information is provided in the methodological section below (Section 1.1).

The ToC for the SLM framework is intended to set out[2]:

- What the SLM programme is expected to achieve (its benefits or outcomes).
- How and why delivery of the policy actions are expected to lead to achievement of the SLM objectives (section 1 of the Agriculture (Wales) Act 2023).
- How the policy actions are connected with the SLM objectives in a causal chain and contribute to change, leading to the desired policy benefits and ultimately contributing to the outcomes set out in the Well-being of Future Generations (Wales) Act 2015.

It follows a clear structure and provides:

- An explicit line of sight from the different SLM policy mechanisms and levers through to the SLM Purposes of Support and objectives and on to the priority strategic objectives.
- A framework for developing a robust monitoring and evaluation framework, including indicators, data collection and analysis (in line with section 4 of the Agriculture (Wales) Act 2023).

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[1] Defra (2022), Theory of Change Toolkit – SD1421
[2] Adapted from Defra (2022), Theory of Change Toolkit – SD1421

- A framework for reporting and communicating findings about how the policy actions will work to deliver the changes required to meet the SLM objectives.

When appropriate to do so, a series of logic models tailored to the different individual schemes and other policy levers designed to meet the SLM objectives could be nested beneath this ToC.

The structure and terminology used in the ToC is set out in Section 5 of this report. It is worth noting that the language and concepts embedded in the ToC are not entirely self-explanatory to everyone and can be a barrier to understanding. For this reason, alternative, more straightforward and intuitive terms are proposed for each part of the ToC presented here, with the technical terms included in brackets.

Clear communication, including concrete examples where appropriate, is important to help people inside and outside government to grasp the concepts and the relationships between the different ToC elements. For some, the ToC may be a new tool and it can be helpful to emphasise that it does not represent a radical departure from the way that policy is devised and assessed by competent bodies at the moment. It is a formalisation of a systematic approach to linking policy initiatives to the objectives that they are intended to support. It is used fairly widely in government evaluation in the UK and is a means of structuring good policy development in a methodical way and to ensure that all those working on the policy have the same framing and structure, clear focus on objectives, and are using the same language and approach to ensure consistency, coherence and a well-timed sequence of interventions.

1.1 Methodological approach

The framework and structure for the ToC has been developed based on guidance provided by the UK Government Evaluation Support Team[3], supplemented by the Defra Theory of Change Toolkit[4]. The Defra toolkit provides a structured process for the development of a ToC for complex policies and programmes, which the SLM framework is considered to be, given its four distinct but interrelated policy objectives and multiple pathways for achieving those objectives. It sets out a systematic approach that provides clear pathways between the policy mechanisms and the SLM objectives, illustrating the elements that should be in place for achieving these, while also providing a basis for developing the indicators and targets for measuring success.

One challenge arising when applying the framework to the SLM is that it constitutes a broad policy framework encompassing a number of relatively broad objectives which in principle could be advanced by a fairly wide spectrum of policy interventions. The approach taken has been to reflect these characteristics in the individual components of the ToC to capture the full range of actions and conditions necessary to fulfil the SLM objectives. Actions and enabling conditions have been grouped so that the overall picture remains clear and can be summarised in a single diagram. Limitations to the approach are discussed further below.

To populate the different components of the ToC a range of evidence was used. In the first step, the scope, objectives and detailed sub-objectives of the SLM Framework were clarified, based on the text in the Agriculture (Wales) Act 2023 and the Explanatory Memorandum. This was

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[3] The Theory of Change Process – Guidance for Outcome Delivery Plans
[4] Defra Theory of Change Toolkit – SD1421

subsequently checked with Welsh Government. It was agreed that the sub-objectives should be restricted to the purposes for which Welsh ministers are explicitly empowered to provide support for or in connection with agriculture in Wales and ancillary activities that take place in Wales, pursuant to Section 8 of the Agriculture (Wales) Act 2023. Additionally, Section 8(2) of the Act lists the 15 predefined Purposes of Support, as set out in Section 4.2 below. It must be emphasised that this list is not exclusive and can be changed, subject to regulations, in future.

In the next step, the outcomes to which the SLM Framework could contribute were determined, identifying the relevant goals to which the Welsh Government were committed, including those identified in the Well-being of Future Generations Act (Wales) 2015 and other economic, environmental and social commitments at the international and national level. These were also reviewed by Welsh Government.

In the third step, a rapid evidence review was carried out by the study team to ascertain the main barriers that may influence the achievement of the objectives set out in the Agriculture (Wales) Act 2023. Barriers were identified in the academic and grey literature. Search strings containing key words from each of the SLM objectives and Purposes of Support were created, and the top five articles returned on Google Scholar reviewed for barriers relating to the objectives. Where examples were limited, the search was extended to grey literature[5] and research project reports. These barriers were then reviewed by the study team, and clustered. The barriers identified and the evidence underpinning these are set out in Annex-3. These barriers were then used to identify the enabling conditions that would need to be in place for the SLM objectives to be achieved. These include social, economic, environmental, as well as those related to data, evidence and governance issues. It is these enabling conditions that feature in the ToC. To make the list manageable for the purposes of this ToC, six overarching enabling conditions were created, under which a series of more detailed enabling conditions was nested.

In the fourth step, the study team identified the range of actions or activities that would be required to achieve the enabling conditions, which would be delivered through one or more policy mechanisms. These were identified based on a review of the content of a range of policy mechanisms that exist, both in Wales and elsewhere, as well as inputs from WG policy leads and the expert knowledge of the study team. A long list of 35 actions were identified. To make the list manageable for the presentation and operation of this ToC, ten overarching actions were created, under which the detailed actions were grouped.

The detailed components of the ToC were tested with Welsh Government colleagues via regular meetings with a WG working group, comprising key WG officials, a series of six one-to-one interviews with WG strategic policy leads and two internal workshops with WG officials, one in person (6 November) with 24 attendees and one online (12 November) with 18 attendees (excluding the study team and WG members of the Steering Group). These interactions found that the ToC components were largely aligned with what was expected, with some comments on specific wording or specific issues that required more or less emphasis and a number of other

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[5] Grey literature was defined as non-peer reviewed documents, which can provide valuable insights into a relevant topic. Given the lack of a peer review process, all such sources were assessed to ensure they were credible, used in date, appropriately referenced sources and reputable databases. The documents were also cross-referenced with the available academic literature.

suggestions that were taken into account. The detailed components of the ToC were revised, based on this feedback.

The WG policy units involved in the interviews and the workshops were as follows:

- Food Division
- Agriculture Sustainability and Development
- Office of the Chief Veterinary Officer (OCVO)
- Landscapes, Nature and Forestry
- Rural Development
- Marine and Biodiversity
- Land Management Reform
- Rural Payments Wales
- Flood, Water and Coal Tip Safety

Finally, based on feedback from the workshops, some elements of the ToC terminology were revised to make the titles of the ToC components more user-friendly. The original and revised terminology is set out below, with the first two remaining unchanged.

Table 1-1 Comparison of new and original ToC terminology

New terminology	Original terminology
- **Outcomes**	- Outcomes
- **Objectives**	- Objectives
- **Purposes of Support**	- Sub-objectives
- **Enabling conditions**	- Capabilities
- **Actions**	- Activities
- **Policy mechanisms**	- Inputs

A number of limitations were identified in applying the ToC process to the SLM. The main challenge was the breadth of the SLM policy framework, meaning that the objectives and Purposes of Support can be addressed by a wide range of actions and enabling conditions, many of which have the potential to address multiple objectives to varying degrees. Presenting these multiple interacting components in a clear and accessible way was therefore a key consideration. The solution adopted was to group the detailed lists of actions and enabling conditions to create shorter lists that were 'overarching', with the detailed lists nested beneath them and set out in Annexes-1 and -2 of this report. This facilitates the construction of a single diagram which brings together all the key elements of the ToC onto one page. However, the main limitation of this approach is that each overarching action and enabling condition is rather generic in nature and therefore has the potential to address most Purposes of Support (see point below).

The breadth of the SLM Framework also presents a further limitation, namely that the ToC cannot specify in detail the full range of actions or enabling conditions that might be covered by a potential policy mechanism (such as a scheme to provide support for certain actions taken by farmers) that is developed to meet the SLM Purposes of Support and SLM objectives. The idea is that these actions and enabling conditions would be set out within separate individual logic models tailored to the different schemes and nested beneath this overarching ToC. The implication of this, however, is that the ToC can only show that an action has the potential to

contribute to an enabling condition, or that an enabling condition has the potential to help address a Purpose of Support, it may not be relevant or appropriate in every case   The ToC is a tool, it is not prescriptive. In this document, it is made clear that to determine whether or not the policy mechanism in question can be expected to contribute to a specific Purpose of Support in a real-life situation, the specific attributes and purpose of the policy mechanism will need to be assessed. Use of the ToC therefore will require discretion, with judgements still to be made for each policy mechanism individually. If it is not used in this way then its value is very much more limited.

It is also worth emphasising that the ToC is based on evidence, experience of the use of various policy mechanisms and conditions prevalent at the time it was assembled. Over time some of these variables will change and the ToC will need periodic review and updating to keep it relevant. It should be open to modification and continuous improvement.

1.2 Use of the ToC for evaluation purposes

The ToC will inform the development of a Monitoring Research and Evaluation Framework for SLM reporting as required by the Agriculture Act, including the development of indicators and targets for assessing progress towards meeting the SLM objectives.

It provides an overarching structure to inform the monitoring and evaluation of whether or not the SLM Framework is having the impacts anticipated and determining the extent of progress against achieving the objectives and outcomes identified.

It will be used to inform the drafting of the evaluation questions and helps determine what needs to be measured (and what does not), providing a framework for the indicators to be used and the evidence that should be collected.

The assumptions and risks identified in the ToC should be tested through regular monitoring as well as evaluation to help explain progress (or lack of) towards meeting objectives and inform any adjustments that may have to be made. Modifications to the risks and assumptions embodied in the ToC may be necessary as new evidence appears.

Evaluating the SLM Framework's impact may show that there are factors influencing the successful achievement of its objectives that are different to those included within the ToC. If this is the case, it would be appropriate to revisit and adapt the ToC based on the evidence.

A key part of the ToC is ensuring that the SLM Framework connects with existing and other current strategic policy, the resulting monitoring and evaluation architecture and the associated targets and indicators. This is likely to result in evidence from SLM contributing to other policy targets and indicators or that evidence from policies other than SLM will contribute to meeting SLM framework targets and indicators.

The process of choosing potential indicators and suggesting possible targets for the monitoring and evaluation framework will involve the preparation of a long list, covering all SLM framework objective and sub-objective areas. This will be based on evidence from other Welsh policy and similar policies in the UK and Europe. This will be reduced to a short list of indicators through a process of engagement with external stakeholders and key personnel in the WG. Once the final set of indicators has been agreed the process of developing possible targets will be considered based on the evidence that the SLM framework is likely to generate from the policy mechanisms outlined in the ToC.

1.3 Use of the ToC within Welsh Government

The ToC lays out a working hypothesis of the different factors that are required to achieve the SLM objectives. These are subject to verification during and after implementation of the various policy mechanisms that are put in place. It is a living document that should be reviewed regularly and updated as necessary. It provides a framework for explaining how the SLM objectives can be delivered, in line with the Agriculture (Wales) Act 2023. It supports WG in developing policies, providing a means of demonstrating a pathway for how they will achieve the Purposes of Support and the SLM objectives, identifying any underlying assumptions and risk factors. The framework will serve two key functions: supporting the design and delivery of policies (e.g. support schemes, regulation) in support of SLM, and the subsequent evaluation of whether, and to what extent, these activities contributed to the SLM objectives in line with the logic of the ToC.

For the design of SLM policies, the SLM ToC can be used to explore how a new policy may fit within SLM as a whole and what might need to be in place to ensure it can deliver against the Purposes of Support and the SLM objectives. The SLM ToC will support the identification of activities and enabling conditions which need to be in place for the new policy to perform as expected, assumptions which need to hold true, and what risks might need to be addressed. The specific logic model for the new policy can be mapped against the SLM ToC to create a clear line of sight as to where it will fit within the wider programme, complement existing activity, and how it is expected to deliver on broader objectives. This process will not only support the effective design of policies but can also serve as a tool to communicate more widely the logic behind new activity and alignment with wider goals.

The SLM ToC will also provide an important framework for the evaluation of SLM. The causal links between activities and the SLM objectives, the assumptions underpinning the logic, capabilities and the contextual factors identified in the ToC provide a structure against which evaluation questions can be designed to test whether the logic of the model held true, the extent to which it did so, and the reasons for this. It will also help identify points along the causal chain at which data should be collected and, in this way, aspects for which new data collection might be needed.

