





Sustainable
Uplands
Agrienvironment
Scheme
(SUAS)













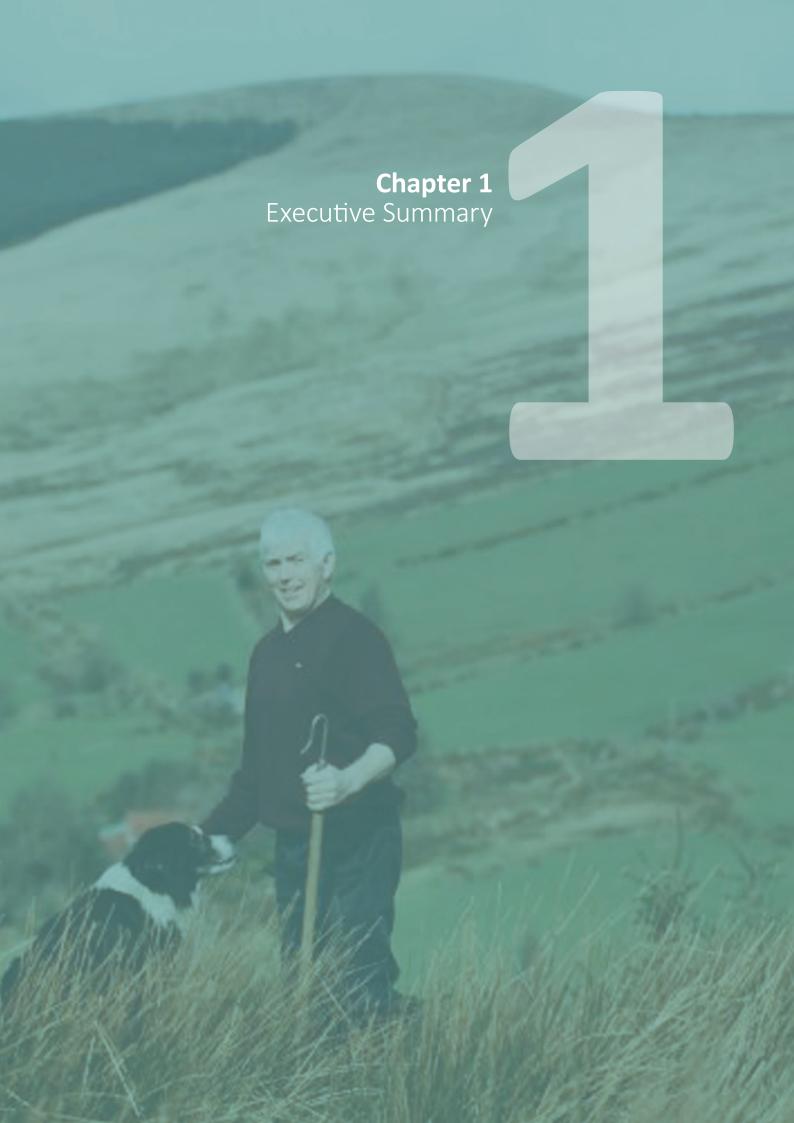




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Executive Summary •

The Sustainable Upland Agri-Environmental Scheme (SUAS) Pilot, proposed by the Wicklow Uplands Council (WUC) in partnership with Teagasc, will develop and evaluate a practical, stakeholder led and bottom up, scheme to address the complex agricultural, environmental and socio-economic challenges associated with the land management of the Wicklow/ Dublin uplands. It will be achieved by building the capacity of the farmers and stakeholders to share their collective knowledge in a common language and take on a new leadership role in the development and implementation of agri-environment scheme (AES). The outcome will be guidance on how commonage management groups can be established and effectively activated. It will also demonstrate the potential of the farmers and stakeholders to develop and test their own activities or measures, which in combination with those already available. It can be used to achieve integrated production and environmental objectives.

WUC has been a representative body for most of the Wicklow/ Dublin uplands stakeholder groups for over 30 years. Teagasc is Ireland's Agriculture and Food Development Authority, a national body providing integrated research, advisory and training services to the agriculture and food industry and rural communities. This proposal evolved from local research that identified the poor-to-bad conservation status of the Wicklow/Dublin uplands and farmer's attitudes, understanding and responses to it. SUAS builds on the award winning Burren Programme approach and includes new innovations to address the particular challenges of upland management. SUAS will foster and grow the existing stakeholder ownership of the local challenges. It will provide a flexible supporting framework to assist stakeholders in developing solutions. As such, it will be highly adaptable to other upland areas in Ireland and Europe that face similar problems.

The guidance will have application in the design of new AESs for the uplands that will be highly adaptable to similar areas here and in Europe.

The SUAS innovations include:

- i) The establishment of Commonage Groups (CGs), with their own constitutions, which will take responsibility for the development, implementation and delivery of their own Commonage Management Plans (CMP).
- ii) Integration of environmental (biodiversity and water) and farming activities into a single CMP.
- iii) The use of an auction-based payment scheme to incentivise the CGs to develop their own solutions to problems they identify on their commonage.

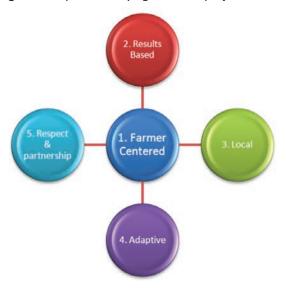
The SUAS Outputs include:

- i) A Commonage Management Handbook, based on the lessons learnt that will provide policy makers and other upland communities with guidelines on designing and developing future locally led commonage/upland AESs.
- ii) The development and evaluation of a smart phone "app" to be used by farmers to record their activities and to collect data that will provide evidence for:
- a. The development of a blueprint for a results-based upland biodiversity payment scheme.
- b. The production of cost guidelines for activities (measures) applicable to upland environments.

Five commonages and two upland farms not involved in a commonage, but farming in the uplands, will participate in the Pilot. The two farms are included as they are representative of non-commonage farms that play a role in the management of the uplands. This approach provides for an inclusive commonage upland management solution. It is estimated that 40 farmers will be involved.

SUAS has adopted the five guiding principles of the Burren Programme in the development its approach (Fig.1)

Fig. 1. Principles underlying the SUAS project.



- 1. Establishment of Commonage Groups;
- 2. Preservation and improvement of biodiversity;
- 3. Preservation and protection of endangered flora and fauna;
- 4. Integrating into the CMP the improvement of farming system viability; protecting water quality, improvement of recreational value and cultural heritage.

The pillars are integrated into two SUAS Actions

- **Action 1.** The establishment of the five CGs, the selection of two non-commonage upland farms and the development of their CMP and Farm Management Plans.
- Action 2. The implementation, monitoring, updating and reporting of the CMP and Farm Management Plans.

The CGs and two upland farmers will be assisted and supported in all aspects of both Actions by the SUAS Project Team and the Operational Group (OG).

Action 1 Establishing CGs. This involves the selection of the five commonages and the two upland farms to participate by the OG. A number of commonages have already indicated that they are interested in participating at farmer meetings to discuss the SUAS Pilot in August 2017. The most important selection criterion is the willingness and enthusiasm of shareholders to participate. The benefit of this Action 1 will be to foster a locally-led responsibility for, and improved collective governance of, upland management.

The process involves eight facilitated workshops. Teagasc's Farm Business Structures Specialist, who has considerable experience in assisting farmers develop partnership and collaborative farming agreements, will assist the Project Team and OG in the process.

The outcome will be individual CG legal constitutions that will set out the objectives and the rules which will be used in their day-to-day operation. A Chairperson will be elected for each

of the CGs who will be responsible for leading and managing the group.

This part of Action 1 will be completed in the first ten months of the Pilot.

Development of Commonage Management Plans: The second part of Action 1 is the development of the CMPs. This will include establishing a baseline for the commonages and farms conservation status and the identification of endangered flora and fauna. An external consultant, ecologist, will be recruited to do this, perform the annual monitoring and making a final assessment of the commonage status at the end of the Pilot. As part of this process, the CGs will also prepare an assessment of the commonages. The ecologist will provide recommendations on the activities required to improve or maintain favourable conservation status using a mapping format. This will be followed by discussions between the ecologist and CGs. The ecologists and farmers assessments will provide the basis for the dialogue that will lead to agreement on the activities (measures) that will be implemented as part of the management plan to achieve or maintain favourable conservation status and to protect any endangered flora or fauna.

There is very little information on the hydrology of the uplands and its associated water quality. An external consultant will map the water ways and their associated catchment onto the baseline ecological maps. The consultant will also provide a baseline biological water quality survey that will assist in informing the decisions about the management options. A water quality monitoring programme will be put in place to provide the best comparable results between areas with variable pressures e.g. burning, livestock access to waterbodies. Wicklow County Council and LAWCO have agreed to assist in this process.

In parallel, the shareholders will collate details about their own farms. The information will provide the basis for their individual farm plan and for the stock management on commonage/uplands. The farm planning will be linked to the Teagasc BETTER Sheep Programme and the programme manager has agreed to facilitate inclusion of the SUAS farmers. The planning will involve flock management, feeding practices, breeding policy, marketing policy, grassland management and monitoring of the farm financial performance.

It will be completed by Month 12.

Action 2. The implementation, monitoring, evolution and reporting of the Commonage /Farm Management Plans. Action 2 is focused on the implementation and annual review and updating of the management plans and the launch of the Auction Payment Scheme. Action 2 operates in years 2 to 5.

Central to the SUAS Pilot is the effective operation of the CGs. They will meet monthly with the objective of keeping everyone informed and updated on the activities, planning future activities and address any issues that may arise. Monitoring progress in implementing the management plans will be an agenda item at every CG meeting. Frank discussions will held if progress begins to lag the planned implementation schedule, and solutions amicably agreed by the CG to correct any slippage.

A summary record of decisions made or actions to be undertaken at CG meetings will be prepared. Twice annually, in January and October, the CG meetings will be combined with a plenary session involving all participants with the objective of sharing progress and learning providing mutual support.

Review of annual biodiversity performance data: There will be an annual monitoring review of the biodiversity on each of the five commonages and two upland farms. The results will be presented by the ecologist and discussed with each of the individual CGs and the two upland farmers. New activities required or changes to on-going activities will be updated in the CMP or Farm Plan for the following year.

Review of annual farm performance data. This will be undertaken by a member of the OG with the BETTER Sheep programme manager.

Review of water quality programme: The results of the water quality monitoring programme will be reviewed by the CGs with a member of the OG.

Both will be dealt with as described for the biodiversity review above.

Innovative SUAS Pilot Supporting Actions.

Preparation, review and evaluation of Auction Bid Payments for mini-projects/activities: The objective of this innovative approach to AES payments is to facilitate developing local solutions to local problems.

There will be a bi-annual open call for mini-projects or activities. The CG will identify the issue they want to undertake. The Project Manager will assist each group to prepare a short proposal and the will orally present their proposals to the OG and an external reviewer. The assessment criteria will be based on how well the proposed mini-project/activity contributes to a successful Pilot project outcome and the capacity of the CG to deliver.

Payments: An innovative practice in the SUAS Pilot is that responsibility for the preparation and submission of farmer payments is made by the CGs rather than by individual farmers (Fig. 2).

Payments will be made on the basis of signed activity sheets completed by the individual farmers. It will record the names and time input of the farmers participating in the activity and any approved additional receipted costs incurred. The individual farmer's activity sheets will be approved by the CG Chairperson and submitted the SUAS project office.



Fig.2. The model for recording farmer activities and payments.

The two upland farmers will submit their costs directly to the Project Team. Following receipt and approval, they will be forwarded to the finance office for payment.

Many of the "on the uplands" activities that will be included in the CMPs plans are difficult to cost beforehand because there are relatively few standard cost guidelines available. These are the hourly rates for farmers' time and contractor hourly

charges. However, the unknown is the work rates (i.e. output per hour) for both farmer and machinery use. The uplands present a varied (terrain) and sometimes very challenging work environment (access, travel times). This suggests the costings need to be site specific. An adaptive approach will be used and new costings will be applied on the basis of data collected and experience gained. This will facilitate the development of standard cost for uplands that can be used in future upland AESs.

A web based Smartphone App is proposed to be developed during the project animation process. The objective is to collect data on the activities implemented. This information is required to provide the evidence to develop robust recommendations in relation to their effectiveness and cost at the end of the Pilot. In addition, from a farmer's perspective the recording system will provide a smart way to record their activities.

Commonage Open Days/Evenings: Each CG will organise at least two events in years 2, 3 and 4 of the project. The first will target the upland farming community and the second will target the non-farming external stakeholders particularly those in the Wicklow/Dublin area.

Engagement with External Stakeholders: The objective of this activity is to develop and build new relationships with external stakeholders and to use the relationships as a platform to enhance the Pilot project activities and to disseminate results. The engagement activity will involve a pro-active approach to engaging with external stakeholders especially those where relationships have been strained.

Commonage Group Training Requirements: The SUAS Pilot requires a significant change for participating farmers in their approach to working together, in their inputs to developing CMPs and to implementing plans within the proposed SUAS Pilot framework. Training will be an essential input to supporting them through this change process. The actual training needs and learning outcomes will become more apparent on an on-going basis during the Pilot.

The Team

WUC, founded in 1997 is an independent voluntary organisation representing over 50 diverse member groups and individuals in the Wicklow Uplands. The WUC Vegetation Sub Committee, comprised of local upland farmers and representatives from WUC, National Parks and Wildlife Service (NPWS), Teagasc and the Irish Uplands Forum (IUF), was formed in 2011 to achieve a consensus on the best management for the Wicklow/Dublin uplands. It commissioned a number of studies that resulted in the recommendation for the SUAS Pilot proposal in 2013. Since then, WUC, Teagasc and NPWS have worked together and organised events focusing on upland vegetation management. This continuing and developing collaboration provides WUC with the consistency and strength to be Lead Applicant on this EIP proposal.

The Operational Group (OG) assembled to support WUC have the range of expertise and experience to provide the knowledge to support to the commonage farmers and stakeholders, and the SUAS Project Team. Two of the members of the OG are upland farmers, including the Project Lead. The other members have expertise in conservation; hill farm production systems; agri-environment; ecology; water quality; public relations; financial management and administration. The organisations involved include Teagasc, NPWS, University College Dublin, Waters & communities and IFAC Accountants.

Budget

The SUAS Pilot costs are estimated at €1.98m. The direct, project animation and running costs are €1.78m, €53k and €146k, respectively. The project funds available for the CGs and farmers to draw down for their time and implementation of activities in Actions 1 and 2 are €1,14m or 60% of the total. The very low project animation costs reflect the on-the-ground preparatory work done by WUC and Teagasc over the last four years since the SUAS Pilot was first conceptualised in 2013.

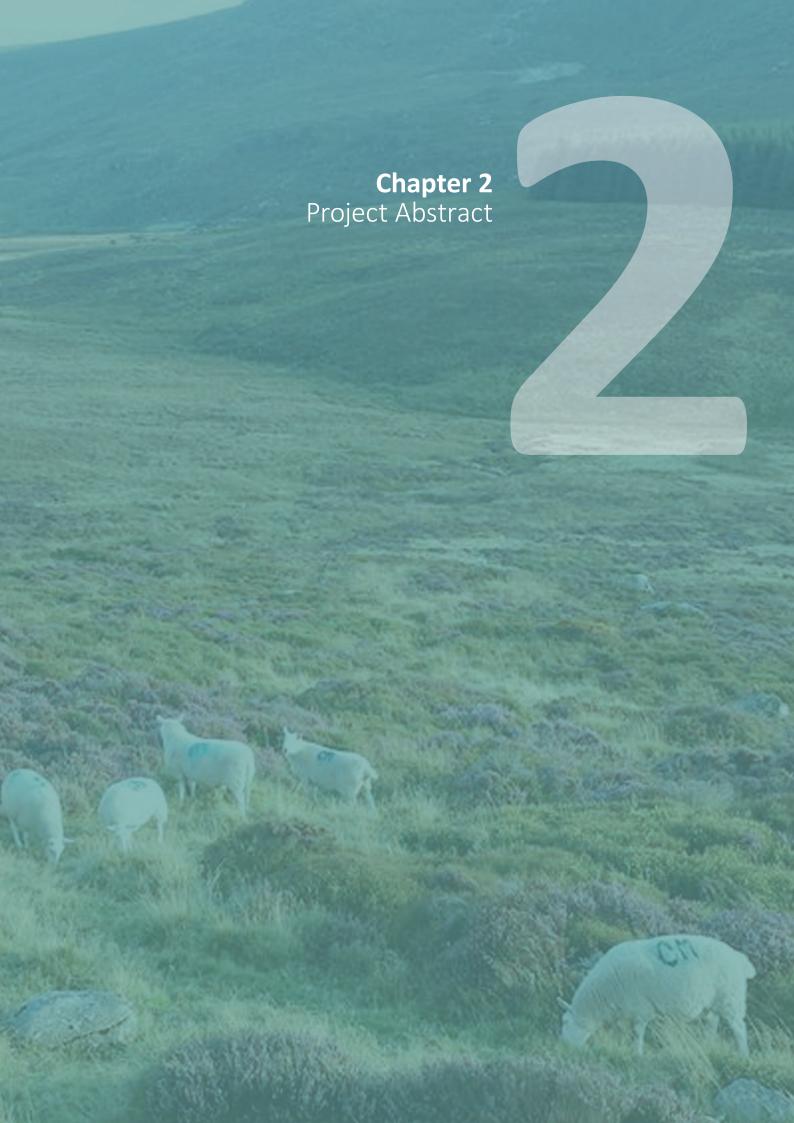
Dissemination

The dissemination plan is focused on i) dialogue for the capacity building, knowledge and information exchange required for the establishment of the CGs and the development and updating of the CMPs ii) dialogue for local stakeholder engagement and ownership; and iii) creating a national profile for the SUAS Pilot.

A National Commonage Open Day will be held in the last summer of project to promote the SUAS outcomes to a wider public audience.

SUAS will publish a Commonage Management Handbook that will provide policy makers and Irish upland farmers with a blueprint to assist them in the design and development of future AESs.





Project Abstract

The five year Sustainable Upland Agri-Environmental Scheme (SUAS) is a locally led pilot project proposed by the Wicklow Uplands Council (WUC). The objective is to explore and evaluate a practical "on the ground" scheme to address the complex agricultural, environmental and socioeconomic challenges associated with the land management of commonages and farms in the Wicklow/Dublin uplands. WUC is a representative body for most of the Wicklow/ Dublin uplands stakeholder groups for over 20 years.

The proposal evolved from local research that identified the poor to bad conservation status of the uplands and the uplands farmer's attitude, understanding and responses to it. The pilot builds on the Burren Programme approach but with new innovations to address the land management of uplands.

SUAS will foster and grow the existing stakeholder ownership of the local challenges and will provide a flexible supporting framework to assist them in developing solutions.

The SUAS innovations include:

- i) The establishment of Commonage Groups (CGs) with their own constitutions, which will take responsibility for the development, implementation and delivery of their own Commonage Management Plan (CMP).
- ii) Integrating the environmental (biodiversity and water) and farming activities into a single CMP.
- iii) The use of an auction based payment scheme to incentivise the CGs to develop their own solutions to problems they identify on their commonage.

The SUAS outputs include:

- i) A Commonage Management Handbook, based on the lessons learnt that will provide policy makers and other upland communities with guidelines on designing and developing future locally led commonage/upland Agri-environmental schemes (AESs).
- ii) The development and evaluation of a Smartphone App to be used by farmers to record their activities and to collect data that will provide evidence for the development of:
- a. A blueprint for a results-based upland biodiversity payment scheme.
- **b.** Cost guidelines for activities (measures) applicable to upland environments.

Five commonages and two upland farmers not involved in a commonage, but farming areas of the uplands, will participate in the pilot. The two farms are included as they also play a role in the management of the uplands. This approach provides for an inclusive commonage upland management solution. It is estimated that 40 farmers will be involved.

The four SUAS pillars are:

- **Establishment of Commonage Groups**
- Preservation and improvement of biodiversity
- 3. Preservation and protection of endangered flora and fauna
- Integrating into the CMP, the improvement of farming system viability, protecting water quality, improvement of recreational value and cultural heritage

These are combined into two Actions

Action 1. The establishment of the five CGs, the selection of two non-commonage upland farmers and the development of their CMP and Farm Management Plans. Action 2. The implementation, monitoring, updating and reporting of the CMP and Farm Management Plans.

The CGs and two upland farmers will be assisted and supported in all aspects of the implementati on of the Acti ons and their associated acti viti es by the SUAS Project Team and the Operational Group (OG).

The SUAS pilot will evaluate an Aucti on Bid Payments for miniprojects/acti viti es. The objecti ve of this innovati ve approach to AES payments is to facilitate developing local solutions to local problems by the local farmers and stakeholders.

An innovati on in SUAS is that responsibility for the preparati on and submission of the farmer payments is made by the CGs rather than by individual farmers.

Many of the "on the uplands" acti viti es that will be included in the CMP are difficult to cost beforehand as there are relatively few standard cost guidelines. There are hourly rates for farmers' ti me and contractor hourly charges. However, the unknown is the work rates (i.e. output per hour) for both farmer and machinery in the upland terrain, oft en with access issues and long travel time. This means the costings need to be site specific. An adaptive approach will be used in SUAS and new costi ngs will be applied on the basis of data collected and experience gained. This will facilitate the development of cost guidelines for uplands that can be used in future upland AESs.

An "electronic acti vity recording system" will be developed to collect data on the acti viti es implemented. This is required to provide evidence to develop robust recommendations in relation to their effectiveness and cost. In addition, from the farmer's perspective it will provide a smart way to record their acti viti es.