2   BACKGROUND AND CONTEXT TO THE SUSTAINABLE LAND MANAGEMENT FRAMEWORK

This section sets out the background to the SLM Framework, its purpose and the broader context within which it operates.

2.1   Rationale for the introduction of a new SLM framework for Wales

The Agriculture (Wales) Act 2023 establishes SLM as the framework for future agricultural support and regulation within Wales.

The UK's departure from the European Union (EU) has also meant leaving the EU's Common Agricultural Policy (CAP) which for many decades provided the regulatory framework providing support for farmers and other land managers. Agriculture is a devolved responsibility in the UK which means that the Welsh Government has the opportunity to develop a new agricultural policy for Wales, to address the specific priorities and needs faced. It is important to note that the budget for agriculture remains a UK responsibility under the control of the Treasury, placing some constraints on what can be done in practice.

As set out in the Explanatory Memorandum to the Agriculture (Wales) Act 2023, it is a priority for the Welsh Government to address the interlinked challenges of sustainable food production, responding to the climate emergency and reversing the decline of biodiversity (section 3.16). It also notes that 'operating outside the EU is also likely to mean a more challenging economic environment' and that 'farm support must help farmers adjust to this' (section 3.17). In addition, it should be borne in mind that agriculture takes place within the wider context of the complete agri-food supply chain, a sector that is exposed to geopolitical, economic and other dynamics arising at an international as well as domestic level. This supply chain is understood as a significant element in the spectrum of "ancillary activities" referred to in the Act.

The meaning of "Sustainable Land Management" in the context of the Act has been defined by the Welsh Government: "SLM incorporates the environmental, economic, cultural and social contribution of farmers in Wales. It is based on an internationally recognised concept that resources, including soils, water and crops, are used for the production of goods to meet changing human needs in such a way that the needs of the current generation are balanced with our obligations to future generations"[6].

The Agriculture (Wales) Act 2023, therefore, enables a new system of farm support to be established, based on the SLM framework to "maximise the protective power of nature through farming" (see section 3.18 of the [Agriculture (Wales) Act 2023 Explanatory Memorandum](#)). The new system of support is intended to take an integrated approach to 'enable the sustainable production of food alongside the delivery of improvements to social and environmental issues' as well as 'support to those parts of the wider industry and supply chain that also support the

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[6] Welsh Government (2023), [The Agriculture (Wales) Act 2023: Introducing the Sustainable Land Management Framework](#)

continued delivery of SLM' (see section 3.20 of the [Agriculture (Wales) Act 2023 Explanatory Memorandum](#)).

The SLM framing is intended to ensure a sustainable farming sector in Wales for future generations, consistent with obligations set out under the Well-being of Future Generations (Wales) Act 2015 as well as the Environment (Wales) Act 2016.

2.2 The wider UK and international context

The implementation of the Agriculture (Wales) Act 2023 has to take into account the broader UK and international context in which policy in Wales is applied.

This includes a number of wide-ranging parameters. Key elements include both UK wide legislation and policies applicable to agriculture and SLM and also wider international legislation and agreements which apply to Wales either directly or via binding UK domestic legislation. Some examples are provided in Box 1.

Box 1: Examples of WG's international commitments relevant to the SLM Framework

Biodiversity – the 2023 Kunming-Montreal Global Biodiversity Framework

Climate – the 1992 Framework Convention on Climate Change, the Kyoto Protocol and other agreements arising under the Convention

Cultural Heritage – the World Heritage Convention

Sustainability – the 2015 UN Sustainable Development Goals

Other multilateral environmental agreements – such as the UNECE Convention on Long Range Transboundary Air Pollution and associated protocols concerned with air pollutants such as NOx.

In terms of the policy context, trade policy adopted by the UK has a direct bearing on the agriculture and land use sector in Wales and on the policies that can be used to steer these. Trade policy is a reserved power and negotiated by the UK Government but is binding on Wales. UK policy in turn is bound by the terms of the [World Trade Organisation (WTO) Agreement on Agriculture](#) since the UK is a member of the WTO. Support policies for agriculture need to be notified to the WTO according to the agreed classification system.

The UK has been active in negotiating new or amended trade agreements with a range of third countries and trade partnerships, a process that is likely to continue.

In addition, policy options within the UK as a whole, including Wales, are bound by the terms of the UK's [Trade and Cooperation Agreement](#) with the EU and policies adopted by the UK government within this framework, such as the [Windsor Framework](#), which came into effect in October 2023. Modifications to the current trading arrangements with the EU may occur. For example, the UK Government has expressed a wish to make a new agreement with the EU in the veterinary field which could have implications for agri-food trade ([Labour Party](#), 2024). However, at present (winter 2024/25) the government has no plans to seek to join the EU Single Market, the Customs Union, free movement of labour agreements or the EU itself.

There are also other reserved powers which give rise to boundary conditions applicable to the attainment of Sustainable Land Management objectives in Wales. A notable example is the

United Kingdom Internal Market Act (2020). Others include the UK Emissions Trading Scheme, the anticipated Carbon Border Adjustment Mechanism (CBAM), due diligence regimes intended to control imports of products associated with deforestation, measures related to biosecurity, health and safety etc. Certain aspects of the tax regime, including the treatment of agricultural land and businesses in inheritance tax also have the potential to affect delivery of SLM objectives.

In addition to the impact that the use of reserved powers and associated legislation will have on Wales, it is worth noting that the exercise of devolved powers in England, Scotland and Northern Ireland also may have a bearing on SLM in Wales. For example, all three of these administrations are developing their own agricultural, land use and associated policies and are not following exactly the same approach. Divergent policies can be expected within the UK, contrasting with the broadly similar (although not identical) policies that were applied under the CAP. These in turn may have spill over consequences for Wales, for example if inward investment in the sector is more attracted to one part of the UK than others because of the incentives in place.

Beyond the broader legislative and policy context, delivery of SLM objectives will be influenced by a range of socio-economic and environmental conditions, such as:

- Geopolitical conditions, energy and commodity prices;

- Agricultural markets, including farmgate prices, timber prices;

- Farm input prices, labour market conditions;

- Changing tariffs and trade patterns;

- Economic growth rates, interest rates, availability of credit, land prices;

- The development of technology and its availability on the ground e.g. via broadband; and

- The impacts of climate change and weather events, implications for water supply, flood control etc.

For the purposes of the ToC, the context, sketched in outline here, needs to be taken into account. The ToC is a living document and changes to the ToC may need to be made, if significant alterations to the contextual framework occur.

3 KEY STAKEHOLDERS

A wide range of stakeholders have an interest in the delivery of the SLM objectives. Table 3-1 sets these out by stakeholder type. This list should be seen as a starting point rather than an exhaustive list. In the ToC, the term 'SLM stakeholders' is used as shorthand to refer to these stakeholder types.

Table 3-1: Stakeholder types with an interest in the delivery of the SLM objectives

Broad category	Possible actors/stakeholder types
Farmers and land managers	Arable Dairy Beef & Sheep (upland and lowland) Pig/Poultry Organic & Pasture for Life Horticulture Commoners Tenants Other areas of food production covered by the SLM framework Other areas of land management covered by the SLM framework
Landowners	Private landowner groups Institutional landowners (e.g. Welsh Water, the Church of Wales) Environmental NGO landowners (e.g. Royal Society for the Protection of Birds (RSPB) Wales) Public sector landowners (e.g. National Park Authorities, Natural Resources Wales) Recreational, life-style landowners
Advisors/consultants	Land agents and farm managers Specialist advisors e.g. Farming and Wildlife Advisory Group (FWAG) Local/economic development officers Vets and other specialist advisors Other animal health and welfare bodies (e.g. Royal Society for the Prevention of Cruelty to Animals -RSPCA)
Training and skills providers	Lantra Wales Tir Coed Further education colleges Specialist Agricultural Colleges
Non-Governmental Organisations (NGOs)	Environmental NGOs e.g. The Wildlife Trusts, Friends of the Earth Cymru, Coed Cadw (Woodland Trust), World Wild Fund for Nature (WWF) Cymru, FWAG, Countryside Alliance Wales Rural Social NGOs, (e.g. The Welsh Countryside Charity (CPRW), Farmwell Wales)
Research institutions	Universities & Research Institutes Scientific research expertise within public and private sector
Water companies and environmental bodies	Dŵr Cymru Welsh Water Hafren Dyfrdwy River trusts e.g. Wye and Usk Foundation, Afonydd Cymru / Caring for Welsh Rivers, West Wales Rivers Trust
Farming organisations	National Farmers' Union (NFU) Cymru Farmers' Union of Wales (FUW) Country Land and Business Association (CLA) The Nature Friendly Farming Network Tenant Farmers' Association (TFA) The Wales Federation of Young Farmers Clubs The Landworkers' Alliance Welsh Organic Forum

Broad category	Possible actors/stakeholder types
Ancillary sectors – upstream and downstream	Food retailers, processors and wholesalers Specialist food transport companies and packaging Dairy companies, others linked to production systems Feed companies Fertiliser and seed companies Agricultural contractors – e.g. for fencing, harvesting etc.
Tourism and recreation	Tourism operators e.g. Visit Wales, local guides More specialised eco-tourism businesses Health and wellbeing organisations e.g. Public Health Wales Ramblers and other walking groups Sporting groups dependent on rural land Accommodation providers e.g. hotels, B&B, campsites etc. Attraction operators e.g. museums, activity centres etc. Transportation providers e.g. bus, railway, bike and e-bike rental
Financial institutions	Banks and Building Societies Investment firms and pension funds Insurance companies
Forestry organisations	Coed Cymru (Welsh Woodland Organisation) Foresters and woodland managers Natural Resources Wales
Technology and energy companies	Renewable energy developers Landowners hosting energy projects Agri-tech companies
Certifying bodies	Red Tractor, Soil Association, Pasture for Life Linking Environment and Farming (LEAF)
Welsh language and culture bodies	Cymdeithas yr Iaith Gymraeg (The Welsh Language Society) Urdd Gobaith Cymru Comisiynydd y Gymraeg (Welsh Language Commissioner) Cultural event organisers
Residents (and bodies who represent them)	Children and youth, students, elderly, families Health and wellbeing organisations Homeowners & renters
Community leaders	Elected officials – councillors and members of Senedd (Welsh Parliament) Religious leaders Community activists – Welsh-language advocates and environmental activists Neighbourhood association members
Health sector	Local health professionals covering physical and mental aspects e.g. GPs and local hospitals as well as those in the private sector.
Local businesses	Shopkeepers, restauranteurs, cafes etc. Local crafts and creative industries Specialist construction and other relevant trades
Visitors	Tourists, temporary residents e.g. students or seasonal workers
National government	Welsh Parliament (Senedd Cymru) Welsh Government (Llywodraeth Cymru): First minister, Welsh ministers deputy ministers Public bodies and agencies: Public Health Wales, Natural Resources Wales (NRW), Future Generations Commissioner for Wales
Community level government	Community and town councils Elected councillors: chairperson or mayor, community councillors Clerk of the council
Designated areas	National Parks and National Landscapes Owners of Sites of Special Scientific Interest, Special Protection Areas and Special Areas of Conservation, RAMSAR sites, Key Wildlife Sites. Scheduled Ancient Monuments, Listed buildings, Conservation Areas

4 OVERVIEW OF THE SLM FRAMEWORK

4.1 Scope

Section 2 of the Agriculture (Wales) Act 2023, empowers Ministers to exercise functions under this act or any other enactment in ways that best contributes to achieving the Sustainable Land Management objectives to provide support for or to regulate: a) agriculture, or other activities carried out on land used for agriculture or; b) ancillary activities.

Box 2: Definitions in the Agriculture (Wales) Act 2023

Agriculture is defined in Section 51 of the Act as follows:
Section 51: Meaning of 'agriculture' and related references
(1) In this Act, "agriculture" means—
　　　(a) horticulture;
　　　(b) farming arable crops;
　　　(c) dairy farming;
　　　(d) keeping and breeding livestock;
　　　(e) using land as grazing land;
　　　(f) using land as farm woodland or for agroforestry;
　　　(g) controlled environment agriculture;
　　　(h) otherwise growing plants for sale, or for the sale of part of a plant;
　　　(i) maintaining land in a state that makes it suitable for an activity listed in paragraphs (a) to (h).

(2) In subsection (1)—
- *"livestock" includes, among other things, any animal kept to produce food, drink, oils, fibres or leathers, or to graze land;*
- *"controlled environment agriculture" means growing plants in a closed ecosystem permitting the management of environmental variables (including temperature, humidity, light and nutrients).*

Ancillary activities are defined in Section 52 of the Act as follows:
Section 52: Meaning of "ancillary activity"
In this Act, "ancillary activity" means
　　a. *taking action, on land used for agriculture—*
　　　　i. *to create and manage habitats, or for other purposes relating to nature conservation,*
　　　　ii. *to mitigate and adapt to climate change, or*
　　　　iii. *to maintain and enhance the resilience of ecosystems;*
　　a) *selling, marketing, preparing, packaging, processing or distributing products deriving from agriculture.*

4.2 SLM Objectives and Purposes of Support

The Agriculture (Wales) Act 2023 establishes four SLM objectives to underpin all support and regulation for agriculture, land used for agriculture and ancillary activities in Wales.

These objectives are as follows:

Figure 4-1: The four SLM objectives of the Agriculture (Wales) Act, 2023[7]

Section 8 of the Act provides Welsh Ministers with the power to provide support for, or in connection with, a range of purposes in pursuit of the four main SLM objectives. A non-exclusive list is set out in the Act, which can be amended or added to over time. These are referred to in this report as the "Purposes of Support" and are as follows:

a) encouraging the production of food in an environmentally sustainable manner;
b) helping rural communities to thrive and strengthening links between agricultural businesses and their communities;
c) improving the resilience of agricultural businesses;
d) sustaining the Welsh language and promoting and facilitating its use;
e) reducing emissions of greenhouse gases;
f) maximising carbon sequestration and storage;
g) maintaining and enhancing the resilience of ecosystems;
h) conserving and enhancing landscapes and the historic environment;
i) improving air quality;
j) improving water quality;
k) maintaining and enhancing public access to and engagement with the countryside and the historic environment;

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[7] Source: Welsh Government (2023), The Agriculture (Wales) Act 2023: Introducing the Sustainable Land Management Framework

l)　mitigating flood and drought risks;

m)　achieving and promoting high standards of animal health and welfare;

n)　maximising resource efficiency;

o)　encouraging agricultural businesses to manage energy effectively (including by adopting energy efficiency and energy saving practices and generating renewable energy on their land).

It is important to note that the Purposes of Support set out in this list should not be seen in isolation. Rather they are mutually reinforcing. This is evident from the fact that many of them contribute to the achievement of more than one of the four main objectives (see Section 5.4).

5 SLM FRAMEWORK THEORY OF CHANGE

The Theory of Change follows a clear structure comprising six distinct layers, shown in Figure 5-1 below.

ToC Component (SLM Framework)	Element (Defra toolkit)	Definition
End outcomes	(3) Longer-term outcomes	Longer-term outcomes – traditionally known as impacts – may only partially be a consequence of the achievement of the main objectives
Intermediate outcomes	(2) Intermediate outcomes	Achieving the main objectives of the policy / programme will bring direct intermediate outcomes (in the shorter-term). It might also unlock, drive, catalyse, support a range of other potential benefits (and possibly disbenefits), known as indirect benefits. Benefits are generally identified with reference to key stakeholders – considering how delivery of an objective may affect each stakeholder.
SLM objectives + Purposes of Support	(1) Main objectives	The main objectives of a policy / programme are the key tangible goals that you expect to achieve in its lifetime. This may be achieved through the delivery of key outputs (which are the product of the activities (actions) in the map) or a significant behaviour change or a shift in how a 'system' operates.
Enabling conditions	(4) Barriers overcome/ capabilities achieved	The objectives of a policy / programme are usually achieved when key 'barriers' or 'market failures' have been overcome. The Defra tool suggests identifying barriers and then conceptually 'flipping' them to represent the capabilities (enabling conditions) that are needed to achieve the main objective(s).
Actions	(5) Activities	A range of activities (actions) and resources will be needed to generate the capabilities. The final ToC should include all the planned activities (actions) and show how they collectively 'should' deliver the capabilities (enabling conditions).
Policy Mechanisms	(6) Inputs	The inputs are generally defined as the initial funding or stimulus provided by central government that initiates and makes possible the policy / programme activities.

Figure 5-1: Elements of a Theory of Change[8]

The ToC developed for the SLM Framework follows this structure and a simplified version is set out in Figure 5-2. To make this diagram readable, only the links between the actions and enabling conditions are included, since for the other layers, many elements link to all those in the layer above. Sections 5.1 to 5.7 provide the narrative to accompany the ToC and set out the detail of the links between the different ToC layers.

The breadth of the SLM framework creates challenges when condensed down to a single diagram with a limited number of components, all of which need to be expressed broadly enough to capture a range of more specific elements. However, a larger diagram with a greater number of more specific individual blocks would be very unwieldy. The sections below set out the more detailed content that cannot be shown in the diagram.

As highlighted in Section 1, it is important to note that this ToC is for the SLM Framework (the objectives and duties set out in the Agriculture Act), rather than for the specific policy mechanisms that are in place or will be put in place in future in pursuit of these objectives. As such, its scope and content has to be sufficiently broad to be able to encompass the full range of actions and enabling conditions that may be required to meet the 15 Purposes of Support and

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[8] Source: Adapted from Defra (2022), Theory of Change Toolkit – SD1421

four SLM objectives. Where appropriate, specific intervention logic models for individual policy mechanisms could be nested beneath this overall ToC for the SLM Framework.

It should also be noted that not every policy mechanism/lever has to address every action and enabling condition. What the ToC endeavours to do is enable each policy mechanism to be checked and analysed in terms of whether its contents follow a clear line of sight through the ToC towards one or more of the Purposes of Support and SLM objectives. Where this line of sight is unclear, this would flag the need to revisit its design to understand why this is the case and consider the implications.
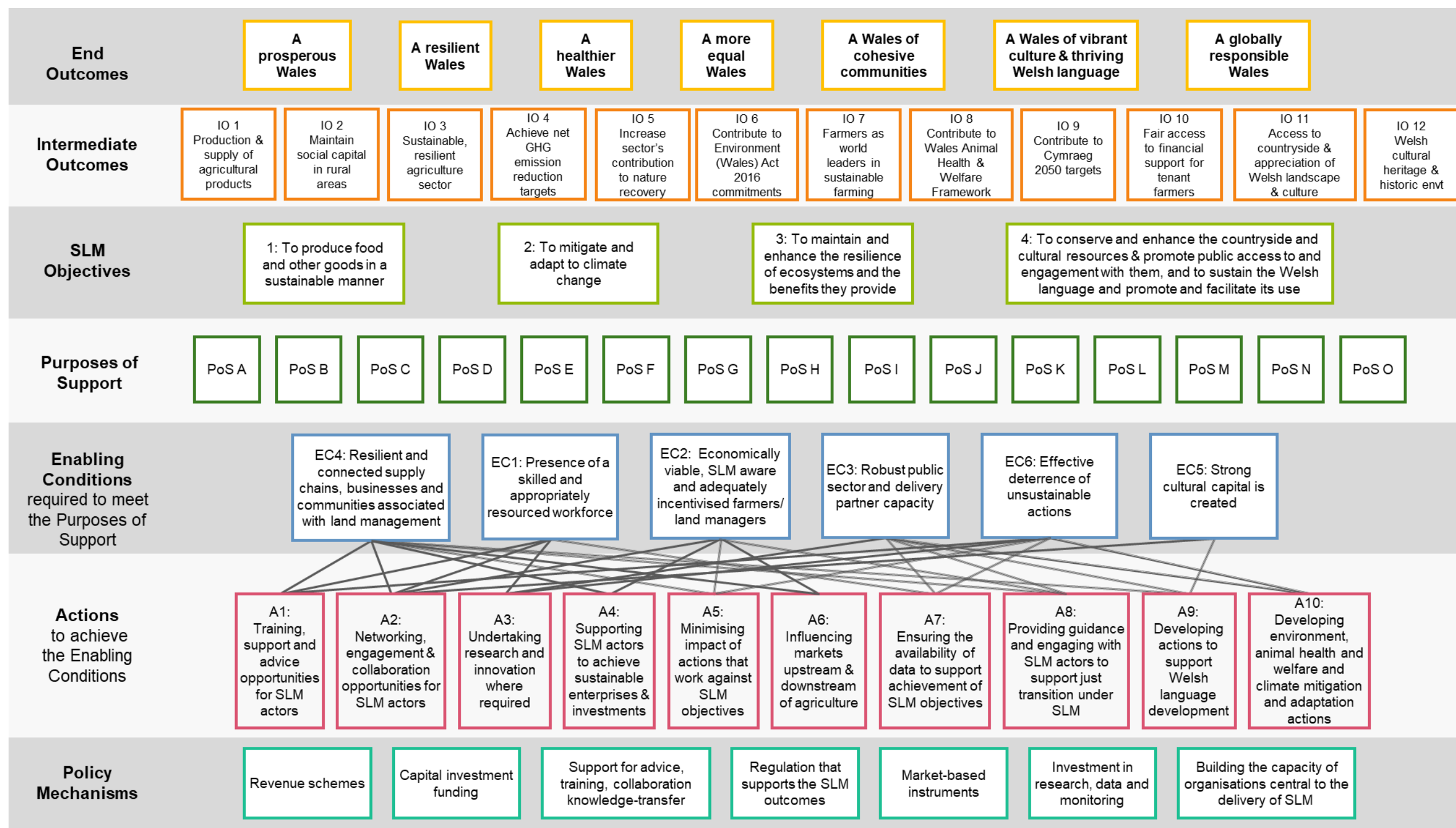
Notes: The Purposes of Support are coded according to how they are referenced in Section 8(2) of the Agriculture (Wales) Act 2023 and are set out in full in section 4.2 and 5.4 of this report. The Intermediate Outcomes are set out in Section 5.5 of this report

Figure 5-2: Theory of Change for the SLM Framework

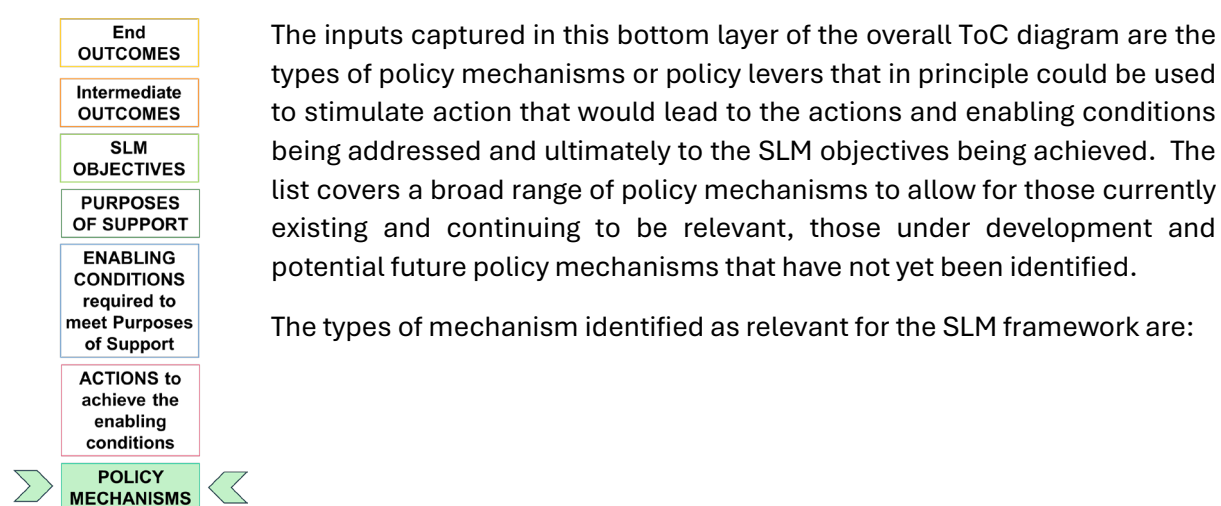The Theory of Change narrative below describes each element (i.e., each box in the diagram) of the Theory of Change diagram in more detail, its linkages to other elements and associated assumptions. In each case, the narrative starts with the bottom of the diagram (policy mechanisms) and works its way up through to the SLM objectives and then outlines the intermediate and end outcomes to which the SLM framework is expected to contribute (the top half of the diagram).

Sources for the barriers, enabling conditions and actions set out below include the academic and grey literature relating to the SLM objectives, policy evaluations, consideration of the policies currently in place in the UK and EU, feedback from two workshops with WG policy staff, as well as expert knowledge from the study team, all of whom have extensive experience with the design, development and implementation of policies for sustainable land management.

5.1 Policy Mechanisms (Inputs)

End OUTCOMES
Intermediate OUTCOMES
SLM OBJECTIVES
PURPOSES OF SUPPORT
ENABLING CONDITIONS required to meet Purposes of Support
ACTIONS to achieve the enabling conditions
POLICY MECHANISMS

The inputs captured in this bottom layer of the overall ToC diagram are the types of policy mechanisms or policy levers that in principle could be used to stimulate action that would lead to the actions and enabling conditions being addressed and ultimately to the SLM objectives being achieved. The list covers a broad range of policy mechanisms to allow for those currently existing and continuing to be relevant, those under development and potential future policy mechanisms that have not yet been identified.