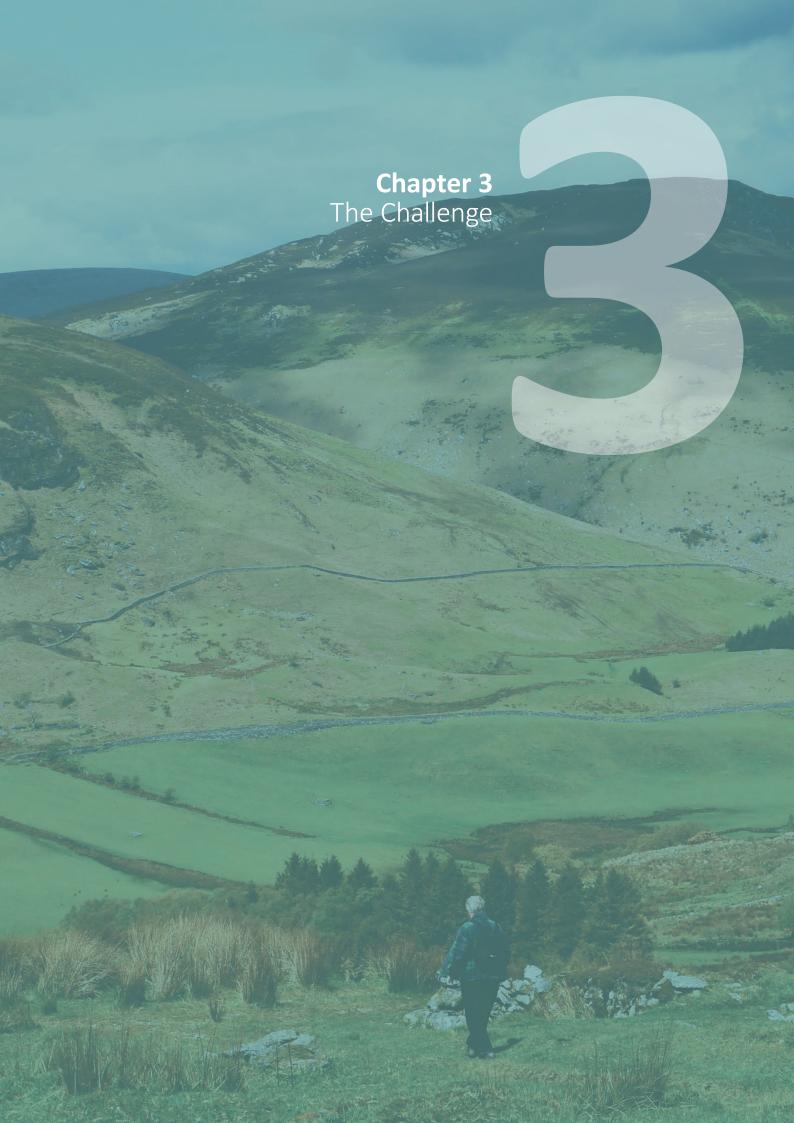
The OG assembled to support WUC have the range of experti se and experience to provide the knowledge to support the commonage farmers and stakeholders, and the SUAS Project Team. Two of the members of the OG are upland farmers, including the Project Lead, Pat Dunne. The other members have experti se in conservati on, hill farm producti on systems, agrienvironment, ecology, water quality, public relations fi nancial management and administrati on. The organisati ons involved include Teagasc, NPWS, UCD, LAWCO and IFAC Accountants.

The SUAS pilot costs are esti mated at €1.98m. The direct, project animati on and running costs are €1.78m, €53k and €146k, respecti vely. The project funds available for the CGs and farmers to draw down for their ti me and implementati on of acti viti es in Acti ons 1 and 2 are €1,14m or 60% of total. The very low project animati on costs reflect the on the ground work done by WUC and Teagasc over the last four years since SUAS was first proposed in 2013.

The disseminati on plan is focused on i) dialogue for capacity building, knowledge and informati on exchange required for the establishment of the CGs and the development, implementati on, monitoring and updati ng of the CMPs ii) dialogue for local stakeholder engagement and ownership and iii) creating a national profile for the SUAS pilot. A National Commonage Open Day will be held in the last summer of pilot to promote the SUAS outcomes to a wider public audience.

Key Words: Commonages; Uplands; Commonage Groups; Integrated agri-environmental plans; aucti on based payment scheme; stakeholder engagement; locally led; restoring/maintain habitats; favourable conservation status; preserve and protect endangered fl ora and fauna.

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3.7 A high level assessment of the current state of knowledge

3.7.1 Literature review

The literature review presented relies heavily on two studies completed in 2013 and 2015. Both formed the platform for the initial submission of the SUAS EIP project for funding. They are:

- Mary Tubridy (20131). A Study to Identify Best Management of Upland Habitats in County Wicklow. This work was commissioned by the Wicklow Uplands Council following two well attended public meetings in 2011 which discussed recurring problems associated with vegetation burning and highlighted the opportunity offered by a targeted agri-environmental scheme. It is worth noting that in preparing the report, over 25 meetings took place with farmers and local stakeholders between 2011 and 2012.
- Fergal Maguire (2015). Farmers attributes, management practices and attitudes associated with commonage use. A M. Agr. Sc thesis submitted to University College Dublin. The primary focus of the thesis was to establish how commonage land in Wicklow is used and to identify practices that could help maintain these commonage areas in Good Agricultural and Environmental Condition (GAEC).

3.7.1.1 Brief History of Irish Commonages and their Management **—**

Irish Commonages: The Norman invasion of Ireland in 1169 introduced a manorial system of land management in the south and east of Ireland. The manorial commons is a remnant of this land management system. The good land, generally surrounding the manor, was cultivated and the owner took all the produce. Surrounding this "manor" land was another area of unenclosed cultivated land which was cultivated in strips by tenants. Further out from this area, where there was poorer quality land that was not cultivated, tenants used it for grazing. This manorial system began to disappear in the 18th century and by 1750 many of these were in the process of being divided and enclosed in private ownership (Andrews, 1987).²

In the west of Ireland, land management operated under the Rundale System (Di Falco and van Rensburg, 2008). It was similar to most of Europe's pastureland up to the turn of the 19th century (De Moor, 2002). The land was distributed amongst the tenants, based on the amount of rent contributed and was for growing potatoes and other crops (Plate 3.1)



Plate 3.1 Lazy beds on less productive land nearer the uplands was used for growing crops by tenants. (http://www.geograph.ie/photo/201400)

These tenants also received a share in the common upland unenclosed area (Lafferty et al., 1999). This common land involved individual users who collectively managed the area. Current management of commonage reflects this history. The holding of land in common has long disappeared from the lowlands (except in Western coastal areas). However, in the uplands, common grazing rights have prevailed. This reflected their low productivity. The boundaries of today's commonage were created by the Irish Land Commission, which was formed in 1881 as a rent fixing and tenant-purchasing commission (Mulugeta, 2013).

The use of the unenclosed land had to be formalised, as the Land Commission began dividing larger estates. Generally, this was achieved by allocating shares in the commonage to the former tenants (Lafferty et al, 1999). Typically today, shareholders on the commonage have grazing rights to the unenclosed upland commonage and access to lowland areas (Plate 3.2.)



Plate 3.2 Commonage shareholders have grazing rights to the enclosed uplands and access to lowlands. (Photo by Dr. Peter Murphy)

In Ireland, commonages cover approximately 423,000 ha or 8.5% of total utilised agricultural area (Central Statistics Office, 2013). Almost 15,000 applicants declared commonage lands, equivalent to approximately 11% of applicants who applied for direct aid under AESs (Dail Debates, 2014). Most of the commonage land is located in the upland areas of five counties i.e. Mayo, Donegal Galway, Kerry and Wicklow (Fig. 3.1).

http://www.wicklowuplands.ie/userfiles/file/Final%20Report%20April%20 2013%20Low%20Res.pdf

²Andrews, J. H. (1987). The struggle for Ireland's Public Commons. In: O'Flanagan, P., Ferguson, P. and K. Whelan (eds.), Rural Ireland 1600-1900: modernisation and change. Cork University Press, Cork. pp.1-23.

³Di Falco, S. and Van Rensbura, T.M. (2008). Makina the commons work: conservation and cooperation in Ireland. Land Economics 84, (4):620-634.

⁴De Moor, M. (2002). Management of common land in the North West Europe. Turnhout: Brepols.

⁵Lafferty, S., Commins, P. and Walsh, J. (1999). Irish agriculture in transition. Dublin: Teagasc in association with Dept. of Geography, National University of Ireland, Maynooth, Co. Kildare. ⁶Mulugeta, Elias (2013).

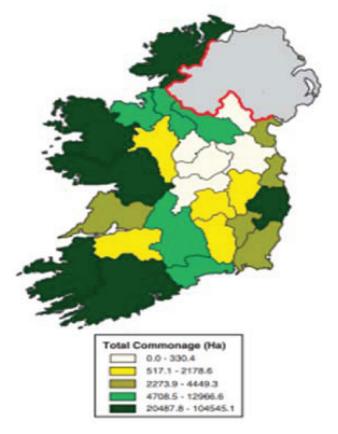


Fig. 3.1 Commonage areas (ha) in Irish counties (CSO, 2010⁹)

The term commonage does not have a precise definition in the context of Irish agriculture but is generally understood to refer to grazing lands that are jointly owned, or lands on which two or more farmers have grazing rights. The owners of the grazing rights are legally the shareholders of the commonage. Commonage land is not physically divided and so no one shareholder owns any particular part of the land. However, each shareholder holds an undivided share in the property, whereby the ownership is divided into notional shares (Lafferty et al., 19995). A shareholder has no right to exclude another shareholder from possession of any part of the land or to prevent them from taking a share in the rents and profits of the land.

The majority of commonages in Ireland do not have any formal commonage committees or associations in place where shareholders meet to discuss the management of the commonage. This absence of cooperation amongst shareholders may have been a major contributory factor to the widespread overgrazing which occurred in the uplands during the 1980s, 1990s and even into the early 2000s, when EU sheep headage subsidies encouraged the stakeholders to overstock the commonages (Joint Committee on Agriculture, Food and the Marine, 2013¹⁰).

In recent years, under grazing of upland areas has become more of a problem than overgrazing. Abandonment of marginal farmland, modernisation of farming methods, decoupling of farm payments, changing demographic patterns in rural Ireland and emigration have all led to fewer active commonage shareholders and in many instances a decline in the quality of management of commonages (O'Rourke and Kramm, 2009¹¹: Joint Committee on Agriculture Food and the Marine, 20138; Monaghan et al., 2014¹².

The management of Irish commonages: Currently, the main agricultural enterprise that occurs on commonage land is extensive sheep production. Upland sheep farming involves

regular movement of sheep between the commonage land and the enclosed land throughout the year (Hynes et al., 2007 ¹³). The enclosed land, which is usually located around the dwelling house (e.g. Plate 2.2), plays a critical role in determining the farm's stocking capacity. The enclosed land is also needed to produce winter fodder. Farmers without enough enclosed land have to rent lowland farms in areas nearby. In Wicklow hill farmers commonly lease good quality lowland in the neighbouring counties of Carlow and Kildare (Tubridy, 20131).

Historically sheep remained outdoors all year round (Mc-Gurn, 2011; Tubridy, 2009¹). Between November and mid-December, after the ewes were mated they were put back onto the commonage. Depending on weather conditions they remained there until the middle of February. In February the pregnant ewes were brought to the lowland and the empty (non-pregnant) ewes were left on the commonage with the previous year's ewe lambs. Ewes that had ewe lambs were returned to the commonage in mid-May with their lambs, while the ewes with twins and single male lambs remained on lowlands until mid-July. Following weaning in mid-July, the male lambs remained on the lowland while all the ewes grazed the commonage until they were mated in late October.

The sheep breed most commonly grazing the western commonages is the Scottish Blackface (Plate 3.2). The Wicklow Cheviot breed is more commonly kept in the eastern half of Ireland particularly in Wicklow (Plate 3.3).



Plate 3.2 The Scottish Blackface (http://www.raisingsheep. net/scottish-blackface.html)



Plate 3.3 The Wicklow Cheviot (http://www.wicklowsheep. com/wicklow-cheviot-sheep)

Traditionally, cattle were a very important part of the agricultural output of the uplands, but in recent years, numbers have declined dramatically. Restrictions due to bovine tuberculosis are said to be one of major factors contributing to this decline (O'Rourke and Kramm, 2009¹⁰). However, in certain parts of the country hardy native breeds of cattle such as the Kerry cow and Dexters, continue to graze the rough vegetation that occurs in the uplands (O'Rourke and Kramm, 2009¹⁰). Numerous herds of feral goats also roam freely across many of Ireland's upland regions.

3.7.1.4 The Wicklow/Dublin Uplands and Commonages

The unenclosed land in the Wicklow/Dublin Uplands is of high value for biodiversity and is of European conservation importance for habitats, species and birds. This is recognised by the designation of a substantial area of the uplands region as a Special Area of Conservation (SAC) (Figure 3.2) and Special Protection Area (SPA) (Figure 3.3). Large areas of the land which are under the ownership of the state are included within the boundaries of Wicklow Mountains National Park.

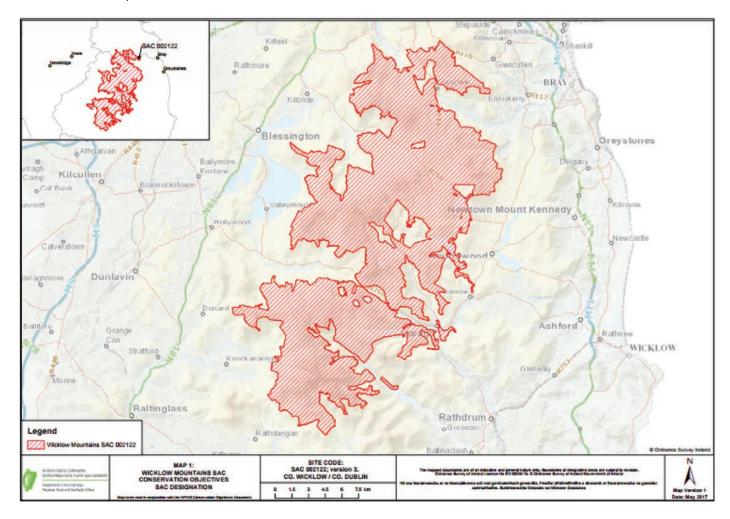


Figure 3.2 Wicklow Mountains Special Area of Conservation (Site Code: 002122) (NPWS, 2017¹⁵).

 $^{^7}$ http://www.cso.ie/en/releasesandpublications/ep/pfss/farmstructuresurvey2013/detailedanalysis/landutilisation/ ⁸Coveney, S. Dáil debates (2014). Report on Review of Commonage Land and Framework Management Plan, Dail Eireann: Dail Debates. 9http://www.cso.ie/en/media/csoie/releasespublications/documents/agriculture/2010/coapre2010.pdf ¹⁰https://www.oireachtas.ie/parliament/media/committees/agriculture/archiveagriculturefoodandthemarine/Final-Report-on-Commonages-160713-For-Print-3.pdf 110 Rourke, E. and Kramm, N. (2009). Changes in the Management of the Irish Uplands: A Case-Study from the Iveragh Peninsula. European Countryside, 1(1). ¹²Monaghan, F., Moran, J., Martyn, M., Boyle, P., and G. Jones (2014). Commonage Case Studies 2014: Informing the development of commonage management plans under Ireland's RDP 2014-2020. Report produced for the European Forum on Nature Conservation and Pastoralism. October 2014 $https://www.researchgate.net/publication/305634943_Commonage_Case_Studies_2014_informing_the_development_of_Commonage_Management_Plans_under_Ire-theory. The properties of t$ land's RDP 2014-2020 13 Hynes, S., Buckley, C., Van Rensburg, T.M. (2007). Recreational pursuits on marginal farmland: a discrete-choice model of Irish farm commonage recreation. The Economics and Social Review, 38 (1) (2007), pp. 63-84 14McGurn, P., (2011) Developing a targeted-based programme for High Nature Value (HNV) farmland in the North Connemara Area, A Report to the Heritage Council by the European Forum for Nature Conservation and Pastoralism http://oldsitehc.info/fileadmin/user_upload/Publications/Wildlife/HNV/Connemara_HNV_Case_Study_Report_2011.pdf 15https://www.npws.ie/sites/default/files/protected-sites/conservation_objectives/CO002122_0.pdf 16 https://www.npws.ie/sites/default/files/protected-sites/conservation_objectives/CO002122_0.pdf ¹⁷https://www.npws.ie/sites/default/files/protected-sites/synopsis/SY002122.pdf

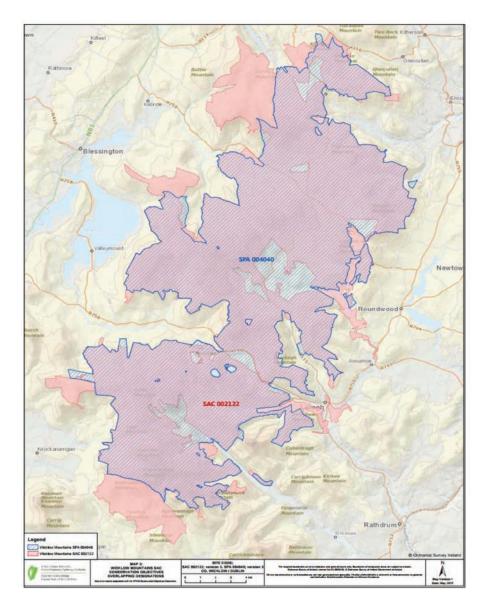


Figure 3.2 Wicklow Mountain Special Protection Area (Site Code: 004040) (NPWS, 2017¹⁶).

The following paragraphs which have been extracted from the NPWS Site Synopsis of the Wicklow Mountain SAC (NPWS, 2017¹⁷) provide some context for the biodiversity importance of the Wicklow/Dublin uplands.

Wicklow Mountains SAC is a complex of upland areas in Counties Wicklow and Dublin, flanked by the Blessington reservoir to the west and Vartry reservoir in the east, Cruagh Mountain in the north and Lybagh Mountain in the south. Most of the site is over 300m, with much ground over 600m. The highest peak is 925m at Lugnaquilla. The Wicklow uplands comprise a core of granites flanked by Ordovician schists, mudstones and volcanics. The form of the Wicklow Glens is due to glacial erosion. The topography is typical of a mountain chain, showing the effects of more than one cycle of erosion. The massive granite has weathered characteristically into broad domes. Most of the western part of the site consists of elevated moorland, covered by peat. The surrounding schists have assumed more diverse outlines, forming prominent peaks and rocky foothills with deep glens. The dominant topographical features are the products of glaciation. High corrie lakes, deep valleys and moraines are common features of this area. The substrate over much of the area is peat, usually less than 2m deep. Poor mineral soil covers the slopes, and rock outcrops are frequent.

Large areas of the site are owned by the National Parks and Wildlife Service (NPWS) and are managed for nature conservation based on traditional land uses of upland areas. The most common land use is traditional sheep grazing, but others include turf cutting, mostly hand-cutting but some machine-cutting also occurs. These activities are largely confined to the Military Road, where there is easy access. Large areas which had been previously hand-cut and are now abandoned, are regenerating. In the last 40 years, forestry has become an important land use in the uplands, and has affected both the wildlife and the hydrology of the area. Amenity use is very high, with Dublin city close to the site. Peat erosion is frequent on the peaks. This may be a natural process, but is likely to be accelerated by activities such as grazing.

Wicklow Mountains is important as a complex, extensive upland site. It shows great diversity from a geomorphological and a topographical point of view. The vegetation provides examples of the typical upland habitats with heath, blanket bog and upland grassland covering large, relatively undisturbed areas. In all, twelve habitats listed on Annex I of the E.U. Habitats Directive are found within the site. Several rare or protected plant and animal species occur, adding further to its value. Throughout Ireland and particularly in Wicklow traditional hill sheep farming which is principally responsible for biodiversity in upland commonages is in decline.

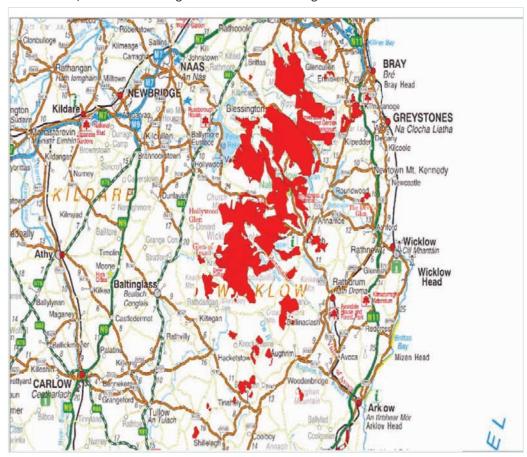


Fig 3.3 The Wicklow/Dublin commonages are shown in red. (Map courtesy of DAFM).

It is clear that the majority of commonage lands fall within the SAC and SPA designated areas (Figs 3.1 and 3.2).

There is difficulty in trying to assemble a date on the Wicklow/Dublin Commonages. An attempt to do so was done by reviewing the 2015 BPS claims. It is important to note figures are not accurate and there is no easy way to calculate the areas of non-commonage upland areas in Wicklow/Dublin Uplands. However, they do give some indication of; the number of commonages, area, number of commonage farmers, the average number of farmers claiming per commonage and the maximum and minimum number of ewe equivalents for these commonages.

The Wicklow Commonages:

- 120 commonages (96 commonages with more than one farmer claiming)
- Area: 27,032 ha
- 354 commonage farmers
- 465 commonage claims (some claiming on more than one commonage)
- Average number of farmers claiming per commonage is 4.6 (excluding commonages with only one farmer claiming)
- Minimum number of ewe equivalence for these commonages 36,656
- Maximum number of ewe equivalence for these commonages 45,741

Notes: This includes lands in the army range in the Glen of Imaal, where sheep are taken in on a per head rate and looked after by Department of Defence employed herds. Farmers don't have access to these sheep while they are grazing there.