The types of mechanism identified as relevant for the SLM framework are:

1. Revenue schemes providing support to land managers (e.g. the Sustainable Farming Scheme).
2. Capital investment funding to farmers, land managers and other relevant actors to achieve specific outcomes (could be in the form of capital grants or low-cost loans/credit).
3. Support for advice, training, collaboration and knowledge-transfer.
4. Regulation that supports the SLM outcomes (e.g. environmental, animal health and welfare requirements etc).
5. Market-based instruments (e.g. carbon credits).
6. Public sector investment in research, data and monitoring.
7. Building the capacity of organisations central to the delivery of SLM, in terms of their resources, knowledge and skills.

5.2 Actions (Activities)

End OUTCOMES
Intermediate OUTCOMES
SLM OBJECTIVES
PURPOSES OF SUPPORT
ENABLING CONDITIONS required to meet Purposes of Support
ACTIONS to achieve the enabling conditions
POLICY MECHANISMS
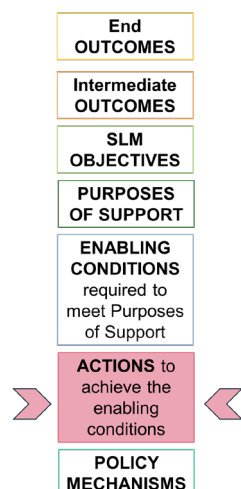
The actions layer of the ToC identifies those expected to be required for the achievement of the SLM framework's enabling conditions (EC) (see section 5.3, including definitions), which in turn are required to deliver the four SLM objectives. These actions would be delivered through one of more of the policy mechanisms designed to deliver the SLM objectives.

Given the breadth of the SLM objectives, a large number of possible actions have been identified that in principle could be carried out in order to achieve the SLM objectives as set out in the Agriculture (Wales) Act (35 in total). These could in turn be broken down into more specific actions or actions within a logic model for an individual policy mechanism. There is no implication that the Welsh Government has plans to bring about any of these actions; this is more of an inventory of possibilities.

To make the list manageable for the presentation and operation of this ToC, ten overarching actions have been created, under which a much larger set of detailed actions are grouped.

The ten **overarching** actions are as follows:

A1: Training, support and advice opportunities for SLM actors	*Meaning:*	Diverse training, education, support and advice opportunities are offered to SLM stakeholders, including, for example, new entrants, advisors and regulators and those on community owned land. This includes actions to promote the Welsh language.

A2: Networking, engagement and collaboration opportunities for SLM actors	*Meaning:*	Relevant networking, engagement and collaboration opportunities are developed within and beyond the body of farmers/land managers, including in supply chains and ancillary sectors and with necessary expertise, including e.g. vets.

A3: Undertaking research & innovation where required	*Meaning:*	Research and innovation are supported, where required, including baseline evidence, mapping, targeting, monitoring and evaluation.

A4: Supporting SLM actors to achieve sustainable enterprises & investments	*Meaning:*	SLM actors in receipt of financial support and / or subject to regulatory requirements are supported both to achieve sustainable enterprises and to make capital investments. This includes facilitation of collective initiatives and strong engagement with, and communication of, measures to stakeholders affected.

A5: Minimising impact of actions that work against SLM objectives	*Meaning:*	Actions which work against SLM objectives, such as sub-standard animal health and welfare issues, are minimised through regulation, inspection, enforcement, the protection of protected sites etc.

A6: Influencing markets upstream & downstream of agriculture	*Meaning:*	Interventions to influence markets upstream and downstream of agriculture are made where required e.g. to help achieve fair prices for farmers/land managers, develop demand for sustainable products, develop supplies of required inputs like saplings etc.

A7: Ensuring the availability of data to support achievement of SLM objectives	*Meaning:*	Data and information are available, accessible and meaningful to all in the sector. Institutions have the capacity and training to develop and implement the policy mechanisms in place to deliver SLM objectives and communicate this to SLM stakeholders through a range of engagement actions.

A8: Providing guidance and engaging with SLM actors to support just transition under SLM	*Meaning:*	Engagement and guidance actions to ensure that access is secured to information, advice and financial support (where available) for all types of land and land managers – tenants, common land managers, landowners through an equitable approach and retain it for the anticipated duration of SLM actions.

A9: Developing actions to support Welsh language development	*Meaning:*	Develop actions to support the continued everyday use of Welsh in land management activities, such as at livestock marts. Enable access to Welsh language courses and language mentors for those wishing to learn within the land management and ancillary sectors.

A10: Developing environment, animal health and welfare and climate mitigation and adaptation actions	*Meaning:*	Environmental, animal health and welfare and climate adaptation and mitigation actions to ensure the appropriate management of land and future decisions on land management among key SLM stakeholders.

An overview of the potential contributions of the actions to the enabling conditions in the following layer of the ToC are set out in Table 5-1. It should be noted that the links between the actions and the enabling conditions highlighted are the main direct potential links. However, there may be some indirect links that are not identified here.

It is important to stress that given the broad nature of the SLM Framework, the ToC can only show 'potential' contributions. It is not prescriptive: actions in the categories specified here will vary in their purpose and operation and will not necessarily contribute to the creation of the enabling conditions. Whether or not the action will contribute to a particular enabling condition in reality will depend on the specific purpose, topic and content of the policy mechanism in question and the context in which it is applied. This will have to be ascertained through an assessment for each policy mechanism individually. The detailed list of actions that sit beneath each of these ten overarching actions are set out in Table 7-1 in Annex-1.

Table 5-1: Potential contribution of each Action to the Enabling Conditions (direct links)

Actions	EC1: Presence of a skilled and appropriately resourced workforce	EC2: Economically viable, SLM aware and incentivised farmers/land managers	EC3: Robust public sector and delivery partner capacity	EC4: Resilient and connected supply chains, businesses and communities associated with land management	EC5: Strong cultural capital is created	EC6: Effective deterrence of unsustainable actions
A1: Training, support and advice opportunities for SLM actors	*			*		*
A2: Networking, engagement and collaboration opportunities for SLM actors	*	*		*	*	
A3: Undertaking research & innovation where required	*		*			*
A4: Supporting SLM actors to achieve sustainable enterprises & investments		*		*		
A5: Minimising impact of actions that work against SLM objectives		*		*		*
A6: Influencing markets upstream & downstream of agriculture		*		*		
A7: Ensuring the availability of data to support achievement of SLM objectives	*		*			*
A8: Providing guidance and engaging with SLM actors to support just transition under SLM		*	*	*		
A9: Developing actions to support Welsh language development			*	*	*	
A10: Developing environment, animal health and welfare and climate mitigation and adaptation actions			*			*

5.3 Enabling conditions (Capabilities)

End
OUTCOMES

Intermediate
OUTCOMES

SLM
OBJECTIVES

PURPOSES
OF SUPPORT

ENABLING
CONDITIONS
required to
meet Purposes
of Support

ACTIONS to
achieve the
enabling
conditions

POLICY
MECHANISMS
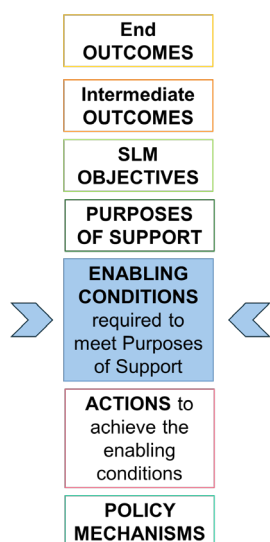
The enabling conditions (capabilities) are the conditions that need to be in place to achieve the four main SLM objectives. They are identified through a review of the barriers which might prevent the successful achievement of the SLM objectives. These barriers are then 'flipped' into positive statements – the enabling conditions. Enabling conditions need to be built in order to overcome the potential barriers.

A large number of potential barriers, and hence enabling conditions, were identified through the literature review, interviews and a workshop with Welsh Government staff as being relevant for the successful delivery of the SLM objectives.

In total 31 enabling conditions were identified. These include social, economic, environmental, as well as those related to data, evidence and governance issues.

The barriers identified and the evidence underpinning these is set out in Annex-2.

To make the list manageable for the purposes of this ToC, six overarching enabling conditions have been created, under which the fuller list of detailed enabling conditions are grouped.

The six overarching enabling conditions are as follows:

EC1: Presence of a skilled and appropriately resourced workforce	*Meaning:*	There is a multi-skilled and appropriately resourced workforce which has the knowledge and awareness of the climate, environmental and animal health and welfare priorities relating to SLM and understands their role in delivering these priorities, how to achieve them and the underlying context in terms of wider changes in Wales.

EC2: Economically viable, SLM aware and adequately incentivised farmers/land managers	*Meaning:*	SLM stakeholders have sufficient revenue and access to the capital required to produce sustainable food and environmental services on the required scale within resilient businesses, are aware of the economic and other benefits of aligning with SLM principles and are adequately incentivised to adopt appropriate practices.

EC3: Robust public sector and delivery partner capacity	*Meaning:*	There is sufficient capacity within the public sector and relevant delivery partners to develop and deliver supportive interventions such that all aspects of SLM can be enabled e.g. via well-designed and targeted schemes based on a strong, accessible and evolving knowledge base with associated mapping, engagement, compliance with regulations, capacity for monitoring and evaluation efforts.

EC4 Resilient and connected supply chains, businesses and communities associated with land management	*Meaning:*	Rural communities and the ancillary sectors, including food and drink supply, are progressively resilient to economic and geopolitical shocks and climate change and inter-connected to support economic and social renewal, adoption of environmental opportunities and to facilitate cooperative approaches.

EC5: Strong cultural capital is created	*Meaning:*	The advantages of achieving the SLM objectives and societal benefits of achieving the SLM objectives are apparent to farmers/land managers, other ancillary stakeholders and visitors to the countryside motivating the protection of rural cultural resources and the Welsh language.

EC6: Effective deterrence of unsustainable actions	*Meaning:*	The required standards for environment, animal health and welfare, biosecurity, energy supply etc. are in place and policies are developed which avoid unintended consequences.

The potential contribution of the enabling conditions to the Purposes of Support in the following layer of the ToC are set out in Table 5-2. It should be noted that the links between the enabling conditions and the Purposes of Support highlighted are the main direct potential links. However, there may be some indirect links that are not identified here.

It is important to stress that, given the broad nature of the SLM Framework, the ToC can only show 'potential' contributions. It is not prescriptive: actions in the categories specified here will vary in their purpose and operation and will not necessarily contribute to the creation of the enabling conditions. Whether or not the enabling condition will contribute to a specific Purpose of Support in reality will depend on the specific purpose, topic and content of the policy mechanism in question and the context in which it is applied. This will have to be ascertained through an assessment for each policy mechanism individually.
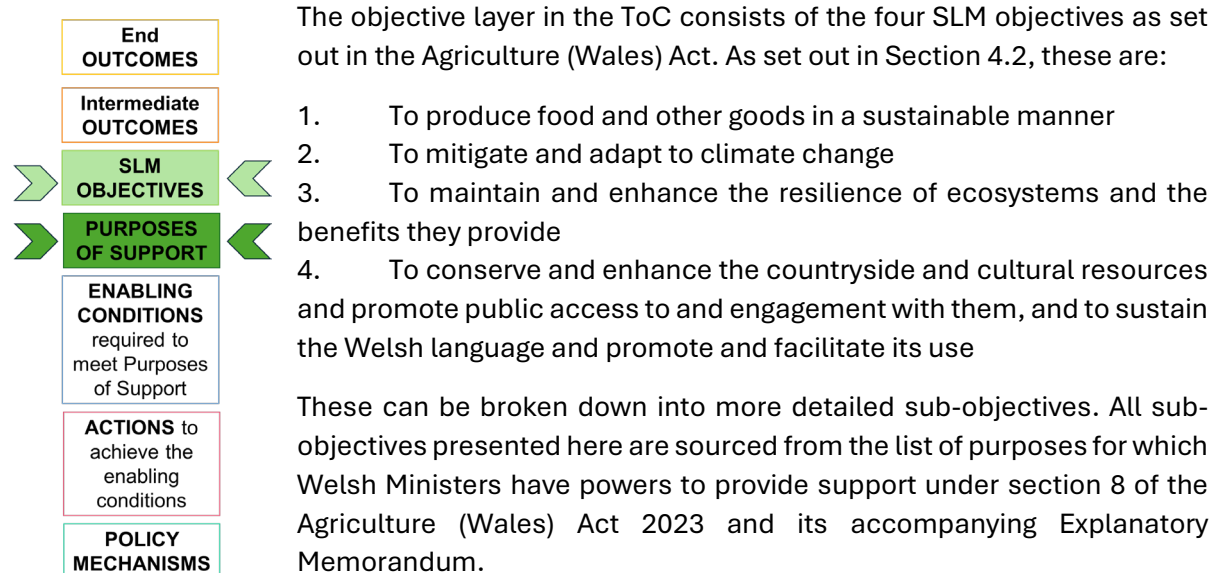
The detailed list of enabling conditions that sit beneath each of these six overarching enabling conditions is set out in Table 8-1 in Annex-2.

Table 5-2: Potential of each of the Enabling Conditions to contribute to the Purposes of Support (direct)

Purposes of Support	EC1: Presence of a skilled and appropriately resourced workforce	EC2: Economically viable, SLM aware and incentivised farmers/land managers	EC3: Robust public sector and delivery partner capacity	EC4: Resilient and connected supply chains, businesses and communities associated with land management	EC5: Strong cultural capital is created	EC6: Effective deterrence of unsustainable actions
a) encouraging the production of food in an environmentally sustainable manner	*	*	*	*		*
b) helping rural communities to thrive and strengthening links between agricultural businesses and their communities	*	*	*	*	*	
c) improving the resilience of agricultural businesses	*	*	*	*	*	*
d) sustaining the Welsh language and promoting and facilitating its use	*	*	*		*	
e) reducing emissions of greenhouse gases	*	*	*			*
f) maximising carbon sequestration and storage	*	*	*			*
g) maintaining and enhancing the resilience of ecosystems	*	*	*			*
h) conserving and enhancing landscapes and the historic environment	*	*	*		*	*
i) improving air quality	*	*	*			*

Purposes of Support	EC1: Presence of a skilled and appropriately resourced workforce	EC2: Economically viable, SLM aware and incentivised farmers/land managers	EC3: Robust public sector and delivery partner capacity	EC4: Resilient and connected supply chains, businesses and communities associated with land management	EC5: Strong cultural capital is created	EC6: Effective deterrence of unsustainable actions
j) improving water quality	*	*	*			*
k) maintaining and enhancing public access to and engagement with the countryside and the historic environment	*	*	*		*	*
l) mitigating flood and drought risks	*	*	*			*
m) achieving and promoting high standards of animal health and welfare	*	*	*	*		*
n) maximising resource efficiency	*	*	*			*
o) encouraging agricultural businesses to manage energy effectively (including by adopting energy efficiency and energy saving practices and generating renewable energy on their land)	*	*	*			*

5.4 Objectives and Purposes of Support

| End OUTCOMES |
| Intermediate OUTCOMES |
| SLM OBJECTIVES |
| PURPOSES OF SUPPORT |
| ENABLING CONDITIONS required to meet Purposes of Support |
| ACTIONS to achieve the enabling conditions |
| POLICY MECHANISMS |

The objective layer in the ToC consists of the four SLM objectives as set out in the Agriculture (Wales) Act. As set out in Section 4.2, these are:

1.   To produce food and other goods in a sustainable manner
2.   To mitigate and adapt to climate change
3.   To maintain and enhance the resilience of ecosystems and the benefits they provide
4.   To conserve and enhance the countryside and cultural resources and promote public access to and engagement with them, and to sustain the Welsh language and promote and facilitate its use

These can be broken down into more detailed sub-objectives. All sub-objectives presented here are sourced from the list of purposes for which Welsh Ministers have powers to provide support under section 8 of the Agriculture (Wales) Act 2023 and its accompanying Explanatory Memorandum.

The Agriculture (Wales) Act also provides more detailed information about objectives 1, 3 and 4 as follows:

- **Objective 1**: For the purposes of the first objective, factors relevant to whether food and other goods are produced in a sustainable manner include, among other things, the resilience of agricultural businesses within the communities in which they operate and their contribution to the local economy (section 1(6));
- **Objective 3:** For the purposes of the third objective, factors relevant to the resilience of ecosystems include, among other things—

  (a) diversity between and within ecosystems;

  (b) the connections between and within ecosystems;

  (c) the scale of ecosystems;

  (d) the condition of ecosystems (including their structure and functioning);

  (e) the adaptability of ecosystems (section 1(7))

- **Objective 4:** For the purposes of the fourth objective, "cultural resources" include, among other things, cultural heritage and the historic environment (section 1(8)).

The Explanatory Memorandum also stresses that Objective 3 is central to the achievement of the other objectives, recognising that ecosystem resilience is fundamental to wider sustainability. It states that, 'The third objective compliments the other SLM objectives by seeking to maintain and enhance a biodiverse natural environment with healthy functioning ecosystems that support social, economic and ecological sustainability and the capacity to adapt to change. This recognises that healthy functioning ecosystems are a foundation of economic and social/cultural sustainability' (see section 3.59 of the Agriculture (Wales) Act 2023 Explanatory Memorandum).

The Purposes of Support identified in the Agriculture Act are as follows:

a) encouraging the production of food in an environmentally sustainable manner;
b) helping rural communities to thrive and strengthening links between agricultural businesses and their communities;
c) improving the resilience of agricultural businesses;
d) sustaining the Welsh language and promoting and facilitating its use;
e) reducing emissions of greenhouse gases;
f) maximising carbon sequestration and storage;
g) maintaining and enhancing the resilience of ecosystems;
h) conserving and enhancing landscapes and the historic environment;
i) improving air quality;
j) improving water quality;
k) maintaining and enhancing public access to and engagement with the countryside and the historic environment;
l) mitigating flood and drought risks;
m) achieving and promoting high standards of animal health and welfare;
n) maximising resource efficiency;
o) encouraging agricultural businesses to manage energy effectively (including by adopting energy efficiency and energy saving practices and generating renewable energy on their land).

It is important to note that the objectives should not be seen in isolation. Rather they are intended to be mutually reinforcing. This is evident from the fact that many of the Purposes of Support contribute to the achievement of more than one of the four main objectives (see Table 5-3). The links between the Purposes of Support and the SLM objectives identify the main contributions (direct and indirect) identified. This should not be seen as definitive as it is possible that other less obvious links may exist.

Table 5-3: Potential direct and indirect links between Purposes of Support and the SLM objectives

Purposes of Support	SLM Obj 1	SLM Obj 2	SLM Obj 3	SLM Obj 4
a) encouraging the production of food in an environmentally sustainable manner	*	~	~	~
b) helping rural communities to thrive and strengthening links between agricultural businesses and their communities	*			~
c) improving the resilience of agricultural businesses	*			~
d) sustaining the Welsh language and promoting and facilitating its use				*
e) reducing emissions of greenhouse gases	~	*		
f) maximising carbon sequestration and storage	~	*	~	
g) maintaining and enhancing the resilience of ecosystems	~	~	*	~
h) conserving and enhancing landscapes and the historic environment		~	~	*
i) improving air quality	~		*	
j) improving water quality	~		*	
k) maintaining and enhancing public access to and engagement with the countryside and the historic environment				*
l) mitigating flood and drought risks	~	*	~	~
m) achieving and promoting high standards of animal health and welfare	*	~	~	
n) maximising resource efficiency	*	*	*	~
o) encouraging agricultural businesses to manage energy effectively (including by adopting energy efficiency and energy saving practices and generating renewable energy on their land)	~	*		

Legend: ***** = direct link; **~** = indirect link

Source: elaboration by the project team, taking into account the Agriculture (Wales) Act 2023 Explanatory Memorandum

5.5 Outcomes

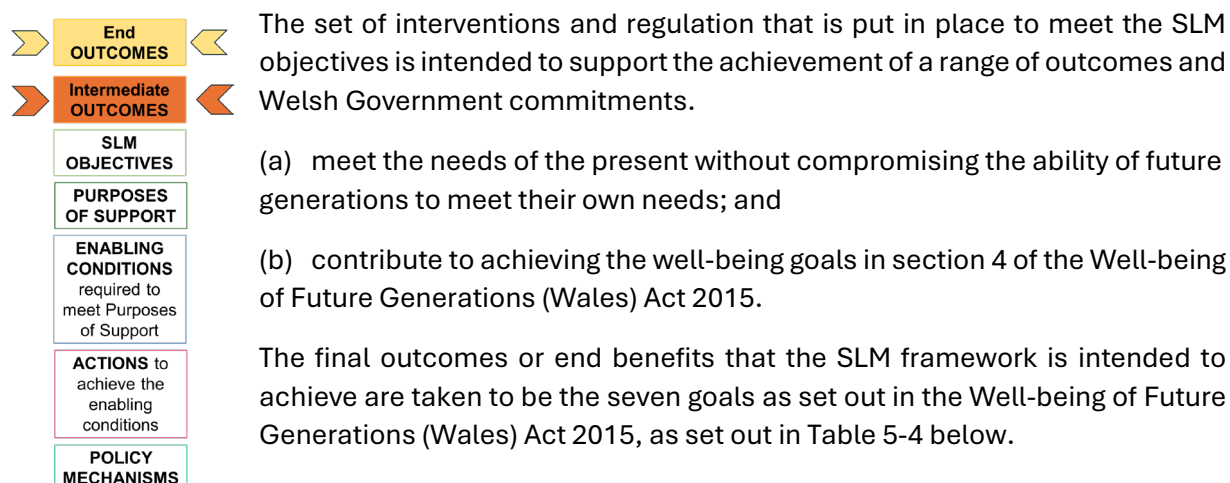End
OUTCOMES

Intermediate
OUTCOMES

SLM
OBJECTIVES

PURPOSES
OF SUPPORT

ENABLING
CONDITIONS
required to
meet Purposes
of Support

ACTIONS to
achieve the
enabling
conditions

POLICY
MECHANISMS

The set of interventions and regulation that is put in place to meet the SLM objectives is intended to support the achievement of a range of outcomes and Welsh Government commitments.

(a) meet the needs of the present without compromising the ability of future generations to meet their own needs; and

(b) contribute to achieving the well-being goals in section 4 of the Well-being of Future Generations (Wales) Act 2015.

The final outcomes or end benefits that the SLM framework is intended to achieve are taken to be the seven goals as set out in the Well-being of Future Generations (Wales) Act 2015, as set out in Table 5-4 below.

Table 5-4: The seven Well-being of Future Generation Goals

Outcome / Goal	Description of Goal
A prosperous Wales	An innovative, productive and low carbon society which recognises the limits of the global environment and therefore uses resources efficiently and proportionately (including acting on climate change); and which develops a skilled and well-educated population in an economy which generates wealth and provides employment opportunities, allowing people to take advantage of the wealth generated through securing fair work.
A resilient Wales	A nation which maintains and enhances a biodiverse natural environment with healthy functioning ecosystems that support social, economic and ecological resilience and the capacity to adapt to change (for example climate change).
A healthier Wales	A society in which people's physical and mental well-being is maximised and in which choices and behaviours that benefit future health are understood
A more equal Wales	A society that enables people to fulfil their potential no matter what their background or circumstances (including their socio-economic background and circumstances).
A Wales of cohesive communities	Attractive, viable, safe and well-connected communities
A Wales of vibrant culture and thriving Welsh language	A society that promotes and protects culture, heritage and the Welsh language, and which encourages people to participate in the arts, and sports and recreation.
A globally responsible Wales.	A nation which, when doing anything to improve the economic, social, environmental and cultural well-being of Wales, takes account of whether doing such a thing may make a positive contribution to global well-being

Source: Well-being of Future Generations (Wales) Act 2015

Sitting between the SLM objectives and these end goals, there is also a set of 'intermediate' outcomes that can be identified (see Table 5-5). All of these are identified in the SLM Explanatory Memorandum or in the Welsh Government's document introducing the SLM Framework[9].