It also includes lands owned by the NPWS, who have grazing licences with farmers to graze their land. Both these areas are claimed by farmers as commonages as they are not fenced off and farmers don't have sole rights to graze specific areas. Some of the NPWS land is not claimed as commonage, as the NPWS allocated these farmers individual areas for claiming direct payments in the past. The sheep are open to surrounding areas and may not even graze on the actual area being claimed.

Coillte also rent out grazing rights and blocks of land to farmers which may or may not be claimed as commonage for direct payments.

The Dublin Commonages:

- 10 commonages
- Area: 2,319 ha
- 45 commonage farmers
- 74 commonage claims
- Minimum number of ewe equivalence for these commonages 2,557
- Maximum number of ewe equivalence for these commonages 3,334

3.7.1.3 Biodiversity on Irish Upland

Commonages •

The uplands form our largest expanses of semi-natural habitats. They include areas of great scenic beauty, forming inspirational landscapes with a sense of wilderness and space (plate 3.4). Almost 29% of the landmass of Ireland is estimated to be over 150m in altitude, while almost 19% of the landmass can be considered to support upland habitats. The importance of upland habitat's plant and animal conservation is unquestionable with upwards of fourteen habitat types listed under Annex I of the EU Habitat's Directive and many rare and threatened bird and animal species being recorded in these areas (Table 3.1). Furthermore, over 40% of the total area designated as Special Areas of Conservation (SAC) in Ireland is estimated to occur within land above 150m altitude.



Plate 3.4 Wicklow Uplands scenic landscape

Table 3.1 Annex I habitats that occur in Irish uplands. Those habitats which form part of the qualifying interests for the Wicklow Mountains SAC are highlighted in red.

Habitat Code	Habitat Name
3110	Oligotrophic waters containing very few minerals and sandy plains (<i>Littorelletalia uniflorae</i>)
3130	Oligotrophic to mesotrophic standing waters with vegetation of the <i>Littorelletea</i> uniflorae and/or of the <i>Isoëto-Nanojuncetea</i>
3160	Natural dystrophic lakes and ponds
3260	Water courses of plain to montane levels with the Ranunculion fluitantis and Callitricho-Batrachion vegetation
5130	Juniperus communis formations on heaths or calcareous grasslands
4010	Northern Atlantic wet heaths with <i>Erica tetralix</i>
4030	European dry heaths
4060	Alpine and Boreal heaths
6130	Calaminarian grasslands of the <i>Violetalia calaminariae</i>
6230	*Species-rich <i>Nardus</i> grasslands, on siliceous substrates in mountain areas (and submountain areas, in Continental Europe)
6410	Molinia meadows on calcareous, peaty or clayey-silt-laden soils (Molinion caeruleae)
7130	Blanket bog (*if active bog)
7140	Transition mires and quaking bogs
7150	Depressions on peat substrates of the Rhynchosporion
7230	Alkaline fens
8110	Siliceous scree of the montane to snow levels (<i>Androsacetalia alpinae</i> and <i>Galeopsietalia ladani</i>)
8120	Calcareous and calcshist screes of the montane to alpine levels (<i>Thlaspietea rotundifolii</i>)
8210	Calcareous rocky slopes with chasmophytic vegetation
8220	Siliceous rocky slopes with chasmophytic vegetation
8240	*Limestone pavements
91A0	Old sessile oak woods with <i>Ilex</i> and <i>Blechnum</i> in the British Isles

Species of international conservation importance which are intrinsically associated with the uplands include those listed under Annex II of the Habitats Directive and Annex I of the EU Birds Directive as well as many species of flora and fauna listed on the various national red lists.

Commonage land is mainly a semi-natural landscape, shaped in some way by farming practices (O'Rourke et al., 201218). Compared with the lowlands, upland habitats, wildlife and vegetation tend to have been less modified by human activities (Perrin et al., 201419). However, fertilisation, drainage, division of common land, agricultural improvement, afforestation and overstocking of sheep, have resulted in the degradation of upland habitats (Bleasdale and Sheehy-Skeffington, 1995²⁰: Reed et al., 2009²¹; Van Rensburg et al., 2009²²).

The importance of upland habitats to plant and animal conservation is clear with upwards of fourteen habitat types listed under Annex I of the EU Habitats Directive, and many rare and threatened bird and animal species have been recorded in these areas (Perrin et al., 2014¹⁵). They tend to be areas of high biodiversity value and include SPAs, SACs and Natural Heritage Areas (NHA). It is estimated that 90% of all SACs, 10% of SPAs and 60% of NHAs are situated on commonage land (Van Rensburg et al., 2009¹⁸). The Irish uplands contain two of Ireland's most critically endangered plant species the Serrated Wintergreen (Orthilia secunda) and the Marsh Saxifrage (Saxifraga hirculus), along with over thirty endangered plant species.

3.7.1.3 Biodiversity on the Wicklow Mountain SAC and Commonages

Flora

County Wicklow has the largest area of unbroken mountain massif in the country. A detailed botanical survey of the Wicklow Mountains was initially collated and conducted by J.P. Brunker, who published the 'Flora of the County Wicklow' in 1950. A number of species which are legally protected under the Flora Protection Order 2015 are recorded from the Wicklow uplands. These include:

- Lanceolate Spleenwort (Asplenium obovatum Viv. subsp. lanceolatum)
- Parsley Fern (Cryptogramma crispa)
- Small White Orchid (Pseudorchis albida)
- Bog Orchid (Hammarbya paludosa)
- Marsh Clubmoss (Lycopodiella inundata)

Other upland species, which are listed under the vascular plants Irish red list include:

Alpine Saw Wort (Saussurea alpina)

- Alpine Lady's Mantle (Alchemilla alpina) (Plate 3.5)
- Stagshorn Clubmoss (Lycopodium clavatum)
- Beech Fern (Phegopteris connectilis)
- St. Patrick's Cabbage (Saxifraga spathularis)
- Alpine Clubmoss (Diphasiastrum alpinum)
- Brittle Bladder Fern (Cystopteris fragilis)
- Harebell (Campanula rotundifolia)
- Fir Clubmoss (Huperzia selago)
- Dwarf Willow (Salix herbacea)
- Stone Bramble (Rubus saxatilis)
- Wilson's Filmy Fern (Hymenophyllum wilsonii)
- Starry Saxifrage (Saxifraga stellaris)
- Cowberry (Vaccinium vitis-idaea)



Plate 3.5 Alpine Lady's Mantle (Alchemilla alpina)

In 2007 a survey of the Rare, Scarce and Threatened vascular plants of Co. Wicklow was conducted for National Parks and Wildlife Service. This survey indicated that there have been significant changes in the composition and distribution of upland species in the county since 1950 (Curtis & Wilson (2008). The focus of that survey was to visit a small number of locations and document only a small number of known alpine/ montane plant records within the Rare, Scarce and Threatened categories.

On foot of the 2007 survey the authors sought funding from The Heritage Council and the Heritage Office of Wicklow County Council to extend the fieldwork and to cover the true alpine/montane flora of the county. These alpine and montane species are characteristic of the following habitat types, which are listed under Annex I of the EU Habitats Directive and occur in Co. Wicklow:

- (4060) Alpine and Sub-alpine (Boreal) Heath
- (8220) Siliceous rocky slopes with chasmophytic vegetation

¹⁸O'Rourke, E. and Kramm, N. (2012). High nature value (HNV) farming and the management of upland diversity. A review. European Countryside, 4(2).

¹⁹ Perrin, P.M., Barron, S.J., Roche, J.R., O'Hanrahan, B., (2014). Guidelines for a national survey and conservation assessment of upland vegetation and habitats in Ireland. Version 2.0. (Irish Wildlife Manual No.79). National Parks and Wildlife Service.

²⁰Bleasdale, A., Sheehy-Skeffington, M., (1995). The upland vegetation of north-east Connemara in relation to sheep grazing. In: Jefferey, D.W., Jones, M.B., McAdam, J.H. (Eds.), Irish Grasslands, their Biology and Management. Royal Irish Academy, Dublin.

²¹ Reed MS, Bonn A, Slee W, Beharry-Borg N, Birch J, Brown I, Burt TP, Chapman D, Chapman PJ, Clay GD, Cornell SJ, Fraser EDG, Glass JH, Holden J, Hodgson JA, Hubacek K, Irvine B, Jin N, Kirkby MJ, Kunin WE, Moore O, Moseley D, Prell C, Price MF, Quinn CH, Redpath S, Reid C, Stagl S, Stringer LC, Termansen M, Thorp S, Towers W, Worrall F (2009) The future of the uplands. Land Use Policy 26:S204-S216.

²² Van Rensburg, T., Murphy, E. and Rocks, P. (2009). Commonage land and farmer uptake of the rural environment protection scheme in Ireland. Land Use Policy, 26(2), pp. 345-355. 23 Wyse Jackson, M., FitzPatrick, Ú., Cole, E., Jebb, M., McFerran, D., Sheehy Skeffington, M. & Wright, M. (2016) Ireland Red List No. 10: Vascular Plants. National Parks and Wildlife Service, Department of Arts, Heritage, Regional, Rural and Gaeltacht Affairs, Dublin, Ireland.

- (8210) Calcareous rocky slopes with chasmophytic vegetation
- (8110) Siliceous scree of the montane to snow levels
- Acid grass-heathlands (the Achilleo-Festucetum tenuifoliae and the Nardo-Caricetum binervis Associations) (this habitat type is not listed under the Habitats Directive).

A list of the alpine and montane plant species recorded in Co. Wicklow is presented in Table 3.2 below. This list includes what are termed both 'Obligate' and 'Facultative' species. For the purposes of the Montane Survey of County Wicklow only those species listed in Table 3.2 were searched for and surveyed. Though the numbers of montane species is greater than those presented here, it was concluded that this list contains a core group of restricted, indicator species which are very useful tools for gauging long-term changes in the upland vegetation and flora of County Wicklow.

Table 3.2 List of alpine plants in County Wicklow with an indication of which general alpine habitat they are found within

Species	Obligate Alpine*	Facultative Alpine*	Alpine Habitat
Lycopodium clavatum		Х	Heath
Huperzia selago		Х	Heaths
			Wet rocks
Diphasiastrum alpinum	Х		Heaths
			Alpine grasslands
Selaginella selaginoides		Х	Wet cliffs
Cryptogramma crispa	Х		Screes
Hymenophyllum wilsonii		Х	Wet cliffs
			Heaths
Phegopteris connectilis	Х		Wet cliffs
Cystopteris fragilis		Х	Wet cliffs
Salix herbacea	Х		Heaths
Meconopsis cambric		Х	Wet cliffs
			Stream sides
Rhodiola rosea		Х	Cliffs
Saxifraga stellaris	X		Wet cliffs
Saxifraga spathularis		Х	Cliffs
Saxifraga hypnoides		Х	Cliffs
Alchemilla alpine	Х		Wet cliffs
Epilobium brunnescens+		Х	Wet cliffs
Campanula rotundifolia	Х	Х	Cliffs
Vaccinium vitis-idaea	Х		Heaths
			Bogs
Vaccinium myrtillus		Х	Heaths
			Cliffs
Empetrum nigrum	Х	X	Heaths
			Cliffs
Antennaria dioica		X	Cliffs
			Heaths
Saussurea alpine	Х		Wet cliffs
Crepis paludosa		Х	Wet cliffs
Hieracium spp		X	Cliffs
Festuca vivipara	Х		Alpine grassland
			Cliffs
Carex bigelowii	Х		Heaths
Listera cordata		X	Heaths

* Species, which never descend lower than 360m or away from cliff habitats and are the true post-Pleistocene relicts, can be considered **Obligate Alpines** due to their virtual confinement to vertical, north-east facing cliffs. Their conditions are severe enough to inhibit competition from coarser species and inaccessible enough to prevent grazing by animals. These may be joined here by what may be termed Facultative Alpines, which are species found in other habitats, not necessarily montane, that are also commonly associated with alpine locations.

Note: Certain Facultative Species such as Campanula rotundifolia, which occurs commonly in the lowlands is an Obligate Alpine in Co. Wicklow.

+ Non-native, but under scrutiny as highly invasive and a likely threat to some alpine species.

Eight montane areas were investigated during the 2008 montane survey and searches were made for the alpine species previously known from each area. A description of the habitats and species present and their condition was completed. The main threats and suggested management measures for each area were documented as summarised in Table 3.3 below.

These indicate a combination of both under grazing and over grazing in different parts of the Wicklow Uplands, as well as ongoing issues with uncontrolled burns (Plate 3.6), high deer numbers, recreational trampling and natural erosion are all contributing to the unfavourable conservation status of habitats in our uplands.

Since the Wicklow Montane Flora study was completed in 2008, National Parks and Wildlife Service commissioned a Scoping study and pilot survey for a national survey and conservation assessment of upland habitats and vegetation in Ireland (Perrin et al, 2009²⁴). This was a precursor to the National Survey of Upland Habitats (NSUH) that commenced in 2010 and the 'Guidelines for a national survey and conservation assessment of upland vegetation and habitats in Ireland' were developed and published (Perrin et al., 2014²⁵). This standardised methodology now forms the basis for determining the 'Conservation Status' of habitats and species within the uplands.

The habitat maps and survey data generated using this survey methodology can be used for conservation management purposes at a local level (commonage), at an individual Natura 2000 site level and for the identification of appropriate national conservation strategies. This data can also contribute towards fulfilment of Ireland's reporting obligations to the EU Commission on conservation status of Annex I habitats. This is an ongoing requirement at six yearly intervals, the first report having been submitted in 2007 and the second in 2013. At a national level the dominant upland habitats (wet heath, blanket bog, dry heath, alpine and subalpine heath) were deemed to be in bad conservation status in both assessments with an ongoing decline. The NSUH has been continuing since then but the Wicklow Uplands have not yet been the subject of detailed assessment.



Plate 3.6 The aftermath of a wildfire in the Wicklow Uplands

24P.M. Perrin, B. O'Hanrahan, J.R. Roche, & S.J. Barron (2009). Scoping study and pilot survey for a national survey and conservation assessment of upland habitats and vegetation in Ireland. November 2009.

²⁵Perrin, P.M., Barron, S.J., Roche, J.R., O'Hanrahan, B., (2014). Guidelines for a national survey and conservation assessment of upland vegetation and habitats in Ireland. Version 2.0. (Irish Wildlife Manual No.79). National Parks and Wildlife Service.

Table 3.3 Montane study areas, documented threats and management recommendations from the 2008 survey

Study area	Threats	Management Recommendations
Maulin-Tonduff	Lack of burning and associated grazing associated with traditional practises.	Re-introduction of heather control through burning and grazing. Confinement of walkers to distinct and allocated routes.
Luggala-Clohoge	Indiscriminate burning and over-grazing by deer and including heavy poaching and wallowing. Cutting of drainage ditches.	Control of deer. Prevention of any further burning to allow the vegetation to recover. Blocking of drainage ditches.
Liffey Head-Djouce	Indiscriminate burning and over-grazing or concentration of grazing in the vulnerable areas of Rhacomitrium-Empetrum hummocks. Increase in pressure from walkers and expansion of existing tracks.	Avoidance of grazing above 600m and control of deer. Confinement of walkers to distinct and allocated routes and the expanded use of netted boardwalks to confine them and prevent damage to the adjoining vegetation.
Loughs Bray & Kippure	Indiscriminate burning and over-grazing or concentration of grazing, in the vulnerable areas along the track over the cliffs. This is initiating damage to the fabric of the vegetation and encouraging slippage of the peat. Increase in pressure from walkers and widening of existing tracks through the currently intact vegetation will mean very large areas will be eroded. There does not appear to be a significant threat from deer in this area. A review of the burn history data provided by NPWS indicate that the south-western slopes of Kippure were extensively burnt in both 2004 and 2006, a small area to the east of the cliffs above Lough Bray was also burnt but the dates for this burn are not provided. The northern slopes of Kippure at Castlekelly were burnt in 2002.	Avoidance of grazing above 600m and confinement of walkers to distinct and allocated routes and perhaps the expanded use of netted boardwalks to confine them and prevent damage to the adjoining vegetation.
Sally Gap to Mullaghcleevaun	Indiscriminate burning and over-grazing, and concentration of grazing in the currently mature areas of montane heath-blanket bog. The southern slopes of Mullaghcleevaun and East Top still carry this vegetation, and burning in this area would effectively wipe out the last good examples of montane vegetation from a very large area. There is very significant erosion occurring on the summits and ridges with much bare peat and exposure of the bedrock and it appears that this will increase over time.	Avoidance of grazing above 600m and control of deer. Deer are in very high number in this area and a cull is highly desirable. It is essential that further burning and especially burning of the remaining area of intact vegetation be prevented.
Tonelagee- Barnacullian	Over-grazing by sheep and deer and including heavy poaching and wallowing. Erosion of the lake edge from walkers. The drier areas immediately above the	Control of deer and de-stocking, preferably removal of sheep. Prevention of any further
	schistose gullies are eroding due to poaching by animals and some soil slippage has occurred down into them. This could have negative impacts on the alpine vegetation there. There is significant erosion taking place on the ridges and parts of the summit which is being exacerbated by heavy sheep grazing.	burning to allow the vegetation to recover. Provision of netted walkways to prevent walkers straying from a designated track.
	A review of the burn history data held by NPWS indicated that there has been a number of burns in this general area although the cliffs and mountain summit have, so far, escaped this damaging activity. The eastern slopes of Tonelagee and the unnamed peak (668m) to the east were burnt in 2003, while the slopes below this summit extending to the conifer plantation above the Glenmacnass Waterfall were burnt in 2001. Further east and north of this, the eastern slopes of Stoney Top, extending east to the Glenmacnass River were burnt in 2000. Small areas of ground within the Brockaghs were burnt during 2000 and 2001 but this damage was exacerbated by the severe burns of 2007 when extensive areas of the slopes, ridge and summit of the Brockaghs extending west to the Wicklow Gap road and north to the summits above Mall Hill were burnt. This fire crossed the road and large areas of ground below the Camaderry Ridge were also burned.	
Seefingan-Corrig- Seahan (Kilbride Rifle Range)	Indiscriminate burning and over-grazing by sheep and deer and including heavy poaching and wallowing.	Control of deer. Prevention of any further burning to allow the vegetation to recover.
Lugnaquilla - South Prison to Percy's Table	Increase in impacts from walkers resulting from littering is the main threat as the route to the summit of Lugnaquilla is resistant to trampling in the schist areas. Burning is possible though less of a threat than in the deeper peat areas. Overgrazing by sheep and deer.	Avoidance of any further afforestation in the watershed of the Ow River. Destocking of sheep numbers and control of deer.
	A review of the NPWS data, which records history of burns within the SAC, shows a series of small burns within the Glen of Imaal rifle range, which are likely to be caused by exploded ordnance. The only other areas that appear to have been burnt in the recent past include the north-western slopes of Ballinnedin Mountain and the south facing slopes between Aughavannagh Mountain and Slieveboy Upper.	

Fauna - Birds

The Wicklow uplands are included within the boundaries of the Wicklow Mountains SPA. Breeding populations of merlin (Falco columbarius) and peregrine falcon (Falco peregrinus) form the basis of the designation under the EU Birds Directive. Peregrine falcons hunt small birds, rabbits and small mammals present in bog, heath and grassland and nests on cliff edges. Merlins hunt small birds, small mammals and insects present in bog, heath and grassland.

Species diversity - Birds: Almost 100 different bird species have been recorded in the Wicklow Mountains National Park. Birds associated with the upper slopes include raven, meadow pipit and red grouse. Stonechat, skylark, whitethroat, golden plover,

snow bunting and wheatear are more common at I ower altitudes.

Other species of high conservation value which are red listed under the Birds of Conservation Concern in Ireland list and have been recorded from the Wicklow uplands include;

- Whinchat (Saxicola rubetra)
- Meadow Pipit (Anthus pratensis)
- Grey Wagtail (Motacilla cinerea)
- Red Grouse (Lagopus lagopus)
- White-tailed Eagle (Haliaeetus albicilla)
- Ring Ouzel (Turdus torquatus)
- Yellowhammer (Emberiza citrinella)

Other species associated with oak woodlands within the uplands are:

- Redstart (Phoenicurus phoenicurus)
- Wood Warbler (Phylloscopus sibilatrix)
- Great spotted Woodpecker (Dendrocopus major)

Red Grouse is a characteristic Upland bird which relies on heather and heather dominated habitats for foraging and nesting (Plate 3.7). While not listed under the Birds Directive it is a red list species in Ireland (Colhoun et al 2013²⁶). Males establish territories in the autumn months before the breeding season and call at dawn and dusk. Eggs are laid in early to mid-April, depending on temperature. Chicks hatch in late May and feed on invertebrates, moss capsules and young heather shoots. Males will continue to live within 4km of where hatched. Hens will travel further. While grouse populations in Wicklow have traditionally been considered very healthy, there has been a report of a decline in the Dublin Mountains (via Eamonn Brennan, Glenfarne Gun Club pers. comm.). Pilot projects are taking place at several locations in Ireland to re-introduce rare upland raptors and improve grouse populations. Associated with this national initiative, red kites (which feed on small mammals such as rats) have been successfully re-introduced to Wicklow. These projects involve partnerships between gun clubs, the NPWS and a national environmental organisation, the Golden Eagle Trust (www.goldeneagle.ie). To restore grouse populations, managed burning and predator control has taken place in Leitrim as part of the Boleybrack Grouse Project (Eamonn Brennan and John Carslake, Boleybrack Grouse Project) (www.nargc.ie/habitat-conservation/ boleybrack-grouse-project.aspx).