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[9] [The Agriculture (Wales) Act 2023 Introducing the Sustainable Land Management Framework](#)

Table 5-5: Intermediate outcomes for the SLM Framework

Intermediate Outcome	Source
IO 1: Future generations maintain the ability to produce and supply agricultural products to and from Wales	S3.8 – Explanatory Memorandum
Keeping farmers on the land producing food in a sustainable manner, thus maintaining social capital within rural communities	The Agriculture (Wales) Act 2023: Introducing the Sustainable Land Management Framework S8.43 - Explanatory Memorandum
IO 2: Creation of a sustainable and resilient agriculture sector in Wales	S3.27 - Explanatory Memorandum
IO 3: Increase the contribution from the agricultural sector to achieve the net GHG emission reduction target of 95% by 2050, and the ambition to reach net zero **And to meet any interim targets established for 2020, 2030 or 2040 (Environment Wales Act 2016, Section 30)**	S3.11 – Explanatory Memorandum

IO 4: Increase the contribution from the agricultural sector to nature recovery and to Wales' biodiversity commitments in the Kunming-Montreal biodiversity framework:
    o **To protect 30% of terrestrial, inland water, and coastal and marine areas by 2030: … especially areas of particular importance for biodiversity and ecosystem functions and services**
 	
    o **Target 7 of the KM-GBF requires a reduction in pollution risks and the negative impact of pollution from all sources by 2030 to levels that are not harmful to biodiversity and ecosystem functions and services. This includes reducing excess nutrient run off by at least half, reducing overall risk from pesticides and other harmful chemicals by at least half and working towards eliminating plastic pollution**
 	
    o **Target 10 of the KM-GBF requires action to ensure that areas under agriculture, aquaculture, fisheries and forestry are managed sustainably, in particular through the sustainable use of biodiversity, including through a substantial increase of the application of biodiversity friendly practices, such as sustainable intensification, agroecological and other innovative approaches contributing to the resilience and long-term efficiency and productivity of these production systems and to food security, conserving and restoring biodiversity and maintaining nature's contributions to people, including ecosystem functions and services**
	S3.13 / S3.55 / S3.56 - Explanatory Memorandum

IO 5: To contribute to commitments under the Environment (Wales) Act 2016:
    o **To contribute to the sustainable management of natural resources (SMNR), maintaining and enhancing the resilience of ecosystems and the benefits that they provide. (Section 3 (2))**
 	
    o **To contribute to the delivery of the national natural resources policy (Section 9)**
 	
    o **To contribute to the pursuit of "area statements" concerned with natural resource management, as established by Natural Resources Wales (Section 11)**
 	
    o **To contribute to the satisfactory delivery of the objectives of land management agreements entered into by NRW (Section 16)**
	The Agriculture (Wales) Act 2023: Introducing the Sustainable Land Management Framework
	
	 Environment (Wales) Act 2016

IO 6: Support the ambition for Welsh farmers to be world leaders in sustainable farming, meeting our global obligations without off shoring food production to countries with lower standards	S3.46 – Explanatory Memorandum

Intermediate Outcome	Source

IO 7: To contribute to the successful pursuit of commitments under the Wales Animal Health and Welfare Framework 2014 including attainment of its strategic outcomes, notably:
    o **That Wales has healthy, productive animals,**
 	
    o **that they have a good life**
 	
    o **And that people have confidence in the way that food is produced and the way public health is protected**
 	
  To contribute to the successful pursuit of the objectives of "Our animal health and welfare plan for Wales 2021-26" and any successor plans.
	The Agriculture (Wales) Act 2023: Introducing the Sustainable Land Management Framework
	
	Our Animal health and welfare Plan for Wales, 2021-26

IO 8: To contribute to the Cymraeg 2050 Strategy's targets:
    o **The number of Welsh speakers to reach one million by 2050.**
 	
    o **The percentage of the population that speak Welsh daily, and can speak more than just a few words of Welsh, to increase from 10% (in 2013 to 2015) to 20% by 2050.**
	The Agriculture (Wales) Act 2023: Introducing the Sustainable Land Management Framework

IO 9: To ensure a fairer approach to accessing financial support by agricultural tenants (compared to owner occupiers)	The Agriculture (Wales) Act 2023: Para 3.21.a) Explanatory Memorandum
IO 10: To ensure the SLM framework improves soil health	The Agriculture (Wales) Act 2023: Para 3.49 Explanatory Memorandum
IO 11: Enhanced access to the countryside and increase in the appreciation of the natural environment and Wales' cultural resources	The Agriculture (Wales) Act 2023: Para 3.62 Explanatory Memorandum
IO 12: Conservation and enhancement of Wales' cultural heritage and historic environment	The Agriculture (Wales) Act 2023: Para 3.63 Explanatory Memorandum

5.6 Assumptions

The achievement of the SLM objectives and hence the outcomes to which these contribute will be dependent on a range of contextual circumstances.

These have been identified as a series of assumptions which are assumed to be true for the purposes of implementing the SLM framework and delivering the SLM objectives. The wider political and UK/international policy contextual situation has been set out in Section 2.2. The assumptions listed here are those contextual dependencies that are relevant for the successful achievement of the actions, enabling conditions and hence the Purposes of Support and the four SLM objectives. The extent to which these assumptions are valid is likely to influence the design of policy mechanisms and the implementation of the agreed actions. Indeed, if these assumptions are not correct, this should trigger consequential action, with a review of the implications carried out and plans for policy design and implementation adapted accordingly. This may take the form of a risk assessment and/or an action plan for adopting mitigation measures, The monitoring and evaluation framework will therefore also have to factor in and update these assumptions in order to determine if they need adjusting, and any resulting impact on policy mechanisms and agreed actions.

It is generally considered good practice for these assumptions to be allocated to the links between particular actions, enabling conditions or objectives in the ToC. However, for the

purposes of this ToC, these have not been attributed in this way as the majority are relevant to all elements of the ToC.

The assumptions identified have been grouped under different headings. They are not specific to any part of the ToC and therefore apply at all levels and are as follows:

- **Policy design and resourcing of the SLM framework within WG**
    - The budget made available by the WG is sufficient for the scale of uptake of SLM grants and incentives required to deliver the SLM objectives.
    - The human resources necessary for public bodies to implement, control and enforce the policy mechanisms put in place are politically supported and appropriate to enable their effective implementation.
    - A joined up and coherent approach to policy design and targeting within WG and associated bodies is encouraged by WG allowing policies to adjust over time.
    - There is preparedness and awareness within WG and among SLM stakeholders to respond to minor and major external shocks e.g. Senedd elections, changes in budget allocation from UK government, changes in domestic policy (e.g. Inheritance Tax), severe climate events, supply disruptions, pandemics, collapses in key commodity prices, if these occur.
    - Different departments and delivery bodies within and aligned to WG will collaborate in the development of the SLM framework inputs and associated policy development.
    - Conflicting priorities inside Welsh Government do not hinder delivery of SLM objectives.

- **The processes and infrastructure associated with the SLM framework**
    - The physical and digital interfaces between beneficiaries and government are functional, streamlined and easy to access, e.g. tackling or responding to limited broadband availability in some areas.
    - Relevant data and evidence from a range of sources are used to inform a systems-based approach to mapping/targeting to inform judgements on what priorities should be addressed where.
    - Key M&E findings relating to SLM actions are shared and used in such a way to enable iterative improvements to the SLM policy mechanisms/tools.
    - Low carbon energy infrastructure in rural areas will be developed to facilitate farmers and land managers/SLM stakeholders in reducing their carbon footprints, increasing local energy security and providing energy markets etc.
    - Disruptions associated with changes in policy can be kept to a minimum (e.g. reductions in specific budgets ending schemes early) and access to new schemes made as simple and equitable (e.g. accessible to tenants and commoners) as possible.
    - Stakeholders relating to the ancillary sector are broadly supportive of the SLM objectives and will assist in the development of new or adjusted supply chains in line with consumers' wants and needs, including the required production specifications.
    - Other levels of government, notably local authorities, will find effective ways to engage with SLM objectives and provide some enforcement of regulations where necessary.

- **Applicants to the initiatives offered under the SLM framework**
  - SLM stakeholders are supportive of the transition required to achieve the SLM objectives.
  - Appropriate governance arrangements are in place to ensure oversight, accountability and engagement with stakeholders, who are aware of these processes.
  - A sufficient proportion of SLM stakeholders will respond to incentives and other inputs in a way that enables them to contribute to meeting the SLM objectives.

- **Wider changes in society, the economy and technology that will be beneficial to meeting SLM objectives**
  - While dietary changes and developments on the food demand side may occur, they are not relied upon to drive SLM objectives.
  - Value for money technical options to help address key sustainability challenges appropriate to Welsh conditions are developed (e.g. lower use of agrochemicals or extensive grazing in open landscapes).
  - The forthcoming Community Food Strategy, expected in 2025, will help deliver SLM objectives in terms of re-energising the local element to the food system by building networks, small supply chains, and better co-ordination at local and community levels of food related actions.

5.7 Risks

A list of possible risks that might threaten the achievement of the SLM objectives has been developed. For the purposes of this ToC, these have not been attributed to links between particular actions, enabling conditions or objectives as the majority are relevant to all. There may also be risks associated with the wider geopolitical and UK/international policy situation, however these are not mentioned here as they are covered in Section 2.2.

The risks identified have been grouped under different headings. They are not specific to any part of the ToC and therefore apply at all levels. They will require reviewing at regular intervals to take into account any new risks that may arise. The risks identified are as follows:

- **Policy design and resourcing of the SLM framework within WG**
  - If environmental agencies, like NRW, are not resourced and staffed to the level required they may not be in a position to provide the necessary support to farmers/land managers/SLM stakeholders in delivering SLM actions, or be able to enforce those regulations that prevent actions that counter SLM objectives.
  - A lack of collaboration between WG teams in developing policy mechanisms risks the achievement of the SLM objectives if different policy actions are put in place either duplicating efforts by doing similar things or acting against each other.
  - There may be a temptation not to use the best evidence within the ToC framework, or to misrepresent it, if it does not support the case for a particular input or action that policy makers want to advocate-for example because it is a well-established initiative. It may also be the case that the best evidence is overlooked. The ToC structure *per se* is not a guarantee that evidence-based policy making is taking place.
  - The ToC structure works logically as an aid to planning the delivery of binding objectives but the outcomes may not align with requirements from other directions.

For example, national and international reporting obligations may be at variance to elements of a monitoring and evaluation system that emerges from the ToC. Competing requirements may result in the full benefits and impacts of SLM not being realised.

- **The processes and infrastructure associated with the SLM framework**
  - IT systems necessary to deliver new policies and secure key outcomes are sub-optimal or fail completely and progress towards SLM objectives is held back.
  - Infrastructure required to support engagement in achieving the SLM objectives (e.g. broadband or internet speed) is inadequate for SLM stakeholders to engage in assessing the suitability of the scheme or make an application.
  - Regulatory overload, in terms of number and complexity, on farmers/land managers, including a sometimes-perceived conflict between requirements hinders the achievement of SLM objectives.
  - The capacity of advice providers means it is not possible to extend their reach among SLM stakeholders.
  - Lack of accurate data relating to farms (e.g. number of livestock) hinders the development of policy to tackle key issues such as nutrient management.
  - The connections with SMNR and the Environment Act are not fully mapped to SLM framework meaning that the mutual benefits of these compatible regulations are not realised.

- **Applicants to the initiatives offered under the SLM framework**
  - Too many farmers/land managers/SLM stakeholders are alienated by the policy change and are reluctant to participate in new schemes, making the contribution of voluntary measures to the SLM objectives inadequate.
  - Farm profitability declines e.g. following low commodity prices and farmers and land managers require financial support to survive rather than pursue profitability and transitioning to resilient businesses.
  - Lack of successors on some farms leads to declining management, temporary land uses, lack of investment and reduces progress towards SLM objectives, especially if land use is changed so it falls outside the scope of the Agriculture Act. It could, however, offer opportunities to deliver the SLM objectives in a different way.

- **Wider changes in society, the economy, the environment and technology that could have an impact on the ability to meet SLM objectives**
  - Severe climate effects e.g. drought, heavy rainfall and flooding, disease outbreaks (e.g. foot and mouth, bluetongue) or issues such as Covid disrupt land management and divert resources into priorities other than SLM.
  - Land prices fall and farmers and land managers struggle to finance their operations.
  - Further consolidation and industrialisation within agriculture lead to more exploitative rather than sustainable approaches to management of land, impact the resilience of rural communities and further reduce the amount of land that is eligible for SLM actions.
  - Even when well-implemented by rural stakeholders, the actions supported by SLM schemes do not lead to the desired outcomes.

- o The requirements of retailers, processors and other food chain actors on farmers become an (even larger) driver of farm management decisions than they are now and are not in line with the SLM objectives.
- o Shortfalls in skilled labour either at the local level or more widely, inhibit progress within key institutions e.g. advisory bodies or at the farm level so that the deployment of the necessary skills is not possible in the timescale required and management choices fail to align with those required to achieve the SLM objectives.

6 CONCLUDING REMARKS

In constructing the proposed ToC and drafting the narrative we have consulted extensively with Welsh Government colleagues via the Steering Group, a set of dedicated interviews and two workshops. Comments were also sought from stakeholders via a Technical Expert Group set up to inform the development of SLM indicators as part of the monitoring and evaluation framework.

The Agriculture (Wales) Act 2023 sets out an ambitious and wide-ranging set of objectives and Purposes for Support for SLM. These in turn can be advanced by a wide range of policy mechanisms. The ToC sits above the individual policy mechanisms that might be used in this sphere and seeks to represent the breadth of the types of actions and enabling conditions required to address the Purposes of Support and SLM objectives. As such it does not set out an inventory of all the specific policy mechanisms that legitimately could be used in the SLM realm or to detail their characteristics. An array of specific policy mechanisms will be required, with the logic model set out separately for each in relation to its particular purposes and relevant conditions. These specific policies and logic models would be nested below this ToC.