Plate 3.7 Red Grouse

Species diversity —Fauna

The otter (Lutra lutra), is a species listed under Annex II of the EU Habitats Directive and forms part of the qualifying interest of the Wicklow Mountains SAC. For healthy otter populations to survive they need rivers of good water quality with populations of their prey and habitat in which to forage, rest and breed.

The marsh fritillary butterfly (Euphydryas aurinia) is the only invertebrate species listed under Annex II of the EU Habitats Directive. The marsh fritillary was deemed extinct in County Wicklow for many years with the last records known of the species from 1986. Dedicated survey effort by Wilson & Osthoff identified several breeding populations in the county and these were the subject of a NPWS funded survey in 2012 (Wilson, et al 2012²⁷). Since that survey was completed, several new populations were identified in Wicklow, some of which have been lost to recent afforestation (C. Osthoff, pers. comm.). This species requires appropriate grazing levels and the maintenance of areas of its sole food plant devil's bit scabious (Succisa pratensis).

The freshwater pearl mussel (Margaritifera margaritifera) is the oldest living animal in Ireland and populations of the species are known from the Avoca – Aughrim, Avoca – Upper Avonmore, Avoca – Lower Avonmore, Slaney - Dereen, Vartry, and Liffey - Kings River catchments. Flow changes, fine sediment and nutrient loss from land into the freshwater environment are the key causes of the loss of sustainable freshwater pearl mussel populations and the sustainable management of our upland habitats in these catchments is critical in maintaining water quality.

Deer are common in the Wicklow Uplands. The native Irish Red Deer in Wicklow are considered to have interbred with Sika deer which were introduced in 1860 (Purser et al, 2010²⁸). Other mammals of note include Irish hare, goat and fox, otter (the latter is protected under the EU Habitats Directive), pine marten and badger. Since the demise of the estate system the only form of official management of the deer herds in Wicklow is licensed shooting. Deer populations in Wicklow are now considered unsustainable, resulting in economic and ecological damage (Wilson and Curtis, 2009). A study commissioned by the Wicklow Deer Management Group and funded by the Heritage Council (Purser et al, 2010²⁸) concluded that a collaborative approach to deer management is urgently required. If carried out, it would involve the co- ordination of control measures, the first comprehensive census of deer in Wicklow and a greater understanding of the relationship between upland farming and deer grazing (Plate 3.8).

Other fauna of importance in the Wicklow uplands include red squirrel, pine marten, badger, feral goats, stoat, Irish hare, badgers, fox, and a number of bat species.



Plate 3.8 Sheep and Deer grazing

²⁶Colhoun, K. and S. Cummins (2013). Birds of Birds of Conservation Concern in Ireland 2014–2019. Irish Birds 9: 523-544 (2013). ²⁷Wilson, F., Bond, K., Crushell, P., Foss, P. & C. Osthoff (2012). Survey of Marsh Fritillary Colonies – South and East Ireland 2012. Unpublished report for National Parks and Wildlife Service.

Fisheries

The upper reaches of some rivers in the Wicklow uplands are spawning grounds for Salmon and Brown and Sea Trout. Other fish species found include Eel, Minnow, and Stickleback.

3.7.1.4 Importance of commonages to Irish society —

The Irish uplands supply a range of valuable ecosystem services to the general public. These services include landscapes for recreation, climate regulation through carbon storage in soils and vegetation, high quality fresh water supplies to urban areas in the lowlands, potential to reduce flood risk downstream; and production of energy, food and wood (Huber et al., 2013²⁹). However for many of these services, the landowners do not get paid in a direct way for the supply of these public goods. Commonages encompass a large part of the uplands. Consequently the way in which they are managed can either have a negative or a positive impact on the provision of these services.

Ireland's uplands areas are of great recreational value (Plate 3.9). They offer challenging opportunities for traditional upland pursuits such as hill-walking, game shooting and climbing and their outstanding landscapes also attract visitors who enjoy the views that the Irish uplands have to offer (Hynes et al., 2007). However, the increasing popularity of alternative upland activities such as mountain running, bouldering and kayaking is bringing increasing numbers of urban dwellers to upland regions. In the last 10 years, recreation in the uplands has increased dramatically. Fáilte Ireland (201330) found that in 2004 there were 259,000 overseas visitors who engaged in hiking or cross-country walking, and that by 2011, this figure increased dramatically to 776,000 and had an estimated total spend of €60 million in the Irish economy. Another study carried out by Buckley et al. (2009³¹) found that the average recreationalist using the commonage areas in Connemara, spent €41.92 per trip. In England 40 million people visited the seven English upland regions and spent £1.78 billion in the area (Commission for Rural Communities, 2010³²). Welsh uplands areas are visited by over 18 million visitors every year, which is valued to be worth £205 million to the local upland economy (Reed et al., 2009).

In the last century, the amount of carbon dioxide and other greenhouse gases that are in the atmosphere have increased dramatically (Ballantyne et al., 2012³⁴). Irish upland habitats and in particular blanket bogs are a major store of carbon. Ireland's peatlands are estimated to store 1085 mega tonne (Mt) of carbon (Malone and O'Connell, 2009³⁵). The way in which uplands are managed, can reduce emissions by retaining stored carbon in their soils, and sequestering more carbon dioxide from the atmosphere. Management practices such as drainage, inappropriate grazing and large burns can degrade the peat in these areas and result in the release of carbon into the atmosphere (Renou et al., 2013³⁶). If commonages are sustainably managed, the carbon footprint of Irish agriculture could be significantly reduced.

Commonage land plays a crucial role in the supply of Ireland's drinking water and flood-management. Two components of water quality i.e. dissolved organic carbon and suspended sediment can be affected by particular land management practices (DEFRA, 2008³⁷). Research in England suggests that large scale burning of upland vegetation and high sheep stocking rates can increase dissolved organic carbon and sedimentation in the water (Worrall et al., 2007³⁸). High levels of dissolved organic carbon can have implications for drinking water quality while high levels of sedimentation can significantly increase costs in the filtration process (Beharry-Borg et al., 2012). There is also evidence to suggest that land management in the uplands can affect flood management lower in the water catchment system. The speed of water run-off in upland areas affects river velocity downstream. Appropriate stocking rates in upland areas will increase vegetation, and improve soil structure and permeability in upland catchments; this in turn will slow down surface run-off and reduce spate flows and flooding (Marshall et al., 2013³⁹).

The EPA's catchment group prepared a water quality risk map of the Wicklow uplands for the proposal. At present the majority of our upland watercourses are deemed to be at risk of not achieving good water status under the Water Framework Directive monitoring assessments as illustrated on Figure 3.3 below.



Plate 3.9 A group of hillwalkers in the Wicklow Mountains

²⁸ Purser, P., Wilson, F. & Carden, R., (2009). Deer and Forestry In Ireland: A Review Of Current Status And Management Requirements, Woodlands of Ireland, Wicklow ²⁹Huber, R., Bugmann, H., Buttler, A. and Rigling, A. (2013). Sustainable Land-use Practices in European Mountain Regions under Global Change: an Integrated Research Approach. Ecology and Society, 18(3).

³⁰http://www.failteireland.ie/FailteIreland/media/WebsiteStructure/Documents/3_Research_Insights/1_Sectoral_SurveysReports/Hiking_and_walking_tourism_in_Ireland 2011.pdf?ext=.pdf

³¹ Buckley, C., van Rensburg, T. and Hynes, S. (2009). Recreational demand for farm commonage in Ireland: A contingent valuation assessment. Land Use Policy, 26(3), pp.846-854. ³²Commission for Rural Communities, 2010. High Ground, High Potential- A future for Englands upland communities. Commission for Rural Communities

³³Ballantyne, A., Alden, C., Miller, J., Tans, P. and White, J. (2012). Increase in observed net carbon dioxide uptake by land and oceans during the past 50 years. Nature, 488(7409),

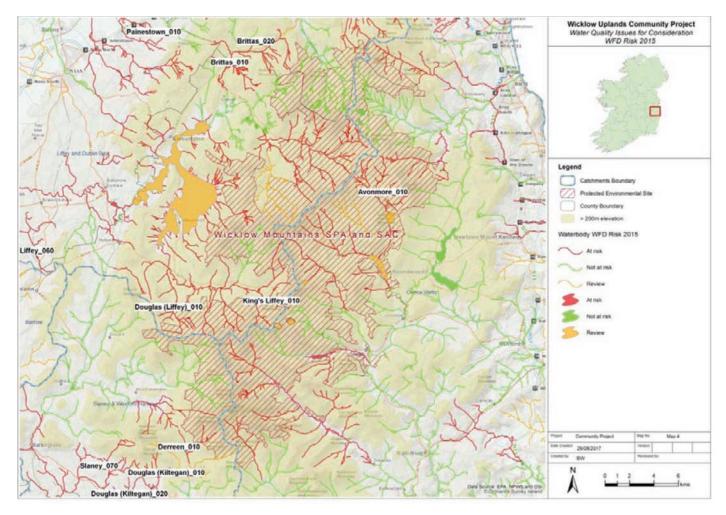


Fig. 3.3 The water quality map for Wicklow showing (in red) the upland rivers considered to be at risk of not meeting the Water Framework Directive targets. (Courtesy of the EPA)

The three rivers identified as being at risk from agriculture and of most relevance to SUAS are the Douglas (Liffey), the Kings Liffey and the Avonmore. Examination of the agricultural factors contributing to the "at risk status" of the three rivers identify siltation issues with cattle access (both Liffeys) and sediment related issues to cattle and deer in the Avonmore.

3.7.1.5 Wicklow Commonage Farmers - demographics, attitudes & practices

This section provides a brief summary of the results from a survey and two focus groups undertaken by Fergal Maguire in 2014 and reported in his thesis. The survey and focus group involved a sample (20% of the total number) of farmers who have access to commonage in County Wicklow.

Demographics: The results provide an insight to the demographics of Wicklow commonage farmers. As briefly outlined below they are not generally different to those of the general Irish farming population. However, Wicklow farmers had a significantly higher proportion (73%) of off-farm income compared with 49% for all Irish farms.

- Age: The average age of the farmers in the survey was 57 years old, ranging from 46 to 75. This is similar to average age (56) of all Irish farmers (Teagasc, 2016⁴⁰). There were no farmers under the age of 40 and 35% were over 60. The CSO reported that 6.2% of the farmer population were under the age of 35.
- Full/part time farming: Fifty seven percent of farmers were full time while 43% operated farms on a part time basis. This is similar to the national figure of 54%.
- Off-farm income: Most (73%) respondents indicated that the household income was substituted with an off-farm job. This result was much higher than the 49% reported in the National Farm Survey 2016⁴⁰). Only 27% of the farmers surveyed stated they relied solely on the farm for income.

³⁴ Malone, S. and O'Connell, C. (2009). Ireland's Peatland Conservation Action Plan 2020 - halting the loss of peatland biodiversity. Irish Peatland Conservation Council, Kildare. 35Renou-Wilson, F., T. Bolger, C. Bullock, F. Convery, J. P. Curry, S. Ward, D. Wilson, and C. Müller (2013). Bogland - Sustainable Management of Peatlands in Ireland. Johnstown Castle, Co. Wexford: STRIVE Report No 75 prepared for the Environmental Protection Agency (EPA)..

³⁶DEFRA, (2008). Understanding the contribution of grass uplands to water quality. DEFRA

³⁷Worrall, F., Armstrong, A. and Adamson, J. (2007). The effects of burning and sheep-grazing on water table depth and soil water quality in a upland peat. Journal of Hydrology, 339(1-2), pp.1-14.

³⁸Beharry-Borg, N., Smart, J., Termansen, M. and Hubacek, K. (2012). Evaluating farmers' likely participation in a payment programme for water quality protection in the UK uplands. Regional Environmental Change, 13(3), pp.633-647.

³⁹Marshall, M., Ballard, C., Frogbrook, Z., Solloway, I., McIntyre, N., Reynolds, B. and Wheater, H. (2013). The impact of rural land management changes on soil hydraulic properties and runoff processes: results from experimental plots in upland UK. Hydrol. Process., 28(4), pp.2617-2629.

^{40//}www.teagasc.ie/publications/2017/teagasc-national-farm-survey-results-2016.php

⁴¹ http://www.macra.ie/system/assets/131/original/land-mobility-and-succession-in-ireland.pdf?1359032953

- Succession: In terms of passing the farm to the next generation, 47% of the farmers that were surveyed had identified a successor. This is slightly lower than a study carried out by Macra na Fermie (2013⁴¹) which indicated that 52% of farm households had identified a successor.
- Farm size, area of private land on the farm, area of commonage on the farm and the main enterprises on the farms.
- Farm size: The average commonage size was 305 ha (range 30 to 1618 ha) and the average commonage shareholding per farm within this was 51 ha (range 8 to 232 ha). Four (7%) shareholders had access to a second commonage. There was no inward or outward leasing of commonage.
- The average amount of private land owned was 32 hectares (range 7 to 97 ha). Rough grazing accounted for just over 33% of the total farm area on 60% of farms.
- Number of shareholders on commonage: The average number of commonage shareholders was 8 (range 2 to 21). 71% and 95% of commonages had less than 10 and 16 shareholders, respectively.
- Main farm enterprise: Almost 97% of farms had sheep. Approximately, 83% of them had hill breed ewes. The average number of ewes per farm was 154 of which 80% were hill breeds. Seventy seven percent of farms had a cattle enterprise. Of these, 68% had suckler cows and 8% had cattle only.

Commonage use: Just 41% grazed the commonage with livestock at some stage during 2014 compared with 83% fifteen years ago (Table 3.4). The remaining farmers (59%) did not graze their commonages in 2014 compared with 17% fifteen years ago. In addition, it was found that 66% of farmers reduced or stopped using their commonage area between 6 and 15 years ago.

Table 3.4 Farmer use of the uplands

Year	Farmers declaring upland for Agri schemes	Farmers actually grazing the upland area	Farmers grazing the upland up for 6 months or more
2014	100%	41%	18%
1999	100%	83%	70%

Of the farmers that were using the commonage in 2014, 46% were grazing sheep on their commonage area for at least 6 months of the year. Fifty one percent were only putting ewes on the commonage after the lambs were weaned and putting a small number of dry hoggets on the commonage in spring (Table 3.5). This indicated that sheep grazing on the commonage area was for less than 6 months of the year.

While there are fewer farmers using the uplands, there is a much greater drop in the numbers of sheep and the length of time they spend grazing on the upland areas than just looking at farmer numbers would suggest.

Table 3.5 Sheep numbers grazing the Wicklow upland areas in 2014 and 1999 and % change

Time of year sheep spent on	2014	1999	% change
commonage			
Ewes and lambs on hill (May-July)	856	5082	-83%
Ewes on hill after weaning (Aug-Oct)	3822	8312	-54%
Ewes on hill after mating (Dec-Feb)	1602	4832	-66%
Dry ewes and hoggets (February-July)	1238	2377	-47%

These results indicate that the grazing pattern has changed in the Wicklow uplands from a traditional practice of having ewes grazing all year round peaking in July, to a situation where the majority of farmers now only put up dry ewes after weaning and taking them back down for mating in October

 2 https://www.agriculture.gov.ie/media/migration/ruralenvironment/ruraldevelopment/ruraldevelopmentprogramme2014-2020/GLASEvaluationLiteratureReview210616.pdf ⁴³http://www.efncp.org/download/Capacity-Building-for-Irish-Commonages_Joint-Report.pdf

The main reasons cited by farmers for reducing their usage of commonage was higher sheep losses (43%), poor economic returns (43%) and reduced lamb performance (33%) (Table 3.6). Another reason cited was the lack of markets for light lamb (29%). A consequence of the reduced market for cheviot store lambs is that farmers no longer put ewes on the hill with male lambs and started crossing ewes with lowland breeds.

Table 3.6 Reasons given by farmers for why they graze less sheep on the uplands.

Reason	% of farmers who mentioned this reason
Sheep losses on the uplands	43
Poor economic return	43
Reduced lamb performance	33
No market for light hill lambs	29
Smaller lamb crops	18
Hills are overgrown	18
Farmer was told to destock	15
Farmer keeping less stock & doesn't need the grazing	11
Labour issues	9
Age	4

The top five reasons quoted by farmers for putting less sheep up to graze the uplands all relate to economic return, either directly or indirectly. Age was not seen by the farmers themselves as a major reason for not putting sheep to the uplands. Similarly, labour was not seen as an issue, but the study did find a direct relationship between off-farm employment and grazing the uplands. There was no relationship between age, area of upland, area of enclosed holding or even being in an agri-environmental scheme (AEOS or REPS) and grazing the uplands.

Changes in vegetation: Overall, the farmer perception of changes in biodiversity was that heather (93%), bracken (63%) and woody scrub (53%) had increased over the last fifteen years. Less than 2% of farmers felt the grassland areas had increased, while 76% felt there was no change.

Many believed that the changes in biodiversity were a consequence of the lack of burning. Farmers were concerned about the changes in the condition of their commonages and implications for their farm payments (Table 3.7).

Commonage cooperation: The current level of cooperation on commonages is very low. Fourteen (58%) of the 24 current users of commonages, herd sheep with other shareholders on their commonage. This includes gathering and bringing the sheep down from the hill, inspections, undertaking animal health practices and removing stray sheep. None of the shareholders were involved in the collective burning of the commonage to control rank vegetation. Only two of the 58 shareholders stated that they had attended a formal meeting set up for commonage shareholders.

Table 3.7 Factors that farmers consider to the decline in commonage vegetation.

Factors considered to the decline in uplands vegetation	% of Respondents
No burning of vegetation on commonage	89%
Less sheep grazing commonage throughout the year	58%
Less sheep in early summer grazing commonage	40%
Less sheep grazing on commonage in winter	14%

There was a general consensus that setting up a commonage group to discuss management of the commonage would be beneficial to shareholders. Nearly all supported the idea that both active and inactive shareholders should be involved. There was some small support for the idea that an external facilitator was required.

3.7.2 Review of other projects and Conclusions =

3.7.2.1 Review of other projects

The ADAS Phase 1 – Literature Review (Final) Evaluation of the GLAS⁴²provides a comprehensive overview of AESs designed to assist farmers to meet very specific and localised challenges. It includes the Burren Measures, other Life projects and NPWS Schemes. The review also covers HNV farmland and results-based schemes.

It identified the Burren Programme as an approach to deal with the unique issues of SAC and SPA management. The review stated "There appears to be value in providing farmers with difficult management challenges, a vision of the desired result and allowing them flexibility in how they approach their task". However, it notes that the applicability of this approach needs to be established. SUAS, in its proposed approach will assist in this task and will help inform future AES design.

The authors note the success of results-based bottom up schemes has led to a broader call for more of these to be incorporated into agri-environmental schemes. They also identify the need to identify how farm land can be managed to meet multiple objectives. SUAS builds on these.

There were no past or current projects identified with the same innovations as proposed in the SUAS pilot. However, and not surprisingly at this time, there are a number of similar on-going projects. They are working with farmers and stakeholders to restore or improve local environments and in one example improve the viability of the associated farming systems. Some examples include the Burren Programme, KerryLIFE, AranLIFE and NPWS's Farm Plan Scheme.

The Burren Programme, started in 2016, was developed from the BurrenLIFE Project. It, like the SUAS pilot, works closely with farmers, advisors and stakeholders (e.g. NPWS and DAFM) to implement solutions to help manage and protect the Burren. SUAS very much builds on the ethos, experience and approach of the Burren Programme but has one significant innovation. SUAS is proposing to work with groups of farmers to collectively and sustainably manage their upland commonages and farms rather than working with individual farmers or land owners. The Burren Project has developed and evolved over 15 years into a result-based payment scheme. SUAS will not be able to achieve this status within its five year lifespan. However, it will use data collected to provide the basis for a blueprint for a results-based commonage payment scheme.

The KerryLIFE project is a demonstration project aimed at restoring two nationally important freshwater pearl mussel populations. The project is developing and demonstrating land management approaches for local farmers and forest-owners. The project is very focused on practical farming activities that can improve water quality for conserving the freshwater pearl mussel. However, the SUAS pilot aim is more integrated and commonage focused and is based on farm management plans that include biodiversity, water quality and stock management.

The AranLIFE project is another demonstration project operating on the Aran Islands that is co-funded under the EU LIFE Nature programme. It is developing and demonstrating the conservation management practices of local farmers on the three island's designated Natura 2000 sites. The project is working on the farming practices using local knowledge and experience combined with scientific knowledge to improve the conservation status of the designated sites. There are similarities between SUAS and AranLIFE in approach but SUAS is working with farmer groups that will be taking ownership and control of the pilot.

The National Parks and Wildlife Service runs a Farm Plan Scheme that works with farmers to create, maintain and enhance conditions for some of Ireland's rarest and most threatened flora and fauna. SUAS does include this element in its approach but has a much greater ambition and a much higher level of innovation included.

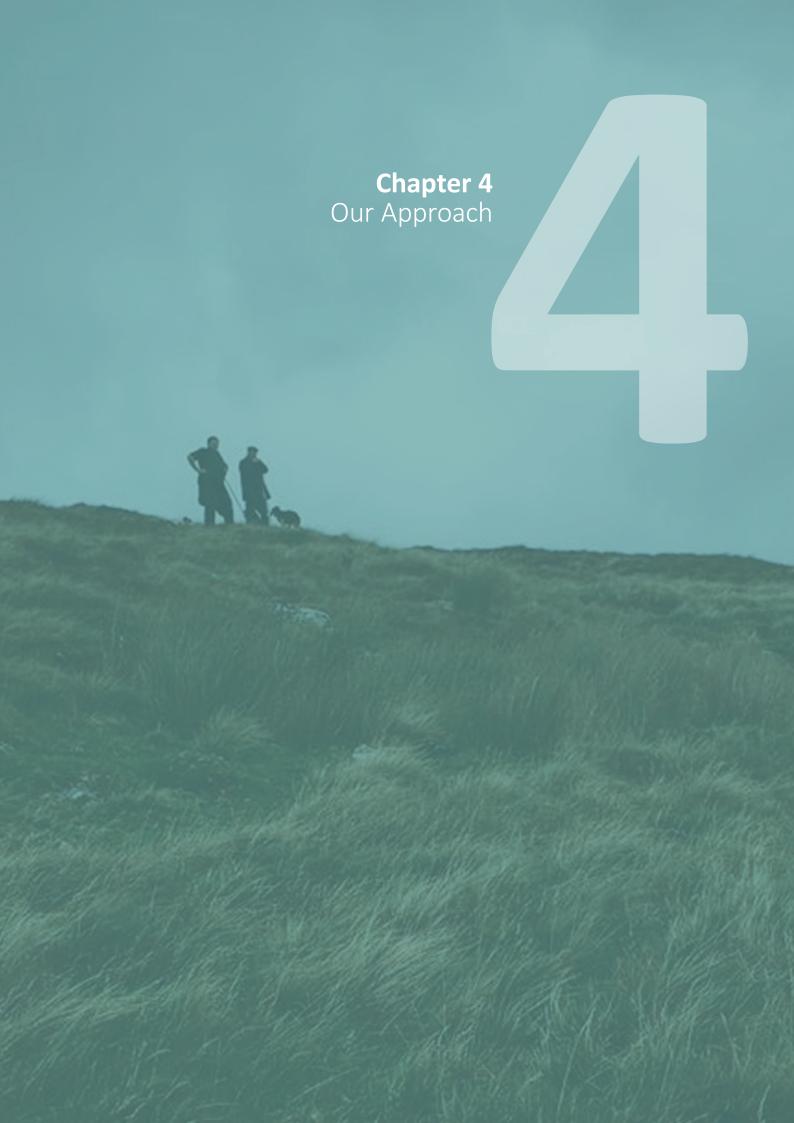
A 2012 report⁴³, Capacity Building for Irish Commonages, based on a study tour to Scotland and Northern England, identified capacity building of Irish Commonages based on discussions and lessons learnt. These are summarized in Table 3.8 and the areas identified where the SUAS pilot proposal addresses them.



Table 3.8 The lessons learnt for capacity building of Irish Commonages and how SUAS will use them.

essons learnt for capacity building of Irish Commonages	SUAS
ommon grazings:	
 Governance of commons (how to have working commonage with active farmers supported by inactive: collective shareholders group) Need for collective buy in by commonage shareholders and the necessifor a robust internal agreement between them. 	Groups
ustainable management:	Considers cattle and
 Different livestock types in ewe equivalents facilitated Have system devised by NPWS for proposed overall stocking levels Need monitoring of existing stocking levels and relationships to favourable condition 	sheep in management plans. Has NPWS support with developing plans.
 Need adaptive management structure 	Monitoring proposed.
 The timing of the grazing is also important, as the sheep will graze different vegetation during the winter (more heather as there is very little else available) than during the summer (more grassy areas) 	Includes adaptive management.
 The control of heather & scrub through burning/swiping is also a necessity on a part of commonages, especially where under grazing has been an issue in the past Bracken control is an issue not necessarily solved by changing the stock 	activity.
numbers	
 There may need to be lead-in periods for changing stocking levels. This not something that can be changed overnight, especially if stock are to be grazed at different times of the year and also if they have to be 	
increased	SUAS will use an
 The whole farming system on farms may need to be looked at. This may involve a change in the breeding and systems of sheep production (e.g. away from spring lamb production and towards producing light hill lam or breeding replacements for lowland flocks). This will develop long- 	management.
term farming systems that utilize commonages rather than have farmer chasing short-term markettrends	SUAS can accommodat activities to reduce the impact of recreational
 The impacts of recreational users, also has an effect on the management of some of these commonages 	users.
Capacity building:	Allows
Leadership and organisational skills required e.g. training on how to	All are important elements in SUAS
 develop a committee for commonage shareholders Mentorship programme for commonage areas – Teagasc discussion groups may be an appropriate model 	Actions 1 and 2.
 Would need to include technology adoption programme (both agriculture production and environment technology) 	
 Financing of a capacity building programme may be possible through RI but needs investigation 	
As well as building capacity among farmers, also need to build capacity among advisors	
 A pilot capacity building programme with clear objectives was suggeste There is a real need for ongoing monitoring and research to inform the development of sustainable practical management programmes for commonage areas in Ireland 	d

In summary, the SUAS approach is generally similar to the projects noted above and is based on the lessons learnt from the extensive work, efforts and experience of those concerned about the sustainable future of the uplands. SUAS is focused on working with farmers and stakeholders with ambitions to protect, restore and enhance land and water based habitats, flora and fauna. SUAS is more integrated and also includes farm viability and the water quality status of the rivers and streams. It takes a commonage and upland area (almost landscape rather than farm) approach. For the first time, SUAS will develop farmer groups to address the unique complexity and challenges of the uplands. A central aim is developing the farmer's knowledge, capacity and confidence to take greater ownership of the management and implementation of the pilot.



4.1 Introduction

The SUAS Pillars and Guiding Principles

SUAS will be delivered by farmers and stakeholders taking ownership of the commonage /upland agri-environmental challenges and solutions. The SUAS pilot builds around Four Pillars (Figure 4.1) and a set of guiding principles (Figure 4.2 – below) that are integrated into the two SUAS Actions. Using this approach in the development of the proposal provides a solid basis for the quality controls and assurances to underpin the achievement of the project objectives.

Pillar 1 - Commonage Groups (CGs). The expected result, from this innovative farmer centred or "bottom up" pillar, is the development and evaluation of a governance model to address the complex challenges associated with the sustainable management of commonages and upland farming systems. It will be achieved by building the capacity of the farmers and stakeholders to share their collective knowledge in a common language and take on a new leadership role through mentoring and support from the Project Team and OG.

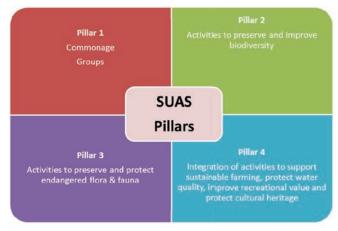


Fig. 4.1 The four pillars of the SUAS Actions and Activities

The expected outcome will be guidance on how farmer management groups can be established, implemented and the type of support they will require to make them work. It will also demonstrate the potential of the farmers and stakeholders developing and testing their own new activities which in combination with available activities, will be used to achieve integrated production and environmental objectives. The guidance will have application in the design of new AESs.

2 - Pillar 2 Activities to preserve and improve upland habitat biodiversity and Pillar 3 Activities to preserve and protect endangered flora and fauna species. These two pillars refer to the "on the ground" activities or measures that the CGs and upland farmers will select for implementation in their management plans. They will generally be similar to the measures used in previous and current AESs. However, the proposed Auction Payment Scheme offers farmers and stakeholders an opportunity to "fine-tune" generic measures and/or develop and evaluate "new" measures to preserve and improve upland biodiversity.

The focus is on farmer ownership of the activities they use and their impact on biodiversity. It is a paradigm shift from the previous model of generic suites of measures handed down that "must be" implemented by farmers to receive payments without understanding the link between what they have implemented and the consequences for biodiversity. This contrasts with the farmer's long term experience of the

impact of his/her management on commodity outputs (e.g. litres of milk or animal sold, etc.). If these outputs are below expectations the farmer has the experience and or training to make the necessary management adjustments to improve

The innovation associated with SUAS Pillars 2 and 3 is the development of the farmer's capacity, knowledge and understanding of how the activities they implement impact on biodiversity. This farmer ownership approach to the two pillars (habitat and species protection) will facilitate improved working relationships between the farmer groups and the outside agencies involved in the protection and preservation of habitats (flora, fauna and water quality) that will be built on respect and partnership rather than conflict.

Pillar 4 - Support sustainable farming, protect water quality, improve recreational value and protect cultural heritage.

The expected result is the development of a model for the integration of the pillars 1, 2 and 3 into wider RDP objectives of the priority areas in DAFM's 2014 – 2020 RDP programme.

To date, the focus of schemes has generally been on the development of the individual elements of the system (e.g. production, water, biodiversity, greenhouse gas emissions, socio-economic, production systems, etc.). The extent of the integration challenge is reflected in the difficulty of developing the policies and actions to achieve it.

Significant progress has been made in many of these individual areas. As a consequence, their application on the ground by the farming community has been fragmented. This Pillar focuses on ensuring that the production efficiency of the hill farm enterprise is optimised through improved managements and their relationships and synergies with the other environmental, cultural and recreational activities.

The practical recommendations arising will be potential solutions to integrating and implementing environmental performance, production efficiency and wider public good measures.

Guiding Principles: The SUAS approach is based on five guiding principles (Fig 4.2). These are based (with permission) from the successful Burren Programme.

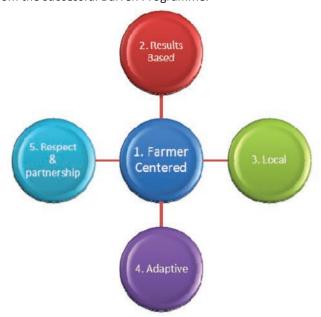


Fig. 4.2 The guiding principles adopted by SUAS in the development of the approach

1. Farmer centred: The SUAS approach is built around the

establishment and development of farmer led CGs (Fig 4.3). This, as noted in Chapter 3, is something that many farmers identified the need for.



Fig. 4.3 The farmer centred Commonage Group approach

The CG is a partnership approach and the innovation is that farmers work together to collectively manage their commonage through the implementation of the SUAS pilot. It harks back to a previous era on commonage land which involved individual shareholders collectively managing it.

The farmers will be involved in developing their own assessments of the environmental and agronomic problems, setting of the targets and selecting the activities to achieve them, monitoring their progress and adapting the activities if required. It will also involve them in the recording of their activities and associated eligible costs. This approach gives each CG, and non-commonage upland farmer, freedom to sustainably farm in the manner they deem most appropriate for their upland area. It will require significantly more farmer dialogue, work and knowledge input, compared with the previous schemes they have been used to. Therefore, they will receive support from the Project Team and OG and the requisite training to build and develop their capacity to work together and deliver.

2. Results Based: The payment system proposed is one based on the costs of successfully implementing the activities of the two Actions. It is not possible to include a results-based payment scheme for biodiversity in the pilot as the current conservation status of the commonages is identified as being poor or bad and biodiversity response times slow. However, SUAS will develop a draft result-based payment scheme for the commonages based on the progress to the achievement of favourable conservation status and the evidence and experience gained during the pilot. This can be adapted for use in any future commonage AES.

Local: The evolution of the SUAS programme is locally led. As noted above WUC and Teagasc have been pro-active with the local farmers and communities in identifying the need for a

targeted AES. This approach provided the foundation for the SUAS pilot proposal.

Local, in SUAS, is not confined to just the non-commonage upland farmers or commonage farmers, but also includes all those with an interest in the Wicklow/Dublin uplands. WUC provides a forum for them and is the Lead Partner. It is important to note that local agri-environmental consultants will form an important part of the stakeholder groups. Local is central to SUAS and the local non-farming stakeholder inputs and support are essential to achieving the local community's vision for the area.

4. Adaptive: SUAS understands the innovative nature of its proposed approach and recognises the potential risks involved (c.f. Chapter 6). The new initiatives of the CG, auction payment scheme option and integrating environmental and agronomic measures, require an adoptive approach to reduce the risks.

They necessitate an in-built capacity to change in response to unexpected or unsatisfactory outcomes. The SUAS actions and activities will involve capacity building, continual learning and evolution. The Project Team and OG supporting the CGs will ensure that the lessons learnt can be integrated as and when the need arises.

SUAS will use a participatory learning and action approach to facilitate and develop the adaptive approach. It will involve CGs members in an evolving cycle of forming collective views on the challenge(s) (observing) taking the agreed action to address it/them (acting), monitoring and evaluating the results (reflecting) and revising their activities as required (Fig. 4.4). This approach is based on learning and engaging with communities. The objective is to reduce the risks associated with the introduction of the CGs and with activities that are not delivering the required responses.

Fig. 4.4 The evolving cycles of adaptive learning envisaged for the CG1

5. Respect & Partnership: The SUAS approach requires building trust and partnership among not only the commonage farmers but also the local and national stakeholders. Some of the initial ground work has been undertaken and is reflected in the outputs of the 2013 Tubridy report and the 2015 Maguire thesis. Both involved significant stakeholder collaboration that contributed to this SUAS proposal. The pilot will build on this by continuing to nurture and develop respect and a sense of partnership not only with the farmer stakeholders but also with the external stakeholders.

These five principles underpin the SUAS approach.

4.3 The SUAS Actions – Introduction

4.3.1 Introduction

The four SUAS are integrated into the two SUAS Actions.

- Action 1 The establishment of the five CGs, the selection of two non-commonage upland farmers and the development of their Commonage Management Plans.
- Action 2 The implementation, monitoring, evolution and reporting of the Commonage /Farm Management Plans.

The five pilot commonages will each form a CG and once

Adapted from: https://aifs.gov.au/cfca/publications/participatory-action-research 2http://www.gowercommons.org.uk/index.htm

established they will develop their own Commonage Management Plan. Two non-commonage upland farmers will be included in the pilot. They will not be involved in forming a CG but will be involved in developing an Upland Management Plan, similar to the management plans for the commonages.

Action 2 is concerned with the implementation of the Commonage/ Farm Management plans.

Action 1 will be completed by the end of the first year. Action 2; the implementation of the Commonage/ Upland Management Plan will be operational over the remaining four or four and half years of the project lifetime (c.f. Chapter 7).

The CGs will be assisted and supported in all aspects of both Actions by the SUAS Project Team and the OG (Fig 4.5). The Project Team will provide a coordinating role for the CGs and the non-commonage upland farmers, representing them in negotiations with external stakeholders and providing full time support/services.

It is envisaged the role of the SUAS Project Team in any future Commonage/upland AES will be replaced by an association that represents the interests of all CGs and non-commonage upland farmers. A successful example of this is the Gower Commonage Association².

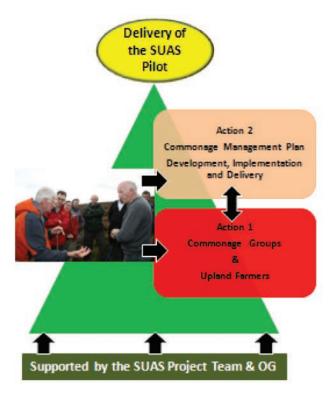


Figure 4.5 The two SUAS Actions that will be developed and delivered by the Commonage Groups and upland farmers with support from the SUAS Project Team and Operational Group

4.3.2 Selection of the five Commonage Groups -

The objective is to create a collective farmer "ownership" of SUAS, its vision, implementation, evolution, monitoring and evaluation, demonstration, reporting and providing value for the money invested in the project (Fig. 4.6). The CGs are made up of the individual farmers who have rights to graze the commonages. They will have a degree of self-governance that allows the farmers to collectively take significant control of how the SUAS pilot will operate.



Fig. 4.6 The deliverables required for the Commonage Groups

This is an innovative and ambitious action as it will require an almost seismic shift in farmer's attitudes to the development and operation of an AES. They now have to own, operate and deliver it rather than just implementing measures that previously have been handed down to them.

One of the many new challenges this innovative approach will create for participating farmers, is that they will no longer just implement land management activities. They will now have to develop, implement, monitor and evaluate them. They will have to be cognisant of not only the monies they have traditionally received, but also, the measurable results and associated administrative costs with implementation.

An important change will be the shift away from payments being made directly to farmers. All payments and individual farmer requests, will be made to the Project Team, based on completed activity sheets, approved and submitted by the chairperson of the CG, not individual farmers. Once these are approved, payments will be issued by the Project Office to the individual CG farmers. The long-term goal would be to issue payments to the CG, who then pay all third party invoices, pay farmers for time/ work carried out and distribute any other monies among the group members based on agreements within their constitution.

This will require a significant learning process and will involve them in a higher level of recording, monitoring and evaluation of their plans. The SUAS OG includes experts in the areas pertinent to the successful implementation of the pilot (c.f. Chapter 5). The OG and the Project Team will support the CGs in addressing these new challenges and provide guidance to them as they work through them. Training sessions for the CGs will be provided based on their identified needs throughout the period of the pilot.

The approach and steps involved in establishing the five CGs are summarised in Table 4.1

Table 4.1 Establishing five Commonage Group – Summary of activities, actors and timelines

Activity			Actors		
	Farmers	Project Management Team	Operational Group	External Consultant	Timing (month)
Expression of interest from commonages and hill sheep farmers in participating in the pilot		٧			1
Review of responses by the Project Management Team and OG		٧			1
Identify Potential Candidates		٧	٧		1
Collect additional commonage information	٧	٧			2
Select two candidates for Stage 1 of establishing CGs.		٧	٧		2
Begin CG establishment process	٧	٧		√ Facilitator	2
Eight (8) half day sessions with commonage farmers	٧	٧		√ Facilitator or Tom Curran	3,4 & 5
Select two hill sheep farmers to participate		٧	٧		4
Agree and finalise CG constitution documents & elect Chairperson	٧	٧		√ Tom Curran √ Solicitor	6
Select three candidates for Stage 2 of establishing CGs.		٧	٧		5
Begin CG establishment process	√ (~24)	٧		√ Facilitator	6
Eight (8) half day sessions	٧			√ Facilitator or Tom Curran	7,8 & 9
Agree and finalise CG constitution documents & elect Chairperson	٧	٧		v Solicitor	10
Approval			٧		10

The estimated cost of this activity is €56k. It is made up of farmer time costs (€12k), external consultants (€11k) and direct project costs (€33k) (Project Manager and OG time, room hire).

The SUAS target is to create and support five CGs. The SUAS farmer consultation meetings (August 2017) and participation in Teagasc's Hill Sheep Farm event on September 6th, 2017, have helped in creating an interest in the pilot and its objectives. This will facilitate a "quick-start" to the process of selecting the CGs.

Plate 4.1



Commonages or farmers wanting to participate in the SUAS pilot will be asked to submit an expression of interest in participating in the project. This simple form will collect details of the land area/ commonage, its shareholders and their legal status. Applicants will also be asked to briefly describe why they want to join. The Project Team and OG will review these, and those considered to offer the greatest potential, will be identified.

In a separate process, upland farmers not involved in a commonage but in farming areas of the uplands, will be invited to submit an expression of interest. These are being included because like commonage farmers, they play a role in the management of the uplands, and in many cases their land is not fenced off from surrounding commonages. Excluding them from SUAS would represent a missed opportunity in delivering an inclusive upland management solution.

Additional information will then be collected from those selected to participate. It will include current status in terms of the number of shareholders actively grazing, approximate stocking rates, grazing season length, number of stakeholders claiming BPS, GLAS payments, information available on known archaeological sites, public access, designation as a SAC/SPA and the quality of the water resources. When collated, this information will be used in a second evaluation stage to select the suitable candidate commonages and non-commonage upland farmers for the pilot.

However, the most important selection criteria will be the willingness and enthusiasm of stakeholders to participate. The OG, particularly the farmer members, will have an important role in evaluating this criteria based on local knowledge. The CG is the central pillar of SUAS and this approach will reduce the risk associated with establishing them. A similar approach will be used to identify two upland sheep farmers for the project.

The other selection criteria proposed for this stage are designed to provide commonages, in so far as is practical, and to represent the range of characteristics that exists in the Wicklow/Dublin Uplands. This will enhance the potential of the pilot to address a range of commonage "types" and in so doing, add value to the outcomes. These include in general order of priority: Note: the numbers in the brackets are the target number of commonages for the criterion.

- Biodiversity Status: Poor (1) Moderate(3) and High (1)
- Number of Commonage Stakeholders < 4 (1), 5 to 12 (3) and > 12 (1)
- Commonage Area: < 100 ha (1), 225 ha (3) and > 350 ha (1)
- Sheep Flock Production Potential: All commonages participating in the SUAS pilot will be required to have sheep that can be developed to adequately graze and maintain the improved areas from the application of Action 2 measures. A desired output from the CG is an improvement in the flock's production performance over the period of the pilot, to maximise financial returns from the stock and ensure long-term viability of our upland farming systems. Payments will not be made for increases in productivity.
- Water Quality: It is an objective to include a commonage in an area where water quality has been identified as being "at risk" by the EPA's catchment assessment and agriculture is identified as being a contributory factor (Fig 3.3). This will offer a unique opportunity to consider what is causing the problem and the activities that are required to address them in conjunction with the biodiversity and farming activities.
- Number of protected species: A commonage that has one or more protected species to evaluate Action 2 activities.
- Number of archaeological sites: A commonage that has one or more archaeological sites to evaluate Action 2 activities.
- Public Access: A commonage that has existing public access or the potential to develop one will be considered to allow the development of Action 2 activities to facilitate public assess.

In the event of having more than five expressions of interest, a ranking scheme will be used to select the top five.

The estimated number of farmers in each commonage group will be eight. This is the average number of farmer stakeholders in the 120 Wicklow commonages. This means there will be 40 farmers participating in Action 1. This was the figure (40) used when estimating farmer time costs.

4.3.3 Commonage Group Establishment and Constitutions —

The establishment of the CG will be done in two stages. This first Stage will focus on two commonages, identified as having the best potential to be successfully established. This selection will be made by the Project Team and the OG. Stage 1 will be completed by month 6. The selection of the two upland sheep farmers will be made during this period.

In Stage 2, which begins at the end of Stage 1, the process of establishing the three remaining CG's will be initiated building on the lessons learnt in Stage 1. This will help to refine the process and ensure it is more efficient and effective.

During both Stages there will be an on-going assessment of progress by the Project Team and the external consultant. If progress is deemed to be not satisfactory or difficulties are identified with the formation of the CG, a decision will be made by the OG to suspend the process and proceed with a new CG from the list of applicants. However, the selection process should ensure there is a low risk of this occurring.