As stressed previously, the ToC is not prescriptive. It cannot be used to assume that by carrying out one type of action, specific enabling conditions will be met, which in turn will lead to Purposes of Support being addressed. Whether or not a policy mechanism that has been chosen can be expected to contribute to a specific Purpose of Support in a real-life situation, will depend on its specific attributes and purpose and this will need to be assessed in every case.

Use of the ToC therefore will require discretion, with judgements to be made for each policy mechanism individually, based on evidence and well-informed analysis. If used in this way, then it can add value in supporting good policy making.

The SLM ToC should not be seen in isolation from other policy spheres and their associated ToCs, given the reality of and necessity for multiple interactions between policies e.g. on the economy, spatial planning, energy supply etc. Furthermore, the roles and capabilities of other actors, including those with responsibilities for policy implementation, e.g. local authorities, clearly need to be factored in when considering the need for Welsh Government to develop policies itself, the relationship of these policies with SLM objectives and the capacity to deliver policies on the ground.

It should be noted that while the ToC provides a logical structure for guiding interventions, it does not in itself facilitate a discussion about the most appropriate or efficient selection, sequencing, prioritising and application of policy measures across the whole policy landscape (both SLM policies and those with which they interact). To enable this to occur it requires effective communication between different policy units and the availability of necessary information sources to enable policy makers to have a good line of vision across the range of policy mechanisms in place or being designed to deliver against the Purposes of Support and the SLM objectives.

In operationalising the ToC it will also be important to reflect on the extent to which the assumptions and risks identified apply at the relevant point in time. With respect to the assumptions, these are an expression of the contextual factors that would ideally be in place for a successful achievement of the SLM objectives. However, in reality these assumptions will not always be correct. This is perhaps most true with respect to the availability of funds and other resources, but also the acceptability of policy interventions by different actors and their capacity

to deliver. Limitations of varying severity may need to be taken into account. This does not mean that the SLM objectives cannot be achieved but it may have significant implications, for example for the scale of action that is possible or the timescale over which objectives may be achieved. In these situations, it will be important to be transparent in setting out which assumptions hold true, which need to be qualified or set aside and what the implications of this are for the delivery of the policy mechanisms. This will also have implications for the Monitoring and Evaluation Framework, which will have to take account of any revisions made.

To make the most of the ToC and embed it in the policy making cycle on a continuing basis, effective communication within the policy making community at all levels, as well as the broad network of stakeholders who will be required to deliver policy in practice, will be needed. A good understanding of the concept, the terminology and the internal logic of the ToC framework will be key to getting people on board and to enable its effective use as a tool for policy development and informing monitoring and evaluation.

Finally, it is important to emphasise that a ToC is a living document and therefore will need periodic review and updating to keep it relevant. It is important to achieve a balance between providing support to help with long term planning alongside recognition of the need for agility to respond to crises, be they climate, geopolitical or disease related. It is expected that the ToC would be a valuable tool in this regard The ToC therefore should be open to modification and continuous improvement in the light of new evidence and experience as well as unexpected events at international level which could not be foreseen in advance (e.g. Covid, the Ukraine war, Food and Mouth disease etc).

ANNEX-1: DETAILED ACTIONS UNDERPINNING THE OVERARCHING ACTION LAYER OF THE ToC

Table 7-1 sets out the detailed actions that underpin the ten groups of overarching actions set out in Section 5.2

Table 7-1: ToC action layer showing overarching actions (green shaded boxes) and the detailed actions which underpin these

A1: Diverse training, education, support and advice opportunities are offered to SLM stakeholders, including, for example, new entrants, advisors and regulators and those on community owned land. This includes actions to promote the Welsh language.	A2: Relevant networking, engagement and collaboration opportunities are developed within and beyond the body of farmers/land managers, including in supply chains and ancillary sectors and with necessary expertise, including e.g. vets.	A3: Research and innovation are supported, where required, including baseline evidence, mapping, targeting, monitoring and evaluation.	A4: SLM actors in receipt of financial support and / or subject to regulatory requirements are supported both to achieve sustainable enterprises and to make capital investments. This includes facilitation of collective initiatives and strong engagement with, and communication of, measures to stakeholders affected.	A5: Actions which work against SLM objectives, such as sub-standard animal health and welfare issues, are minimised through regulation, inspection, enforcement, the protection of protected sites etc.
Detailed actions that contribute				
1. Training, education, advice provision, guidance, peer to peer learning offered by range of bodies both private and public sector.	2. Pilot schemes, trials, demonstration farms, land management to share best practice and offer training by a range of bodies.	2. Pilot schemes, trials, demonstration farms, land management to share best practice and offer training by a range of bodies	5. Measures and funding to secure accessibility to land / buildings / machinery / infrastructure.	2. Pilot schemes, trials, demonstration farms, land management to share best practice and offer training by a range of bodies.
2. Pilot schemes, trials, demonstration farms, land management to share best practice and offer training by a range of bodies.	4. Collaborative approaches developed and supported through facilitation, including for collaborative work at the landscape scale.	7. Appropriate scheme design and targeting – environmental / social / economic criteria.	14. Provision of public sector support (including e.g. grants or affordable credit/loans) for capital investment where needed.	8. Regulatory protection against negative externalities in place and enforced, either through SLM or a related regulation, including fair payment to producers.
6. Support to encourage and remove barriers to generational renewal (new entrants & those exiting the sector).	11. Promote community understanding, awareness and engagement in the management of land among the full range of SLM stakeholders.	9. Robust scheme monitoring and evaluation processes are in place, to include social, economic and environmental return on investment in the specific context.	22. Aid for business planning to cover diversification/transition period e.g. switch to organic or sustainable farming approach.	10. Secure retention of land (e.g. not lost to non-agricultural use) eligible for SLM purposes and managed by SLM stakeholders.

A1: Diverse training, education, support and advice opportunities are offered to SLM stakeholders, including, for example, new entrants, advisors and regulators and those on community owned land. This includes actions to promote the Welsh language.	A2: Relevant networking, engagement and collaboration opportunities are developed within and beyond the body of farmers/land managers, including in supply chains and ancillary sectors and with necessary expertise, including e.g. vets.	A3: Research and innovation are supported, where required, including baseline evidence, mapping, targeting, monitoring and evaluation.	A4: SLM actors in receipt of financial support and / or subject to regulatory requirements are supported both to achieve sustainable enterprises and to make capital investments. This includes facilitation of collective initiatives and strong engagement with, and communication of, measures to stakeholders affected.	A5: Actions which work against SLM objectives, such as sub-standard animal health and welfare issues, are minimised through regulation, inspection, enforcement, the protection of protected sites etc.
Detailed actions that contribute				
12. Provision of competent advisory services at increasing and sustained levels offered by a range of bodies, tackle shortages in some areas e.g. vets.	12. Provision of competent advisory services at increasing and sustained levels offered by a range of bodies, tackle shortages in some areas e.g. vets.	13. Increasing and sustained resourcing of regulatory bodies, including the role of local authorities e.g. through planning and in baselining activity and enforcement.	23. Exit and new entrants grants for selective use in target areas, sectors or groups.	11. Promote community understanding, awareness and engagement in the management of land among the full range of SLM stakeholders.
23. Exit and new entrants grants for selective use in target areas, sectors or groups.	17. Creating innovative networking opportunities, – relevant for farmers, land managers, advisers and other SLM stakeholders focusing on the 'overlooked', not just the 'usual suspects'.	18. Establishing high quality environmental monitoring and baseline regimes, allowing targeting, tuning of incentives, scheme evaluation etc, and investigating novel approaches, such as remote sensing.	24. Aid for transition/ diversification out of unsustainable systems in target areas, e.g. in sensitive catchments or habitats.	13. Increasing and sustained resourcing of regulatory bodies, including the role of local authorities e.g. through planning and in baselining activity and enforcement.
27. Support for certification bodies to develop their roles in change to SLM.	19. Leverage resources to support Welsh language courses for those wishing to learn and enable learners to work with language mentors in the rural community linked to the land.	31. Communications programme to share successes, challenges and raise awareness.	26. New dedicated set of nature-based solutions actions (meeting challenges of climate change, biodiversity loss and society e.g. environmental pollution reduction).	25. Actions to assist transition towards net zero and climate change adaptation and mitigation at farm/holding level.

A6: Interventions to influence markets upstream and downstream of agriculture are made where required e.g. to help achieve fair prices for farmers/land managers, develop demand for sustainable products, develop supplies of required inputs like saplings etc.	A7: Data and information are available, accessible and meaningful to all in the sector. Institutions have the capacity and training to develop and implement the policy mechanisms in place to deliver SLM objectives and communicate this to SLM stakeholders through a range of engagement actions.	A8: Engagement and guidance actions to ensure that access is secured to information, advice and financial support (where available) for all types of land and land managers – tenants, common land managers, landowners through an equitable approach and retain it for the anticipated duration of SLM actions.	A9: Develop actions to support the continued everyday use of Welsh in land management activities, such as at livestock marts. Enable access to Welsh language courses and language mentors for those wishing to learn within the land management and ancillary sectors	A10: Environmental, animal health and welfare and climate adaptation and mitigation actions to ensure the appropriate management of land and future decisions on land management among key SLM stakeholders.
Detailed actions that contribute				
8. Regulatory protection against negative externalities in place and enforced, either through SLM or a related regulation, including fair payment to producers.	13. Increasing and sustained resourcing of regulatory bodies, including the role of local authorities, e.g. through planning and in baselining activity and enforcement.	3. All actions need to ensure accessibility to schemes for all types of land use in Agriculture Act for tenants, common land managers, landowners.	19. Leverage resources to support Welsh language courses for those wishing to learn and enable learners to work with language mentors in the rural community linked to the land.	6. Support to encourage and remove barriers to generational renewal (new entrants & those exiting the sector).
15.Support to assist in the development of viable markets for sustainable products, supporting development of supply chains where needed, and seeking to secure reliable access for farmers/land managers and other SLM stakeholders.	20. Clarity about policy direction and budget availability, coupled to meaningful involvement with policy design, well communicated to build stakeholder confidence.	10. Secure retention of land (e.g. not lost to non-agricultural use) eligible for SLM purposes and managed by SLM stakeholders.	30. Use of Welsh language within all SLM objectives and related events to retain and reveal link between nature, culture, landscape and language.	8. Regulatory protection against negative externalities in place and enforced, either through SLM or a related regulation, including fair payment to producers.
28. Accessible and affordable upstream technology to aid the development of new markets and meet regulatory requirements.	29. Adjustment of existing assurance schemes or development of new ones to support the delivery of products in line with SLM objectives.	16. SLM policy tools to incentivise/support medium to long-term environmental changes required .		16. SLM policy tools to incentivise/support medium to long-term environmental changes required.
29. Adjustment of existing assurance schemes or development of new ones to support the delivery of products in line with SLM objectives.		34. Ensure common land has a fit for purpose governance system suitable for engagement with SLM schemes and similar.		18. Establishing high quality environmental monitoring and baseline regimes, allowing targeting, tuning of incentives, scheme evaluation etc, and investigating novel approaches, such as remote sensing.
32. Collection of baseline data concerning the supply chains and				21. Environmental adaptation and mitigation actions to ensure the appropriate management of land

A6: Interventions to influence markets upstream and downstream of agriculture are made where required e.g. to help achieve fair prices for farmers/land managers, develop demand for sustainable products, develop supplies of required inputs like saplings etc.	A7: Data and information are available, accessible and meaningful to all in the sector. Institutions have the capacity and training to develop and implement the policy mechanisms in place to deliver SLM objectives and communicate this to SLM stakeholders through a range of engagement actions.	A8: Engagement and guidance actions to ensure that access is secured to information, advice and financial support (where available) for all types of land and land managers – tenants, common land managers, landowners through an equitable approach and retain it for the anticipated duration of SLM actions.	A9: Develop actions to support the continued everyday use of Welsh in land management activities, such as at livestock marts. Enable access to Welsh language courses and language mentors for those wishing to learn within the land management and ancillary sectors	A10: Environmental, animal health and welfare and climate adaptation and mitigation actions to ensure the appropriate management of land and future decisions on land management among key SLM stakeholders.
Detailed actions that contribute				
market share to identify areas of potential growth.				and future decisions among key SLM stakeholders.
				22. Aid for business planning to cover diversification/transition period e.g. switch to organic or sustainable farming approaches.
				23. Exit and new entrants grants for selective use in target areas, sectors or groups.
				25. Actions to assist transition towards net zero and climate change adaptation and mitigation at farm/holding level.
				26. New dedicated set of nature-based solutions actions (meeting challenges of climate change, biodiversity loss and society e.g. environmental pollution reduction).
				35. Communication initiative to the wider public on benefits of landscape change happening under SLM. Could include schools visits etc.
				36. Maintenance of the management of valued habitats and landscapes.