The CGs will require a sustainable governance structure. It

has to address the complex challenges associated with the sustainable management of commonages and upland farming. These include ownership of grazing rights but not the land, designations as a National Park, SACs or SPAs, both landscape and farm based biodiversity management issues, large and variable topographic areas, demographics of the farming community, the viability of the marginal farming systems, access issues, deer populations and rustling. They also need to deal with both internal and external conflict.

At a meeting of Wicklow Upland farmers in August 2017 to discuss the SUAS measures, Gwyn Jones of EFNCP (http://www. efncp.org/) provided an outline of observable characteristics of fair and sustainable common governance arrangements.

Plate 4.2



These included:

- Clearly defined group boundaries. 1.
- 2. Rules governing use of common goods matched to local needs and conditions.
- 3. Those affected by the rules can participate in modifying the rules.
- The rule-making rights of community members are respected by outside authorities. 4.
- A system is in place by which community members monitor members' behaviour. 5.
- There are graduated sanctions for rule violators. 6.
- There are accessible, low-cost means for dispute resolution. 7.
- 8. The responsibility for governing the common resource is built in nested tiers from the lowest level up to the entire interconnected system.

Translating these into an agreed constitution for the CGs and drawing up the internal agreements (the contract between the farmers, setting out how records are kept and linking measures implemented to outcomes and payments, etc) will be a new and challenging area for commonage farmers.

The CG has to be able to address the diversity of its members. For example, members;

- Who behave in a narrow, self-interested way and never cooperate in dilemma situations (free-riders)
- Who are unwilling to cooperate unless they are assured that they won't be exploited by free-riders (nervous collaborators)
- Who are willing to initiate reciprocal cooperation in the hopes that others will return their trust (active collaborators)
- Who always try to achieve better results for the group (altruistic activists)

The Wicklow/Dublin upland farmers have stated that they see the need for and advantage of a CG to address the challenges as documented by Tubridy1 and Maguire2. However, there is a significant gap between recognising the need for it and realising it. Action 1 is focused on bridging this gap through a series of facilitated meetings leading to the signing of a legal agreement by the commonage farmers. The Project Team and the OG in conjunction with the farmers are responsible for its implementation.

Action 1 will involve bringing together all farmers or their representative who have grazing rights on the commonage to develop a constitution. This will set out the rules and objectives which the CG will use in its day-to-day operation. During the early stages of the process, the farmers, Project Team and OG will initially work on developing the constitution. Without a constitution, the CG farmers could find themselves at cross purposes on how the SUAS Actions and activities will be carried out and managed. It will serve as a reference and assist in resolving problems when they arise. It will also demonstrate to external stakeholders that the CG they will be engaging with over the lifetime of the pilot, are properly formed and operated using an agreed set of rules.

An example of a possible Constitution is provided below. It is important to note that it is for illustrative purposes only. The

actual constitutions of the CGs will be developed and agreed by their members.

To assist the farmers in developing the CG constitutions, SUAS will secure the services of Tom Curran, Teagasc's Farm Business Structures Specialist. He has considerable experience in assisting farmers develop partnership and collaborative farming agreements.

The CG constitution will maximise the skill sets of all members, which will help in achieving the required outcomes for the SUAS pilot. They will need to be open to making decisions jointly for the benefit of themselves and the pilot. Therefore, there is a need for a lead-in period for farmers to become familiar and comfortable with the whole process. The CG will have to evolve to a stage where the farmers can sit down and talk, establish their constitution and make decisions about the Commonage Management Plan. It is proposed to allow between 16 and 24 weeks for the development of the CG constitutions.

The success of the CG will be very much based on how the farmers involved operate within the CG on a day-to-day basis and how decisions are made. This requires good open dialogue, combined with the attributes of mutual respect, trust and a willingness "to put their shoulder to the wheel" for the benefit of all involved.

Therefore, the Project Team will be providing the energy, patience and guidance in this vital stage of the process with the support of the OG, in particular Monica Gorman, Sean Byrne and Pat Dunne to provide expert advice to the participating farmers. The experience of external contractor Tom Curran to facilitate will be invaluable.

It is worth noting, that there are other benefits to the farmers working as part of the CG. These include having someone to discuss ideas and issues with, ranging from relatively minor daily issues right up to long-term planning. It also has positive impacts on issues such as, rural isolation, mental health and farm safety.

Once established, the CG members and in particular, the Chairperson, will require continued support and training to ensure that they can meet the challenge of successfully delivering SUAS. This will involve maintaining and/or improving their

- 1. Commitment and buy-in to manage the commonages and uplands collectively
- 2. Ability to engage among themselves and with other key stakeholders in planning, managing and resolving conflicts in an integrated and sustainable way
- 3. Knowledge of the biodiversity and water resources of the Wicklow/Dublin uplands
- 4. Approaches to the productivity and profitability of hill farming, through breeding, animal husbandry and management of the stock, while on the lowland parts of the farm
- 5. Awareness of health and safety in the uplands
- 6. Recording and reporting skills
- 7. Openness to proposing and evaluating their own solutions to particular issues they identify in implementing their Commonage Management Plans.

Therefore, following the establishment of the CG, continuing on-going training will be provided to support them in the delivery of a successful SUAS pilot. It is proposed that these will be based on a social learning model of discussion groups where the meetings are regular and facilitated to give the CG real ownership and where experts are invited in but the group retains the leadership. It is envisaged that these will be a mix of classroom based and field based activities with approximately half the time focused on the CG management skills and half on the farming / environment management skills. The CG, in conjunction with the Project Team and the OG, will continuously identify their specific training needs. These will be provided as required/requested.

The Project Team have a role in coordinating the training activities to avoid duplication of effort. For example, where more than one CG requires similar training they can be amalgamated, or in some cases, individual members of the five Commonage Groups can be trained together.

The OG members Monica Gorman, Declan Byrne, Sinead Hurson, Catherine Keena, Helen Sheridan and Sean Byrne will contribute to the development of the training modules. They have the necessary expertise and experience in the range of knowledge areas required to underpin the SUAS pilot.

4.3.4 The development of the Commonage/Farm Management Plans

Running in parallel with the establishment of the CGs, there are a number of actions taking place under Action 1 (Table 4.2). These are primarily concerned with the preparations and development of the Commonage/Farm Management Plans. It should be noted that Project Team and the OG will be managing and supporting all of these activities.

Table 4.2 The parallel actions in Year 1

Para	اماا	Action	nc V	oar 1

Actions	Farmers	Project Management Team	Operational Group	External Consultant	Timing (month)
CG Meetings (~ one per month) – 6 for stage 1 CGs and 2 for Stage 2 CGs	٧	٧			6 to 12
Recruit consultant to develop EarComm	٧			٧	2 to 8
Recruit CG admin support	٧				6 to 7
Recruit ecological surveyor and hydrologist.	٧	٧	٧		4
Conduct baseline ecological surveys.	٧			√ Ecologist	6 to 10
Conduct commonage hydrological surveys				√ Hydrologist	6 to 10
Collect & collate baseline farming data	٧	٧			6 to 10
Engagement with external stakeholders	٧	٧	٧		11
Develop Commonage Management Plans	٧	٧		√ Ecologist Hydrogologist	8 to 11
Agree Commonage Management Plans	٧	٧	٧		12
CG and upland sheep farmer training	٧	٧	٧	V	6 to 12

The estimated cost for this activity is €96k. It is made up of farmer time costs (€32k), external consultants (€32k) and direct project costs (€32k) (Project Manager and OG time, Room Hire).

CG meetings: Following the establishment of the first two CGs, their work will begin immediately. There will be six monthly meetings of the two Stage 1 CGs between July to the end of the year, and two meetings for the three, Stage 2 CGs. These will be focused on developing the Commonage /Farm Management Plan for the following year. The Project Team will arrange meetings for the two upland sheep farmers.

In preparation for this, the CGs will be required to undertake their own initial assessment of the current vegetation status of their commonage. This will then form a basis for the discussion with ecologists on their findings from the baseline survey and their management recommendations. It will help facilitate the creation of better farmer ownership of their commonage/farm biodiversity and offers a learning opportunity for both parties.

The CGs will be undertaking the collection of the baseline farm/flock data that will be used in the development of the Commonage Management Plan. They will also need to agree and establish the recording and reporting approach that they will use to meet the pilot requirements.

This initial experience gained in undertaking the work described above, should be very helpful to the three, Stage 2 CGs once they are formed in October. The Chair of the CG will be responsible for its management and delivery. Therefore, a time of five hours per week has been allocated for this.

Recruit CG Admin support: Each CG will appoint/ recruit some administration support. The administrator functions will be primarily to assist with record keeping, reporting and providing support to the Chairperson. It is envisaged that this is a part-time position with a time allocation of 1.5 hours per week. All payments will be based on the submission of Activity Sheets.

Ecological Surveyor & Hydrologist: The Project Management Team will issue a tender for the conduct of the baseline ecological

surveys of the potential five commonages in month 4. There will also be a requirement for baseline surveys on the two upland sheep farms. The tender will be for an initial baseline survey, annual monitoring in years 2, 3 and 4, followed by a repeat of the baseline in year 5.

The tender will require that the NSUH methodology, to establish a baseline habitat condition assessment for individual commonages within the Wicklow uplands, is used to inform management recommendations. Conservation assessments for Annex I habitats at a site (or commonage) level consist of three main aspects: area, future prospects, and structure and functions. Conservation assessments of Annex I habitats are made on the basis of the vegetation that is currently present. This is done through the recording of a series of monitoring stops generally 2 m x 2 m in size within each habitat. The number of monitoring stops required depends on the size of the habitat as outlined in Perrin et al 2014 (Table 4.3).

The ecological baseline survey of the first two commonages will take place in month 6 and 7 (June and July). The surveys for the other three commonages and the two non-commonage farms will take place later when they have formed their CGs in Month 10.

Table 4.3. The proposed number of monitoring stops for the different areas of habitats.

Area of habitat (ha)	Number of monitoring stops					
<0.04	i i					
0.04 - 10	4					
10 - 50	8					
50 – 100	12					
100 – 500	16					
500 - 1,000	20					
1,000 - 2,000	24					
2,000 - 4,000	28					
4,000 - 10,000	32					
> 10,000	36+					

The conservation status of habitats within a commonage can then be assessed as either 'favourable', 'unfavourable inadequate' or 'unfavourable bad' using the approach outlined in Table 4.4

Table 6: General evaluation table for determining conservation status (modified from table in Appendix 1; Annex E, of Dochab 04-03/03-rev.3).

Parameter	Conservation status			
	Favourable (green)	Unfavourable - Inadequate (amber)	Unfavourable - Bad (red)	Unknown (insufficient information to make an assessment)
Area	Stable (loss and expansion in balance)	Any other combination	Large decrease in surface area: Equivalent to a loss of more than 1% per year	No or insufficient reliable information available
Structure and functions	Structures and functions (including typical species) in good condition and no significant deteriorations / pressures	Any other combination	More than 25% of the area is unfavourable as regards its specific structures and functions (including typical species)	No or insufficient reliable information available
Future prospects	The habitat's prospects for its combination prospects future are excellent / good, no significant impact from threats expected; viability		The habitat's prospects are bad, severe impact from threats expected; viability over next twelve years not assured	No or insufficient reliable information available
Overall assessment of conservation status	All 'green' OR two 'green' and one 'unknown'	One or more 'amber' but no 'red'	One or more 'red'	Two or more 'unknown' combined with green or all "unknown'

The ecologist will be required to prepare an initial baseline report and management recommendations. An example of the report is provided in Appendix 4.2

The ecologist will be required to meet with each of the five CG's to explain and translate the results and recommendations into a language that can be understood by the farmers. As noted above, the CGs will be required to undertake their own biodiversity assessment of their commonage/farm. The objective is to provide a basis for the dialogue and afford mutual learning to both parties.

Running in tandem, there will also be a tender issued for the recruitment of a hydrologist (c.f. Water Quality Baseline bullet point below).

As noted in the Chapter 3 there is very little information on the hydrology of the uplands and its associated water quality. Therefore, the hydrology of the commonages needs to be established. A hydrological survey and ecological survey will be carried out on the selected commonages. This is integral to establishing baseline data to ensure potential activities associated with the land management of the commonage will not have negative impacts on water quality. The tender will be for the mapping of the water ways and their associated catchment areas and a baseline ecological survey (Small Stream Risk Score). These will be mapped onto the baseline ecological maps (from biodiversity baseline survey), and will assist in informing the decisions on the management options. In addition, the tender will include the mapping of the water quality monitoring points currently being conducted by Wicklow County Council. Based on this, the tender will request a recommendation on a water quality monitoring programme, including recommendations for suitable sample locations, to yield best comparable results between areas with variable pressures e.g. burning, livestock access to waterbodies, throughout the duration of the project. Wicklow County Council and LAWCO have agreed to assist in this process. Sinead Hurson of the OG in association with Wicklow County Council Environment Section will provide input and support in relation to water quality issues.

Collect & collate baseline farming data: The SUAS approach is based on developing an integrated management plan. This in-

cludes a plan for the farming activity. The SUAS pilot will link this aspect of the plan to Teagasc's BETTER Sheep Programme. The objective of this Teagasc Programme is to establish focal points for the on-farm implementation, development and evaluation of technology, that is relevant to the viability of the sheep sector. The programmes implemented on the collaborating farms are used to support the wider adoption of breeding and production methods in the context of an agreed plan that can enhance the sustainability of sheep enterprises.

The central concept is that the programme is built upon active collaboration between the farmer and Teagasc Research and Advisory staff in the application and development of appropriate technology. A very close linkage with discussion groups and other advisory initiatives is an integral part of the process and this will revolve around the farmer sharing experiences and performance results with visiting groups.

The key elements of the programme are:

- The farmers involved volunteered to participate in the programme. They are open to change to achieve better financial returns and labour efficiency.
- In the first season the farmers engage with Teagasc in a comprehensive review of their current system identifying opportunities for improvement. The results of the review are incorporated in a farm plan with key changes highlighted. The plan involves changes in flock management, feeding practices, breeding policy, marketing policy, grassland management and farm facilities.
- Participating farmers are implementing an individual animal performance recording programme for all sheep on the farm based on electronic identification (EID), with help and guidance from Teagasc research staff. Individual data on ewe performance (litter size, mortality, weight at joining) and lamb performance (including lamb weights at birth, 7 and 14 weeks of age, and at sale) collected on the flock will be available to Teagasc for research and advisory purposes in the overall context of the project.
- Farm financial performance is being measured through participation in the National Farm Survey operated by Teagasc so that a consistent set of financial data is produced for each farm
- The farmer will share physical and relevant financial performance information with other farmers through Teagasc discussion groups and organised visits

Dr. Frank Campion of the Teagasc Better Sheep Programme has agreed to facilitate the CGs farmers inclusion in the programme.

The following data will be provided by each flock owner in the CG:

- No. of ewes to the ram
- No. of ewes scanned in lamb
- Scanning rate
- No. of ewes lambed
- No. of lambs born dead or alive
- No. of ewes and lambs turned out to the hill
- Date ewes and lambs are put to the hill (age of lambs being the key thing here)
- No. of ewes and lambs that return from the hill for weaning
- Date of weaning

- No. of lambs sold and retained for breeding
- Sales structure i.e. fattened or sold as stores

Records will be completed on a monthly basis by farmers and collated by the CG administrator and submitted to the Project Team. This data will be used to initially establish baseline flock performance for each farmer and a plan will be developed for each individual farmer with the aim of providing appropriate grazing activity on the upland area while improving efficiency and output in conjunction with the Teagasc BETTER sheep farm programme.

The farmers will be supported in this activity by Declan Byrne of the OG.

Developing and Agreeing Upland/Commonage Management Plans: Following the collection and collation of the ecological and farm data the first two CGs will begin the initial discussion on developing their Commonage Management Plan in month 7. The process will involve agreeing the targets, the management, monitoring and reporting activities that they will undertake over the four hill management years of the pilot.

Many of the "on the uplands" activities that will be included in the management plans are difficult to cost beforehand. Firstly, there are relatively few standard cost guidelines available. Where possible, the cost calculations are based on those available. These are the hourly rates for farmers' time and average contractor hourly charges for various services provided (e.g. machinery hire). However, the unknown is the work rates (i.e. output per hour) for both farmer and machinery use. The uplands present a varied (terrain) and sometimes very challenging work environment (access, travel time) (Plate 4.1). This means that the costings for some activities that involve either or both, man or machine, need to be site specific. Where work rates are not available for activities, it is proposed to make payments for activities based estimated hourly rates.

Plate 4.1 Contrasting terrains in the Wicklow uplands



It will be addressed initially in the first two year planning cycles. Upland activities will be estimated on the basis of the knowledge and experiences of the upland farmers and the relevant OG members. These will be discussed in terms of the activities potential to deliver the service required and its costs. Where it is agreed to implement the activity, common sense limits will be applied. During the pilot period, an adaptive approach will be used to refine the costing on the basis of data collected and experience gained. This will facilitate the development of standard cost for uplands that can be used in future upland AESs.

The plan will outline the activities that the CGs or farmers will implement during each year. A list of activities that could be used in the management plans is presented briefly below. Note: The costing of all activities proposed in the plan will be based on the cost farmer's time (€15/hr) and pre-approved invoiced costs.

Controlled Burning Equipment: There is a need to establish burning groups to carry out controlled burning. The groups will require training and personal protective equipment (PPE). The DAFM Code of Practice for Prescribe Burning recommends six people are involved in a controlled burning operation. There is also specialist firefighting equipment required to both start the fires and to control them. Therefore, each commonage/participant, who completes the course on controlled burning and sets up a burning group, can apply for funding to source a controlled burning pack to include; all PPE required for six people, fire starting equipment, suitable hand tools (beaters; shovels; rakes; Pulaski's), suitable water pumps/ sprayers for damping down vegetation and flames and any other equipment deemed necessary. The cost of the equipment and course is in the region of €2000 per CG.

Controlled Burning Operations: The burning of vegetation on the uplands must be done in a planned and controlled manner. A fire management plan for the upland can be completed following the formation of a burning group. The plan, based on the ecological baseline survey recommendations, will include specific details of the areas to be burnt and the timing.

Six people required for a controlled burn operation. A 10 hour day is planned, to allow time for the burning to take place and also the monitoring of the site afterwards to ensure it is completely out. The cost is €900 per day of controlled burning based on the farmer's time at €15 per hour. An average of three burning days per year per CG (subject to permission & weather conditions) will cost €2,700.

Mechanical swiping/cutting of vegetation: This may be an option on certain sites where terrain and access are suitable as an alternative to burning or in conjunction with burning as part of a larger vegetation control plan. Machines may vary, but have an average rate per hour of €55. Depending on the type of vegetation, ground conditions, terrain, etc., work rates less than 0.2 to 0.8 ha per hour are achievable.

Creation of Firebreaks: Some areas of the Wicklow uplands border with forestry. Currently, there are very few fire breaks still in existence. These are essential to prevent fires, both wildfire and controlled fires from spreading into the forestry. Firebreaks for heather dominated areas should be up to 3-6m wide. Fire breaks are made by mechanical means, using a track excavator or a tractor with a suitable cutting/swiping attachment. Costs; Track machines: €55 to €70 per hour; Tractor and attachment: €55-€70 per hour.

Creation of fire control lines: These are similar to fire breaks in that they prevent fires from passing over them. However, they are designed for use in controlled burning rather than for preventing fires. They do not have to be as wide as firebreaks and for a good burning group they can be as narrow as 1m wide where they are used for lighting the fires. These fire control lines are created in advance of controlled burning. They greatly increase the capacity of a burning group to control their fires and allow for a greater number of small burns to be carried out the same day. Costs; Manual cutting with brush cutters: €19/hour (€15 per hour for labour and brush cutter hire at €4/hour). The annual cost per commonage is €1,520 based on an average of 80 hours per commonage. This activity might be front loaded in the earlier pilot years and will form part of a controlled burning plan for the commonage. Machine cutting: This would be included as part of the mechanical cutting/swiping of vegetation measure.

Providing Infrastructure: There has been a general deterioration in the infrastructure associated with farming the uplands. The infrastructure includes; gathering pens for taking stock off the hills; sorting facilities; and access routes/roadways. It requires that stock must be brought down to the lowland farms for routine jobs including shearing, drafting, dosing, and vaccinations and dipping. Good infrastructure will encourage farmers to keep stock on the uplands. The creation of any infrastructure requires permission from NPWS. The pilot will provide funding towards the cost of the upgrading/provision of these facilities. Remuneration will be based on TAMSII standard costs where available.

Shepherding: Sheep must be herded while on the uplands. This is required to help "settle" sheep on their own areas, check for problems, herd sheep on or off areas to comply with the grazing management plans and to monitor sheep condition and health. There is an aging population of farmers in the Wicklow/Dublin uplands and many younger farmers have off-farm employment. This creates a shepherding problem. Therefore, each CG can claim a shepherding allowance. The frequency of shepherding varies and is most frequent just after turning out to the hills. In general, they should be seen on average at least twice per week over a six month grazing season. The CG will be required to keep records of who does the shepherding and when it is done for payment purposes. An option will be included to issue a handheld GPS device to each CG takes on the shepherding option. This can be used to monitor the shepherding activity and also will identify what areas of the hills the sheep graze and for how long. It is proposed for the first two years a six hour shepherding allowance will be paid. This will cost €120 per shepherding event based on €20 per hour for one person and their trained sheep dog. From the third year onwards, payment will be based on actual time spent shepherding or an agreed rate per shepherding based on the findings from the first two years monitoring of this activity.

Educational Visits: A possible activity could be where the CG or farmer makes an agreement with the local school to provide access and talks to school classes on the history and ecology of their uplands. This may require some research to be conducted to get all the information and posters or brochures or information leaflets to be printed. This can be done in conjunction with the CGs or farmers own assessment of uplands that is part of the development and monitoring of the management plan. Additional research costs and the preparation of the teaching material can be claimed for this. A payment of €100 to €200 per visiting group can also be claimed based on having at least two CG members hosting the visit.

Cattle grazing supplement: Cattle grazing on the uplands was common up to relatively recent times. Cattle grazing can be important for the control of certain species of plants, particularly Molinia and bracken. The nature of the cattle grazing can provide a greater range of post grazing plant heights and the trampling can break up bracken root systems and tussocks of Molinia. Cost; It is proposed to pay €300 per livestock unit of cattle that are grazed on the uplands for a period of at least 4 months, including May – June for the control of Molinia. This cost is based on loss of production and increased veterinary costs.

Study Trips: Each year a study trip will be organised for the CGs and upland farmers. The objectives of the study trip will be agreed by the CGs and the Project Team will make the necessary arrangements. It is anticipated that there will be one representative from each CG and one upland farmer participating in each trip. The initial focus might be on the operation of the commonage groups in the UK. The estimated costs per participant for such a three day study trip, including travel and accommodation is approximately €500. This is based on Teagasc experience in organising similar trips.

Potential Auction Payment Scheme activities: The following is a list of options to provide the CGs with ideas for the Scheme. Options are not confined to those listed below. It is envisioned that the Project Manager will help with the development of these ideas into options for the course of the pilot. However, the long-term intention is that participants will do it themselves.

- Provision of informational/educational signage at the entrances to the uplands. May be based on history, plant species present, birds nesting or feeding on the uplands, rare species or species of importance located on this upland area, etc.
- Options to encourage new young farmers into hill farming
- Options to encourage the supply of suitable hill sheep for those trying to build up numbers.
- Guided tours/informational walks for groups or the general public
- Creation of wildfire control groups in association with the local fire service, help fight wildfires when they occur
- Local issue with dumping, walkers, dog worrying, etc.
- Rush cutting
- Bracken cutting/trampling/rolling/strimming
- Drain blocking
- Removal of grazing (temporary or permanent)
- Destocking
- If public access is provided upgrade/works to access tracks, stiles, etc.
- For badly damaged areas of bare peat, proposals could include the use of mulches and soil stabilizers, repeated applications of nitrogenous fertilizer, sowing with macerated moss fragments and establishment with native species, as well as exclusion of grazing animals
- Vary grazing species and type (sheep/cattle/goats/horses/ ponies, breed, age, sex)
- Changes to associated practices (supplementary feeding, presence and nature of shepherding practices, use of vehicles)
- Fencing of rare/protected plant populations e.g. around cliffs/rocky outcrops
- Control of predators for the benefit of rare nesting bird species
- Deer control
- Measures to protect features of archaeological interest
- Areas of bare peat with no suitable nearby seed bank may be revegetated by importing dwarf shrub seed
- Heather restoration on Molinia dominated areas

Once the plans are agreed by the CG, they will be sent to the OG for approval (c.f Appendix 4.3, 4.4). Some plans may require an Appropriate Assessment. The need will become apparent during the plan development and the necessary steps taken to get one completed in a timely manner. The involvement of OG members during the process will assist with this aspect.

It is envisaged that this process will be completed within 12 weeks. The objective is that implementation of plans can begin at the start of year 2. The Upland Management Plans for the non-commonage farmers will also be completed by the end on month 12, for implementation at the start of year 2. For the other three CGs this may not be possible. However, the process may be faster based on the experiences gained with the first two CGs. The pilot risks associated with some spillage are considered to be small because of the low level of upland activities in late winter and early spring.

Commonage Group Training Requirements: The SUAS pilot requires a significant change for participating farmers in their approach to working together, their inputs to developing Commonage Management Plans and to implementing them within the proposed SUAS pilot framework. Training will be an essential input to supporting them through this change process. The actual training needs and learning outcomes will become more apparent on an on-going basis during the pilot. Each group will be asked to identify their particular training needs and to submit them to the Project Team. Based on these, the Project Team will schedule and arrange these sessions in conjunction with the Chairpersons. Priority will be given to those training needs most requested. Therefore, the actual training to be offered is difficult to predict and it is proposed that up to eight training sessions will be offered.

Reporting: The CG and two upland farmers will prepare and submit a short report on Year 1 activities before the end of the year. This will include a description of the activities successfully completed and a copy of the agreed Commonage Management Plan. The primary focus will be the learning outcomes from the establishment of the CGs and the development of the Commonage/Upland Management plans.

4.3 The implementation of Commonage Management Plans —

Following the formation of the CGs and the approval of the five Commonage and two upland farm Management plans at the end of year 1, the operations of the pilot are focused on the implementation and annual review of the management, the launch of the Auction Payment Scheme, dissemination activities and reporting (financial & progress) These activities are summarised in Table 4.3.

The estimated cost for this activity is just under €443k in years 2, 3 and 4. It is made up of farmer time costs (€60k), payment for implementation of plan activities (€261k), external consultants (€12k), direct project costs (€110k)(Project Manager and OG time, Room Hire). In year 5, there are additional external consultants and dissemination costs of €32k.

A brief description of these activities is provided below in the table. However, it should be noted that these represent only the planned activities. Additional activities may be involved if and when required in response to unforeseen circumstances.

The CGs will play a leading role in the delivery of Action 2. Their activities will encompass all aspects of the on-going management of the pilot on the ground. At all times the Project Management Team and the OG will be managing and supporting all of these activities.

Table 4.3 A summary of the SUAS pilot actions in Years 2, 3, 4 and 5

	Farmers (Number)	Project Management Team	Operational Group	External Consultant	Timing (month)
CG Meetings (~ one per month)	٧	٧			13- 60
Monitoring of Commonage Management Plan implementation	٧	٧	٧		All months
Record keeping & Reporting	٧	٧	٧		18, 24, 30, 36, 42, 48, 54, 60
Review of annual biodiversity monitoring report	٧	٧	٧	√ Ecologist	23, 35, 47, 59
Review of annual farm performance data	٧	٧	٧		23, 35, 47, 59
Review and update of Commonage Management Plans	٧	٧	٧		18, 24, 30, 36, 42, 48, 54, 60
Preparation, review and evaluation of auction payment bids.	٧	٧	٧		11, 17,23, 29,35,41,49
Review of auction bid projects/activities		٧	٧		19, 25, 31, 37, 43, 50, 57
Commonage Open Days	٧	٧	٧		18, 30, 42, 54
Engagement with external stakeholders	٧	٧	٧		All months
Budget reviews and payments	√	٧	٧		18, 24, 30, 36, 42, 48, 54, 60
Development, implementation and review of annual project dissemination activities	٧	٧	٧		Months 2, 6, 8 and 10 each year.

Commonage Group Meetings: As described above for Year 1 but with the following additional agenda items. There is a basic requirement for monthly meetings of the CGs. The objective is to keep everyone informed and updated on the current activities, plan future activities and deal with any issues that may arise. It is expected that all members will attend. Records of attendance and a summary record of decisions made or actions to be undertaken will be required. As noted above, the meetings will be attended by a member of the Project Team who will assist and support the working of the Group. These meetings will provide an opportunity to invite guest speakers who can provide knowledge and/or expertise that the group may require in the execution of their agreed work programme. Twice annually, in January and October, the CG meeting will be combined with a plenary session. The objective is for each CG to share progress and learnings and to provide mutual support.

Some the activities that will be covered at the monthly meetings will include:

Monitoring Commonage Management Plan Activities: This will be an agenda item at every monthly CGs meeting. As noted above, progress with implementing actions will be checked against the planned implementation timelines. Where issues arise, solutions to address them will be identified and implemented. The Project Management Team member, in conjunction with CG members, has the responsibility for ensuring the issues are logged and resolved. In some cases it may be necessary for the issue to be raised with the OG to provide a resolution. Records of the activities, particularly in relation to the activities and outputs from Action 2, will contribute to the evaluation of their outcomes and to the bi-annual project progress reports. DAFM will be informed where a major disruptive issue arises that may have implications for the pilot.

- **Commonage Group Training Sessions:** As described above in Year 1.
- Review of annual biodiversity performance data: The ecologist will conduct an annual monitoring review of the biodiversity in each of the five commonages. The objective is to assess any changes that have occurred. The monitoring will, if possible, also assess the impact of the measures implemented to date. The ecologists will provide a report including any recommendations required. The results of the monitoring outcomes will be presented by the ecologist and discussed with each of the individual CGs, the two upland sheep farmers, the Project Team and OG. On the basis of the monitoring results and discussion, any new actions required or the cessation of any on-going actions, will be integrated into the updated Commonage Management Plan for the following year. This will contribute to the learning as we go for all participants. Helen Sheridan and Catherine Kenna of the OG will provide support and expertise with this activity.
- Review of annual farm performance data: This will be undertaken by a member of the Project Management Team in conjunction with Frank Campion of the BETTER Sheep Programme. It will be dealt with as generally described for the biodiversity review above. Declan Byrne and Pat Dunne of the OG will provide support with this activity.
- Review of water quality programmes: The results of the water quality monitoring programmes will be reviewed by the CGs in conjunction with Sinead Hurson of the OG. If a response is required, it will be discussed and agreed for implementation in the revised management plan.

Preparation, review and evaluation of Auction Bid Payments for mini-projects/activities: The objective of this innovative measure is to promote learning about the problems faced by the CGs in their commonages. It will also facilitate farmers, possibly in some cases in conjunction with stakeholders to come up with local solutions to local problems. It is proposed that €50,000 per annum for four years (late year 1 to late year 4) of the pilot will be allocated to this initiative. The budget allocation is based on the expectation that each CG and the two hill sheep farmers will apply for projects/activities valued up to €10,000 annually. The CG will be notified bi-annually by the Project Team of the call for mini-projects/activities. The call will provide some guidance on project ideas/activities. Some of these are listed below under Action 2 (c.f. below). However, it will operate as an open call. Generally, it is envisaged that these will be short term project/activities that will run for less than 12 months. Following notification of the call, CG members will be asked to come forward with their ideas. The CG will discuss these and select one to submit. The Project Manager will then assist each group to prepare a short submission using a template similar to the one shown below. The applicants will orally present their proposals to the OG and an external reviewer. The decision to approve the application will then be made. The assessment criteria will be based on how well the proposed miniproject/activity contributes to a successful pilot project outcome and the capacity of the CG to deliver.

SUAS Mini-Project/Activity Application From

Please consult with Project Management Team when filling out this application form.

Commo	nage Group Detail	s
_		
1.	Name of Group:	
2.	Project Title:	
3.	Commonage	
	Group Chair	
4.	Telephone:	
5. Ema	il address	
Project S	Summary	
(500 w	rords)	
	- I D C'I -	
(200 w	ed Benefits ords)	
Estima	ted Costs	

Chapter 9 provides a more detailed description of the dissemination activities. A short summary is given below.

Commonage Open Days/Evenings: Each of the CG will be required to organise at least two events in years 2, 3 and 4 of the project. The first is where the target audience is the upland farming community and the second is where the target audience is non-farming external stakeholders particularly those in the Wicklow/Dublin area. The event will be hosted by the relevant CG. They will be supported by the Project Team and the OG. They are an integral part of the SUAS Dissemination and Outreach Plan and consistent with Guiding Principles 3, Local, and 5, Respect and Partnership. Larry O'Loughlin of the OG will provide the expertise with this activity.

Engagement with External Stakeholders: The objective of this activity is to develop and build new relationships with external stakeholders and to use it as a platform to enhance the pilot project activities and as a mechanism for dissemination. A list of the external stakeholders is provided:

Table 4.4 A non-exhaustive list of SUAS Stakeholders

SUAS Stakeholders							
Irish Farmers Association	Department of Defence – rifle ranges						
Macra na Feirme	Mountaineering Ireland						
Irish Natura & Hill Farmers Ass.	Hill Walking Clubs						
National Parks & Wildlife Services	Gun Clubs						
Woodlands of Ireland	Dublin Wicklow Mountain Partnership						
The Forest Service	Dublin Naturalist Field Club						
Coilte	Local Primary & Secondary Schools						
Birdwatch Ireland	Heritage/biodiversity Officers of adjoining Local Authorities						
Irish Wildlife Trust	Mountain biking community						
Deer Management Groups	An Oige						
Wicklow County Council Fire Service	Tourism Ireland						
Inland Fisheries Ireland	Recreational Users via magazines such as Oursider						
Deer Management Groups	Sport Ireland re national trails and waymarked routes						
LAWCO	Irish Water						

The activity will involve a pro-active approach to constructively engaging with external entities that up to now have not functioned effectively, and where relationships have been strained.

This activity will also focus on developing collaborative projects with external stakeholders. Where a common interest is identified, that involves the CG and one or a number of the external stakeholders, and especially where funding opportunities are identified, the objective will be to involve the stakeholder in the preparation of a joint project application. Other possible examples include collaborations with i) LAWCO on water quality issues ii) the IFA's SMART Farming Programme (https://www.ifa.ie/smart-farming/) – a collaborative and voluntary initiative focused on improving farm returns and enhancing the environment iii) the restoration/development of upland gully woodland in collaboration with Pro Silva Ireland/ Woodlands of Ireland/Forest Service/NPWS.

However, such initiatives do not necessarily require funding and mutually beneficial initiatives can and will be pursued. Indeed, this is an area where the CG could apply for funding under the auction payment scheme activity.

To illustrate a potential collaboration the following example is provided. At one of the pre-submission information meetings we were approached by Wicklow bee keepers. They subsequently submitted an expression of interest in being involved in the pilot (Appendix 4.5).

The engagement with stakeholders will be led by the Project Team and the Chairpersons of the five CGs. It will be initiated by inviting these groups to attend an initial meeting, to inform them of the SUAS pilot, and seek their co-operation with implementing it. The outcome will be an expression of interest from the stakeholders to be involved with the SUAS pilot and how they consider contributing to an enhanced project outcome.

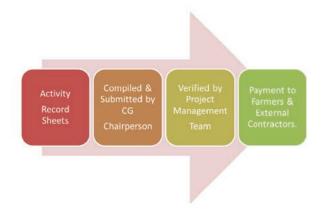
These expressions of interest will be followed up by the Project Team and the CG. A strategy for further engagement will be developed and implemented. It is worth noting that WUC has representatives of many of the external stakeholders on its council and through its membership. The OG members, Sean Byrne, Pat Dunne, Helen Sheridan and Larry O' Loughlin will contribute to this activity.

Farmer Payments and Reviews: Sole responsibility for the finances and budgets of the SUAS pilot rests with WUC (c.f. Section 8). An innovation in SUAS is that responsibility for the preparation and submission of the farmer payments is made by the CGs rather than by individual farmers. Tom Doyle, an OG member will provide support with the reviews.

Record Keeping: This is an important activity of the pilot. It provides the evidence for farmer payments for their project activities, payments to external contractors and the data for monitoring, evaluating and reporting of the pilot's activities.

It is proposed that this activity will be managed by the CG. A simple model based on the activities involved in Actions 1 and 2 will be used (Fig 4.7).

Fig. 4.7 A simple model of recording farmer activities and payments



For each of the agreed activities in Actions 1 and 2 an Activity Sheet will be created. For example, CG meetings, CG Chairperson's time, attendance at training sessions, controlled burning carried out, flock management (shepherding), etc. will be made available to CG members. The Activity Record sheet will record the names and time input of the farmers participating in the activity and any approved additional receipted costs incurred. Farmers participating in the activity will be required to sign in their time input based on start time and finishing time. Invoices for external services provided to support the implementation of an activity will be collected and signed off by the CG Chairperson and submitted the SUAS office. Each CG will be allocated a small allowance to provide CG admin support for the CG and in particular for the Chairperson. The time allocation proposed is 1 hour per week in the last six months of year 1 and 1.5 hours per week subsequently. Tom Doyle of the OG will provide support with this activity.

No costs submitted by individual CG members will be accepted by the Project Team. The non-commonage upland farmer will submit their costs directly to the Project Team. Following

receipt and approval, they will be forwarded to the finance office for payment. Payments involving external contractors will be made directly to them within four weeks of receipt. Payments for farmer time inputs will be made on a six monthly basis. Tom Doyle of IFAC, also a member of the OG, will provide expert input in the development of the process.

Any issues arising in relation to payments made to individual members of the CG will be addressed within the CG. In event of failure to resolve the issue, it will be considered by the CG Chairperson and the Project Team. If this fails, the issue will be taken to the OG for final resolution.

Where issues remain following this stage in the process, the OG in conjunction with the Project Team, the Chairperson and the member involved, will agree to external arbitration. The decision of the external arbitrator will be final.

This will also be the structured approach to all conflicts arising in the pilot.

4.3.5 Developing an Electronic Activity Recording System •

It is proposed that an "electronic activity recording system" (EarComm) will be developed during the project animation process. The app will be designed and developed to provide farmers with a frictionless experience in recording the time and eligible costs associated with implementing agreed activities. A significant multiplier is that it will also provide data that will be used to evaluate the efficiency of the activities in terms of return on investment. It will ensure the data integrity of the activities and allow approval and authentication of inputs prior to further processing for payments. It is anticipated that the approval levels for payments will be configurable on the platform, such that farmer payments and other project expenditure is visible to the different stakeholders, including the CG chairpersons, the Project Team and the Finance team.

Activity recording process: The objective of this project animation task is concerned with collecting data on the activities implemented. This is required to provide the evidence to develop robust recommendations in relation to their effectiveness and cost at the end of the pilot. In addition, from the farmer's perspective it provides a smart way to record their activities. It is recognised that there will be issues with farmer uptake. However, considering the cost benefit ratio it does not pose a risk. There is potential that a number of 'champion' farmers can be recruited initially to use it. Their feedback and experiences will help with creating a greater uptake.

Farmers will record their activities using a smartphone app that has drop down menus for the nature of the activity (spraying, burning, fencing, roadways, meetings, etc), the time spent, and the machinery and equipment usage involved. Based on the farmer ID required for app download, entered data will automatically be attributed to the CG in question. Geolocation capabilities may be enabled if data is being recorded at the activity location (Fig 4.8)

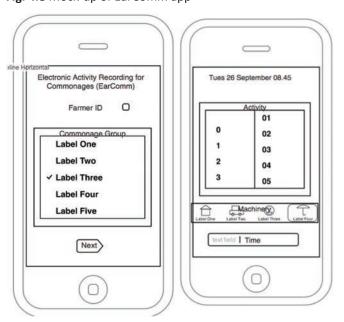
Fig. 4.8 A screen shot of the geolocation utility.



All records are time and date stamped, and will incorporate intelligent sanity such as parameter tolerance for quantified data entry (pre-populated fields, appropriate units of measure, rational quantities and volumes). The a priori validation of data improves data integrity and minimises the administrative workload for the farmer.

The design of the app will incorporate usability features such as legibility (screen layout, text size, use of icons etc), simplicity and robustness. In particular, the user interface will incorporate design features such as spin wheels for rapid and accurate data capture. Figure 4.7 shows a mock-up of the EarComm prototype.

Fig. 4.8 Mock-up of EarComm app



The app will record the data directly to the cloud based platform, but with a local storage capability if out of coverage. Data will be fetched automatically from the farmer's devices whenever Wi-Fi connectivity is available. Farmers may upload other types of information (photos, videos, voice messages, memos) where appropriate in the reporting of commonage status.

Activity administration: The CG and SUAS administrators will have real-time access to the data gathered from the eight farmers in the five CGs and the two upland farmers, and will

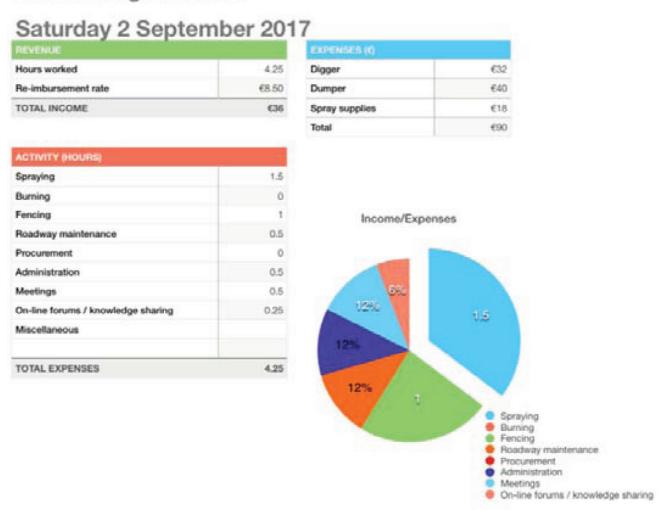
be able to support farmers in the accurate and timely uploads of activity information. An admin account and screen sharing feature will allow the farmer to demonstrate issues and suggestions to the administrator, who will, in turn, be able to configure layout and design features for the individual, according to their level of experience with digital technology.

In-app notifications and alerts to farmers may be configured based on the level of comfort with application. The farmers will be encouraged to share their experiences with other commonage farmers (and project personnel) via an in-app chat feature (akin to SnapChat). The same channel will serve to disseminate updates regarding project progress, material procurement and other commonage information. One single app with will essentially act as the conduit between the project team and operations.

Once approved by the administrator, the data will be passed on to the CG Chairperson, who will approve the submission for payment. Reports may be generated at this stage to support management decision making. Figure 4.8 provides a visualisation of proposed commonage activity data.