ANNEX-2: DETAILED ENABLING CONDITIONS UNDERPINNING THE OVERARCHING ENABLING CONDITION LAYER OF THE ToC

Table 8-1 sets out the detailed actions that underpin the six groups of enabling conditions set out in Section 5.3.

Table 8-1: ToC enabling condition layer showing overarching enabling conditions (green shaded boxes) and the detailed enabling conditions which underpin these

EC1: There is a multi-skilled and appropriately resourced workforce which has the knowledge and awareness of the climate, environmental and animal health and welfare priorities relating to SLM and understands their role in delivering these priorities, how to achieve them and the underlying context in terms of wider changes in Wales.	EC2: SLM stakeholders have sufficient revenue and access to the capital required to produce sustainable food and environmental services on the required scale within resilient businesses, are aware of the economic and other benefits of aligning with SLM principles and are adequately incentivised to adopt appropriate practices.	EC3: There is sufficient capacity within the public sector and relevant delivery partners to develop and deliver supportive interventions such that all aspects of SLM can be enabled e.g. via well-designed and targeted schemes based on a strong, accessible and evolving knowledge base with associated mapping, engagement, compliance with regulations, capacity for monitoring and evaluation efforts.
Detailed enabling conditions that contribute		
A. A widespread foundation of knowledge and awareness of environmental and agronomic principles is attained	H. Land purchases (e.g. lost to agricultural use) that are incompatible with SLM objectives are minimised	Q. WG and related institutions have confidence in future budget levels and policy durability
B. Multi-skilled workforce established and maintained and are aware of the opportunities to up-skill, including in local supply chains and diversification.	I. Resource levels and innovative supply chains are increased to allow adoption of SLM on the scale required by retailers and consumers.	R. Demonstrated capacity to create, implement and monitor well designed and targeted schemes with appropriate evidence base both internal to WG and externally.
C. Actions required to deliver SLM objectives are perceived as feasible and practical by farmers / land managers / key stakeholders	M. Capital is available to the stakeholders concerned to put SLM in place. Via a capacity either to generate capital within the enterprise or to access credit or benefit from external funding	S. Creation and availability of a strong, accessible and evolving knowledge base with monitoring and evaluation dimension
G. Farmers/land managers have a high level of awareness of the regulatory requirements applying to their land and the resources needed to comply.	N. Increasing and viable market opportunities for these products are in place	T. A suite of policy measures is adjusted, created and deployed that are capable of delivering climate objectives[10] when implemented

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[10] These are: to reduce emissions of GHGS; to maximise carbon sequestration and storage; to mitigate flood and drought risks; to encourage agricultural businesses to manage energy effectively; and to maximise resource efficiency.

EC1: There is a multi-skilled and appropriately resourced workforce which has the knowledge and awareness of the climate, environmental and animal health and welfare priorities relating to SLM and understands their role in delivering these priorities, how to achieve them and the underlying context in terms of wider changes in Wales.	EC2: SLM stakeholders have sufficient revenue and access to the capital required to produce sustainable food and environmental services on the required scale within resilient businesses, are aware of the economic and other benefits of aligning with SLM principles and are adequately incentivised to adopt appropriate practices.	EC3: There is sufficient capacity within the public sector and relevant delivery partners to develop and deliver supportive interventions such that all aspects of SLM can be enabled e.g. via well-designed and targeted schemes based on a strong, accessible and evolving knowledge base with associated mapping, engagement, compliance with regulations, capacity for monitoring and evaluation efforts.
Detailed enabling conditions that contribute		
AA Approach to learning new skills is culturally acceptable and based on research and educational knowledge of learning approaches	O. Farms and other rural businesses are economically stable enough to adopt SLM actions	V. A suite of policy measures is adjusted, created and deployed that are capable of delivering the span of environmental and animal health and welfare objectives when implemented[11].
DD. Training providers (both in further education and private) are familiar with scheme requirements and have capacity to deliver training where needed.	P. Schemes and incentives designed to meet SLM objectives are attractive to secure the required level of take up alongside a regulatory baseline.	CC. A land use strategy is developed, compatible with SLM objectives, aids delivery on the ground and at local/regional/landscape-scale.
	BB. The regulatory processes associated with SLM deliver the food and environmental benefits.	W. Raising awareness to address particularly challenging or difficult circumstances through local engagement and bringing key stakeholders together.

EC4: Rural communities and the ancillary sectors, including food and drink supply, are progressively resilient to economic and geopolitical shocks and climate change and inter-connected to support economic and social renewal, adoption of environmental opportunities and to facilitate cooperative approaches.	EC5: The advantages of achieving the SLM objectives and societal benefits of achieving the SLM objectives are apparent to farmers/ land managers, other ancillary stakeholders and visitors to the countryside motivating the protection of rural cultural resources and the Welsh language.	EC6: The required standards for environment, animal health and welfare, biosecurity, energy supply etc. are in place and policies are developed which avoid unintended consequences.
Detailed enabling conditions that contribute		
D. Social capital is developed between rural stakeholders / farmers / land managers and with other SLM stakeholders.	I. Resource levels and innovative supply chains are increased to allow adoption of SLM on the scale required by retailers and consumers.	G. Farmers/land managers have a high level of awareness of the regulatory requirements applying to their land and the resources needed to comply.
E. Economic barriers to new entrants and innovative community-based approaches,	J. Welsh language continues to be important across the sector at	T. A suite of policy measures is adjusted, created and deployed that are capable of delivering

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[11] Sub objective is to 'achieve and promote high standards of animal welfare to include the reduction of notifiable diseases like bovine TB, effective management of exotic animal diseases, high standards for all farmed animals and a sustainable supply of vets.

such as community-supported agriculture are minimised.	levels appropriate to meet targets and suitable to that area.	climate objectives when implemented.
F. Potential negative impacts of farm consolidation for rural communities are monitored.	K. Increasing levels of awareness and appreciation are established in the wider population and supply chain to create a sustained level of support for SLM objectives.	V. A suite of policy measures is adjusted, created and deployed that are capable of delivering the span of environmental objectives when implemented without any unintended consequences.
J. Welsh language continues to be important across the sector at levels appropriate to meet targets and suitable to that area.	U. Farmers/land managers and owners are increasingly sympathetic to public access and respectful of access rights. Countryside users also aware of their need to respect the land they are visiting.	W. Raising awareness to address particularly challenging or difficult circumstances through local engagement and bringing key stakeholders together.
L. Interface between rural communities and SLM objectives is enriched by opportunities to engage in actions, relevant networks, actions to reduce barriers aiming to strengthen relations between agriculture/land management and ancillary businesses etc.	FF. Communication initiatives to wider public outline the benefits of landscape change happening under SLM and enthuse a new generation about the countryside.	X. Public and private sector advisory bodies are well resourced to provide the necessary volume and quality of advice.
I. Resource levels and innovative supply chains are increased to allow adoption of SLM on the scale required by retailers and consumers.		Y. Regulatory bodies are well resourced to enable them to enforce regulations effectively and have the mandate to do so.
EE. Accessibility across SLM stakeholders to overcome barriers to engagement in knowledge transfer opportunities.		

ANNEX-3: EVIDENCE FOR THE BARRIERS FACING THE ACHIEVEMENT OF SLM POLICY OBJECTIVES

Table 9-1 sets out the academic literature and other evidence sources that identify potential barriers for achieving the four SLM objectives. These barriers have been used as the basis for identifying the enabling condition layer in the ToC as set out in Section 5.3. Although much of this evidence is not Wales specific, it is considered relevant to the Wales situation.

Table 9-1 Evidence for potential barriers to achieving SLM objectives

Barrier	Evidence
Social	
Lack of awareness/knowledge of key SLM stakeholders of environmental and agronomic priorities	Curry, 1997; Hall and Pretty, 2008; Jebari et al., 2024 Dawkins, 2016. Ingram et al 2018; Mayer et al 2022. Chaplin et al 2021; Mills et al 2018; Ingram et al 2017
Lack of necessary skills on relevant topics / practices	Curry, 1997; Hall and Pretty, 2008; Jebari et al., 2024
Lack of feasibility/practicability of SLM actions	Mills et al., 2011; Mills et al., 2016; Wynne-Jones et al., 2019; Arnott et al., 2021a; Prager, 2022. Land sales data from RICS, Rock Report (2023)
Land managers' capacity to engage/deliver is impaired for age/health/isolation reasons	Mills et al., 2011; Mills et al., 2016; Wynne-Jones et al., 2019; Arnott et al., 2021a; Prager, 2022.
Lack of economic attractiveness of farming as a livelihood limits new entrants	Ingram and Kirwan, 2011; Start to Farm, Farming Connect
Land managers are unaware of or underestimate the importance of regulatory requirements applying to their land	Chivers & Collins 2021 / Hurley et al 2021
Land coming onto the market may be bought by organisations who plan to use it in ways incompatible with SLM objectives	OurFood 1200; Haf and Parkhill, 2017 (focuses on cultural sustainability too).
Insufficient availability of key resources required for establishing and maintaining SLM. Such as deficits in skilled labour, broadband, appropriate breeds, indigenous trees for planting,	McGreevy et al 2022 Wojtynia et al 2021 Sorensen et al 2021 Rose et al, 2019
Shortfall in Welsh speaking farmers/land managers as individuals starting jobs in the farming/land management sector may not know Welsh.	Mac Giolla Chríost et al., 2012; Gruffydd et al., 2023. Morris et al., 2024, pp. 31-38
Cultural and societal benefits of SLM are not apparent to rural population or visitors, who do not then engage much or provide support.	Short et al 2022 Rust et al 2021 Swanick 2009
Lack of resilience in relation to the SLM objectives, especially in areas where agriculture significant presence. E.g. because of fewer, older, more industrialised farms, barriers to entry and to innovation.	PEGASUS outputs ; Dwyer, 2018 ; Dwyer et al., 2020 ; Rega et al., 2020 ; Dwyer et al., 2018 ; Brouwer et al., 2018
Economic	
Lack of capital to invest in sustainable farming/land management business, e.g. equipment, buildings, infrastructure, agri-tech	Vermeulen and Kok, 2012; Sazvar et al., 2018.

Barrier	Evidence
Farmers/land managers are not able to sell the sustainably produced food/outputs that they produce.	*Vermeulen and Kok, 2012; Sazvar et al., 2018.*
Insufficient economic viability of farms and other rural businesses, preventing them from applying activities and new practices related to achieving the SLM objectives.	*Arnott et al., 2021b.* *Pineiro et al., 2020; Pannell and Claassen (2020)*
Insufficient financial incentives, resulting in low take up of SLM actions, so limited results	*NCA statements, CS/CSFF work on spatial alignment of options e.g. Breyer et al., 2020 Chaplin et al 2021; Mills et al 2018; Ingram et al 2017 Reed et al 2023; Reed et al 2022*
Institutional uncertainty, especially around new schemes and budgets and their durability, discourages scheme uptake, broader management change	*Hurley et al 2021; Lyon et al 2022*
Scheme structure/evidence/legal	
Ineffective targeting and poor scheme design and monitoring (lead to environmentally sub-optimal and inefficient incentives and patchy SLM).	*Hurley et al 2021; Lyon et al 2022*
Lack of sufficient knowledge and data flows to underpin land management choices and policy design/development.	*Chivers & Collins 2021 / Hurley et al 2021 Other outputs from ERAMMP*
Environmental	
Land management choices and policy interventions do not lead to outcomes needed to address climate policy objectives.	*See FoE work in England. State of Nature reports. Short et al 2018.* *See GLNP natural capital example. Griffiths et al., 2011.*
Apathy or antagonism towards public access among farmers/land managers.	*Church and Ravenscroft, 2008;* *McGurk et al., 2019;* *Swaffield et al., 2019*
Land management choices and policy interventions do not lead to outcomes needed to address environmental, climate or animal health and welfare policy objectives.	*ERAMMP outputs, Ingram et al 2018, UK treescapes research (e.g. DiversiTree), Urquhart et al 2023 Harrison et al., 2023*
Challenging baseline environmental conditions in some locations e.g. highly eroded soils, require relatively drastic changes in farm management to achieve SLM objectives, so multiple barriers encountered	*State of Nature reports*
Advisory bodies do not have sufficient resources to deliver advice effectively	Labarthe and Laurent, 2013; Prager et al., 2016; Ingram et al., 2022
Regulatory bodies do not have sufficient resources or political mandate to enforce regulation adequately	Interviews

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