Fig. 4.9 Commonage planning tool

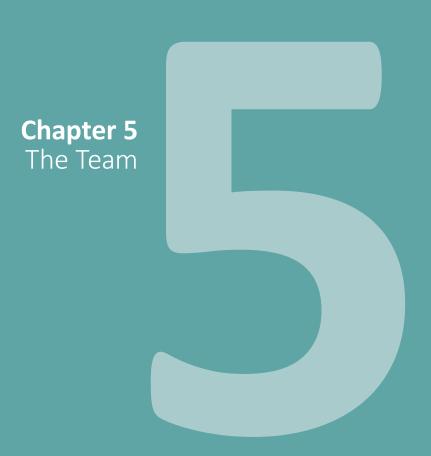
Commonage Planner



Once the submission has been analysed by the CG, the Project Team will, in turn, approve the operational data for farmer remuneration. The Finance team will receive a copy of the payments file as well as the associated activity log. It is anticipated that a digital payments platform for payments will allow greater flexibility for the Finance team to monitor, control and disburse in real time. Famer engagement will be enhanced with the rapid turnaround time between activity logging and payment. Project control will therefore be increasingly real-time based on current activity levels and resource consumption. The data analytics functionality will allow real-time visualisation of project expenditure, which, when correlated with yield data (sourced from the management plan), will provide project management and funders with visibility of impact in a manner that will support strategic decision making.

The estimated cost of developing the EarComm is €15k.







5.1 Introduction

The SUAS pilot is proposed by WUC in partnership with Teagasc, and the latter is the lead applicant. Pat Dunne of WUC is the Lead Partner

An 12 member Operational Group has been assembled to implement the pilot together. Each member was selected on the basis of having the required technical expertise and experience in his/her specific area of responsibility, in the conduct and delivery of the pilot. Collectively, they cover

- Upland farming production
- Ecology and agri-environment
- Water quality and biodiversity
- Ecosystem conservation
- **Upland** farmers
- Rural development and adult education
- Communications and Dissemination
- Finance and administration

All OG members will contribute individually and collectively to fully implement the pilot and bring it to its stated conclusions. All will operate at the highest level of their professional standards and ethics. They will support the Lead Partner, participating farmers and stakeholders with the i) on the ground management and delivery of the two SUAS Actions and their associated Activities; ii) facilitating and ensuring the required level of internal pilot dialogue and engagement with local and external stakeholders; iii) data collection and analysis for the development of technical and financial periodic reports for DAFM, on the progress of activities performed, indicators achieved and the results to date; iv) compliance with procurement and data protection regulation; v)ensuring the visibility of the pilot.

The ethos of the team is firmly rooted in the belief that the innovations proposed in SUAS pilot will make an important contribution towards the development of future locally led results-based AES for Irish uplands. The Team strategy is to create an open respectful environment that will facilitate dialogue in a common language for the exchange and development of the knowledge that will be required to provide the farmer participants and their local stakeholders with the capacity and support to fully implement and deliver on all of the actions and activities proposed in the SUAS pilot.

5.2 Wicklow Uplands Council -The Lead Applicant ____

WUC is an independent voluntary organisation representing over 50 diverse member groups and individuals in the Wicklow Uplands. Members include a broad spectrum of interests which are represented on a four panel structure;

- 1. Farming & Landowning
- 2. **Environment & Recreation**
- 3. **Economic & Tourism**
- 4. Community

Since it was established in 1997, WUC has taken a partnership approach to sustainable development and promotes projects which bring value to people who live and work in the Wicklow uplands and those who use it for recreational purposes, in line with its core mission:

'To support the sustainable use of the Wicklow Uplands in consensus and partnership with those who live, work and recreate there'.

Consensus and Partnership WUC is committed to work for the sustainable use of the Wicklow Uplands in partnership with statutory stakeholders in the spirit of Local Agenda 21. It recognises the necessity for and benefits of collaboration and partnership in developing projects which bring value to the uplands. Consensus building is central to the work of WUC. Since inception, the Board, comprised of 27 Directors, has never voted on a single decision. By its nature a consensus approach ensures that all voices have equal say and all minority concerns are addressed before a decision is made. The development of the SUAS proposal has the full support of all directors. WUC has a proven track record of delivering innovative projects which bring value to wider uplands area and has often led the way nationally.

A Participatory Approach to Best Management of the Upland Habitats in County Wicklow:

Over the past decade WUC has actively engaged with upland farmers and stakeholder organisations (e.g. NPWS, Coillte, Mountaineering Ireland) to develop a consensus in the best management of upland habitats. In 2011, WUC established a Vegetation Management Sub-Committee with the aim of supporting High Nature Value Farming in the Wicklow/Dublin uplands. The idea evolved from a visit to the then Burren LIFE by a group of WUC farmers who saw the success of this locally developed AES in supporting farming and protecting and enhancing local biodiversity.

The Vegetation Sub Committee, comprised of local upland farmers and representatives from WUC, NPWS, Teagasc and the Irish Uplands Forum (IUF). They sought to achieve a consensus on the best management of the Wicklow/Dublin uplands. The Sub-Committee held over 30 meetings, including site visits (Plate 5.1) and field trips and it became apparent to them that there was little evidence available to them to assist in addressing their challenge.



Plate 5.1 Vegetation Group Site Visit, 2011, Brockagh, Co Wicklow

In response, they commissioned Mary Tubridy and Associates to carry out a 'Study to Identify the Best Management of the Wicklow/Dublin uplands in 2011. The study identified the poor to bad conservation status of the upland habitat and the decline in upland farming activities. The report recommended that a targeted AES was the solution. The study was launched

at WUC's 2013 AGM by then Minister for Agriculture, Simon Coveney TD.

Following on from the Tubridy report, WUC, Teagasc and NPWS have developed a strong working relation through the Vegetation Sub-Committee. They have worked together to progress the uplands challenge. They organised or contributed to a number of events focusing on upland vegetation management during that period. Key events included; a biodiversity and uplands farming workshop July 2015 (IUF, WUC), Bracken Workshop April 2015 (WUC, Teagasc), Controlled Burning Workshop Jan 2016 (WUC, Teagasc, NPWS) and a Mechanical Vegetation Removal Demonstration September 2016 (Teagasc, NPWS) (Plate 5.2).

In 2015, Walsh Fellow Fergal Maguire completed his thesis 'Farmers attributes, management practices and attitudes associated with commonage use'. Maguire identified the reasons behind the decline in hill sheep –farming following interviews with and a survey of upland farmers. It is worth noting that Helen Sheridan and Catherine Keena of the OG were the cosupervisor of the thesis. Declan Byrne, also an OG member and Fergal's work colleague, provided key support with the survey and interviews.



Plate 5.2: Teagasc workshop demonstrating mechanical removal of vegetation, September 2016

The continuing and developing collaboration provides consistency and strength to WUC as the Lead applicant. The consistency is important, and is evidenced by some members of the OG having extensive knowledge of the challenges in the Wicklow uplands. It is clear from their achievements they have a strong working relationship with each other and most importantly they have established an open and productive rapport with upland farmers and stakeholders. The history, consistency and strong relationships provide the foundation on which WUC, in conjunction with the Project Team and OG, can successfully lead, implement and deliver the SUAS pilot.

WUC has delivered numerous projects since it was established. It has a proven track record of delivering innovative projects which provide value for money and support the sustainable use of the uplands. These include:

PURE Project (Protecting Upland Rural Environments): The Pure project was innovative and the first of its kind in Ireland. It was established in 2006 to tackle illegal dumping and flytipping in the Wicklow/Dublin uplands (Plate 5.3). This locally led project is a partnership between Wicklow County Council, Dun Laoghaire Rathdown County Council, South Dublin County Council, Coillte, National Parks & Wildlife Service, and WUC, and funded by The Department of Communications, Climate Action and Environment. To date, PURE has removed over 3000 tonnes of rubbish from the uplands landscape. WUC employs the project manager and administers the project account. The wider applicability of the Pure project is evidenced by the fact that it is used as the model for the new National Anti-Dumping Initiative launched in March 2017¹.



Plate 5.3 PURE Truck removing illegal dumping

Sustainable Recreation Opportunities: WUC has initiated and participated in a number of projects to improve and manage the recreational use of the Wicklow uplands. The Council's approach to achieving agreed access on private land was recommended as a model template by Comhairle na Tuaithe. Most recently WUC has supported the development of the Avonmore and Sugar Loaf Way, walking trails which link public transport facilities to the wider upland area. This provides the opportunity for greater independent access to the area and encourages longer visitor stays, providing a boost to the local economies.

5.1.2 Teagasc – the SUAS partner

The SUAS pilot has been developed in partnership with Teagasc. Teagasc – the Agriculture and Food Development Authority – is the national body providing integrated research, advisory and training services to the agriculture and food industry and rural communities. It was established in September 1988 under the Agriculture (Research, Training and Advice) Act, 1988. Teagasc is recognised for its leadership role in the delivery of independent science based advice and education. The organisation is responsive, efficient and independent and delivers a service that is development focussed, ensuring that the farming sector remains competitive, profitable and sustainable. Teagasc's direct involvement with the SUAS project will provide the opportunity to link into their experience and expertise through OG members Declan Byrne and Catherine Keena.

5.2 SUAS Structure -

The structure of the SUAS team is shown in Figure 5.1. It is important to note that CG is the primary innovation and pillar of the SUAS structure. The success of the CG will depend on the strength and leadership of each CG Chairperson. The other elements are there to support, encourage and facilitate the commonage farmers to achieve the project objectives.



Fig. 5.1 The structure of the SUAS team.

The SUAS pilot will require the employment of a full time Project Manager. This is a key post in the implementation and delivery of the pilot. He/She will be responsible for working with and providing assistance to the CGs throughout the duration of the SUAS pilot. He/She will work closely with the Lead Partner and members of the OG to ensure that the pilot is running efficiently and achieving its milestones (c.f. Chapter 7). The qualifications required for the position will include proven expertise or experience in project management; facilitation; mediation; translating knowledge; working with groups and report preparation. Desirable qualifications include knowledge of ecology, upland farming systems, rural development and knowledge transfer.

There will be an interval (up to 6 months) between the start of the pilot and the recruitment of the project manager. Pat Dunne, Declan Byrne and Owen Carton will work as 'interim' project managers until the recruitment process is complete. The objective is to ensure the implementation of the project can start immediately. The Project Manager will be employed through WUC for the duration of the pilot.

The Project Manager and Lead Partner will interact with the OG at their scheduled two monthly meetings. In addition, the structure provides for them to liaise on an on-going basis with the individual OG members when issues arise that relate to their particular area of expertise. It will take time to find a project manager with the necessary attributes and qualification and the recruitment process cannot be rushed.

5.3 The Lead Partner



Pat Dunne is Lead Partner of the SUAS pilot for WUC

Role: Lead Partner.

Pat has responsibility for the delivery and implementation of the pilot. The Project Manager will report directly to him. He will Chair the OG and will serve as the main point of contact between WUC and the DAFM. Pat will be instrumental in establishing the CG's central pillar of the pilot. His experience (outlined below), extensive knowledge of and enthusiasm for the Wicklow uplands and hill farming, has gained him the necessary respect and confidence of the local farming community, stakeholder groups and statutory bodies.

Relevant Experience: First and foremost Pat is an upland hill sheep farmer. He is known widely for his involvement with

both WUC and the IFA. Pat has been a WUC Board member representing the interests of farmers and landowners, since 2001. In 2011, he was elected as chairman of WUC's newly formed vegetation management Sub Committee. He has steered WUCs research and collaborations in the management of upland habitats. Pat was Vice Chairman of the Board of Directors for two years before stepping back to take a position as chairman of the IFA National Hill Committee in January 2014. He is the currently the Chairman of the IFA SAC project team, IFA representative on the Designated Areas Appeals Board, and represents the IFA on Comhairle na Tuaithe. Pats will be stepping down from his position as IFA National Committee Chairman at the end of 2017 following a full term in office. This will allow him to focus his full attentions on the SUAS pilot and take the lead of the project.

Pat is also a member of the Wicklow Mountains National Park advisory committee and is currently the Chairman of Wicklow Deer Management Partnership. Pat was one of the first farmers in the country to establish an 'agreed access route' on his lands. The route allows recreational users to cross his lands and gain access to the wider uplands area while acknowledging the rights of the landowner. The establishment of this route was seen as a model template for easing tensions between upland farmers and recreational users. He has the full backing of WUC in this position. He also has extensive contacts across the country within farming organisations and the media.

The Lead Partner functions are described in the Operational Group Agreement and shown in Fig. 5.2



Fig 5.2 The functions of the SUAS Lead Partner.

5.4 Operational Group Members —

The primary functions of the OG are specified in the Operational Group Agreement and summarised in Fig. 5.3. All functions contribute to ensuring that the project operates effectively and efficiently. The members of the OG have the range of expertise and experience to ensure, not only can they provide the knowledge to support the commonage farmers and stakeholders to achieve their pilot objectives, but also support the SUAS Project Team to fulfil their obligation in achieving a successful project outcome (Fig 5.3). Two of the members of the Operational Group are upland farmers as well as being members of WUC, including the Project Lead, Pat Dunne. WUC Co-ordinator, Brian Dunne, is also a member of the operational group. This provides a very important link to the many external stakeholders who are members of WUC.



Fig 5.3 The functions of the SUAS Operational Group

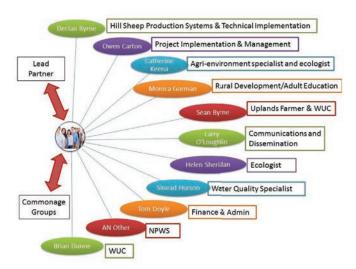


Fig.5.4 The operational group members and their areas of expertise relevant to SUAS.

Declan Byrne ____

Role: Hill Sheep Production Systems / Technical implementation.

Declan will play a key role in the SUAS pilot. He will have responsibility for supporting the OGs and two upland farmers in preparing and implementing their commonage/ farm management plans. A primary responsibility will be the development of the guidelines for activity payments in the uplands. He will be actively involved in supporting the development of the CGs and providing assistance to the Project Manager and supporting them throughout the duration of the pilot. Declan, in conjunction with the Project Lead and Project Manager, will be responsible for reviewing the farm performance records of the CGs at the end of each year and in adapting the activities planned for the following year if required. He will also provide an important link to the local Teagasc office and promote SUAS at events, discussion groups and conferences.

Relevant Experience: Declan has over 21 years working with Teagasc and has served as a Drystock Advisor in County Wicklow since 2000. During this time he has won the respect and confidence of farming community – especially the hill farmers. He has extensive knowledge of agri-environment schemes and been involved with the planning of REPS, AEOS and GLAS schemes. He has organised various farming events including four sheep discussion groups since 2012 and participated on a number of study trips on upland and commonage farming

issues, both in Ireland and abroad. He has also completed a recognised controlled burning course in Barcelona in 2015.

Declan has been an active member of WUC's vegetation management group since its inception in 2011 and organised a number of events on upland vegetation management and controlled burning through Teagasc during that period. Declan's ongoing work as a Teagasc planner brings invaluable local knowledge, contact and influence with farmers in County Wicklow.

Qualifications: B.Agr. Sc., M.Eng.Sc, H.Dip.RECM

Helen Sheridan

Role: Ecologist

Helen will have responsibility for providing expertise on ecology and biodiversity to the SUAS pilot. She will assist in the development of the commonage/farm plans by assisting in the translation of the results of the biodiversity baseline and annual monitoring into a language that farmers will understand. She will provide assistance and support in the annual review of the biodiversity and farm performance data. She will provide input to the development of the blueprint of results-based payment scheme for commonages. Helen's connection with UCD will also give the project a direct link with academia. This will also be an important route for the dissemination of information

Relevant Experience: Helen is a Farm Landscape Ecology and Agri-Environment Policy Lecturer in UCD, School of Agriculture and Food Science since 2010. She has carried out extensive agricultural research and was a post-doctoral researcher with the 'Agri Baseline' and 'AgBiota' research groups in UCD. Helen has an in depth knowledge of the international policies associated with agricultural biodiversity requirements. Her current research involves examining the implementation of international and agri-environmental policy at both a local and national level. Helen has extensive local ecological understanding of Irish agriculture and the Irish farmed landscape and how they connect with international and EU agri-environmental policy obligations and legislation.

Qualifications: B.Agr.Sc, PhD,

Monica Gorman —

Role: Rural Development/ Adult Education

Monica will play a key role in facilitating the formation of the Commonage Groups. She will provide support and identify solutions or training needs that may be required to get the CGs established. Monica also provides an important link with academia through UCD.

Relevant Experience: Monica is an agricultural extension and innovation lecturer in UCD, School of Agriculture and Food Science since 2013. Monica grew up on a Co Wicklow farm. She has held a number of senior management roles for a range of organisations in Ireland and Africa including; Oxfam, Self Help Africa, APSO, IUCN, Irish Aid and Concern Worldwide. Monica has carried out extensive consultancy work for a range of clients in the area of rural development, adult education, communications and organisational management

Qualifications: BAgrSc, MAgrSc, PhD

Larry O'Loughlin —

Role: Communications and Dissemination

Larry will be responsible for communication and dissemination activities. He will lead the development, management and overall implementation of the dissemination strategy and outreach plan. This will include seeking opportunities with local and national media.

Larry has extensive experience in the Knowledge Transfer Department in Teagasc, including farm advisory, education, agri environment, marketing and public relations. Larry is a past president of the Agricultural Science Association and was responsible for establishing the Family Farm of the Year Awards and served as an advisor to the Minister for Rural Development and Forestry from 1992 to 1994 and involved in the McSharry CAP Reform. During his time in Teagasc he was Chief Agricultural Officer in Wicklow, Kildare and Limerick, as well as Regional Manager in Cavan/Monaghan and Laois/ Kildare/Meath/Louth and Dublin, he served as Acting Head of the Public Relations Department on two occasions and served as Marketing and Business Development Manager from 2007 to 2010.

Qualifications: B.Agr.Sc



Sean Byrne =

Role: Uplands Farmer and Wicklow Uplands Council representative

Sean will represent WUC on the OG. He will play an important role in promoting SUAS among the upland farming community and provide advice to farmer's participating in the project. He has extensive local knowledge which will be vital in assessing the applicants for the project. Sean will also serve as a contact with the wider network of upland stakeholders through WUC.

Relevant Experience: Sean is an upland sheep farmer and founder member of Wicklow Uplands Council. He has held a position on the Board of Directors since its inception and been instrumental in the development of the organisation. He is currently the Chairman of WUC. Sean has long been an advocate of upland farmers and has had a long involvement with the Irish Uplands Forum (IUF). He has extensive experience working with key stakeholder groups in Wicklow including; holding a position on the WMNP Advisory Committee, an executive committee member of Wicklow County Tourism as well as being appointed as a member of the EPA advisory committee by then Minister for Environment Dick Roche. Sean has also run the very successful Lough Dan Guest House.

Tom Doyle _

Role: Finance & Admin

Tom Doyle of IFAC/IFAC Audit services Ltd will be responsible for the implementation of a financial system and controls, completion of annual reports in a timely and cost efficient manner. He will be responsible for accommodating external auditing as required by the project funders. This will ensure the smooth running of the SUAS Project on a day to day basis. He will provide support with the farmer payment reviews.

Relevant Experience: Tom is the manager of the Wicklow branch of IFAC audit services. He is currently the accountant for WUC and along with IFAC Audit services is responsible for completion of the annual audit

Owen Carton 🕳

Role: Project Implementation & Management

Owen will play a key role in the running of the SUAS pilot, its overall implementation and its management. He will serve as 'interim' project manager at the beginning of the project, with Pat Dunne and Declan Byrne, until a full time project manager is hired. He will be responsible for the preparation of the SUAS progress reports and the Commonage Handbook. His extensive background in research and project management will bring this experience to bear on the project.

Relevant Experience: Owen has extensive experience in the agri-environmental sector including research, research management, administration, operations, policy development, Foresight, and change management. In addition he has run successful research programmes and has project management experience at institutional (Teagasc), national and international levels. He secured €10m of competitive research grants in the period 2000 to 2007. He has a proven track record for collaboration at national and international level. He has operations and administration expertise in managing agriculture and food research at institutional level and has acknowledged people leadership strength. He is a recognized innovator and has made significant national contributions to the development of grazing management and Irish nutrient management planning. He has an extensive publication record in refereed journals (30+), technical articles (100+) and in the preparation of consultancy reports.

Qualifications: B.Agr. Sc, M.Agr. Sc and PhD from UCD.

Catherine Keena —

Role: Agri-environment specialist and ecologist

Catherine will support and contribute to the direction of the CGs through the OG. She will play an important role in the annual review of biodiversity and farm performance data. She will promote lessons learned from SUAS through the Teagasc Environment KT Programme of events, newsletters, media articles and discussion groups. Catherine will also provide a link to national agri-environment policy through her role as Teagasc Countryside Management Specialist. Catherine is a member of the Guild of Agricultural Journalists and has many contacts with national media.

Relevant Experience: Catherine serves as Teagasc Countryside Management Specialist. She is a member of the Teagasc Knowledge Transfer Specialist team who lead development and implementation of the Teagasc Environment Programme. Catherine's role is to provide national leadership, training and support on Biodiversity and Agri Environment issues and events, leading the Teagasc GLAS planning service including Commonage Management Planning through a partnership arrangement between Teagasc and an external service provider. She is currently the chair of Teagasc Working Groups on Biodiversity and Invasive Alien Species, and represents Teagasc on a range of national groups including National Biodiversity Steering Group, Campaign for Responsible Rodenticide Use, Natural Capital Forum, Burren Programme, Hen Harrier Project, National Rural Network Biodiversity Group, All Ireland Pollinator Plan and the Irish RAMSAR Wetland Committee.

Qualifications: B.Agr.Sc., BASIS Certificate in Crop Protection, M.Agr.Sc(Rural Environment Conservation and Management), DAFM Approved Adviser for FAS, GLAS and GLAS Commonage

Sinead Hurson

Role: Water Quality Specialist -LAWCO

Sinead will provide input and support with developing the approach to integrate water quality objectives and activities into the management plans. She will provide assistance in the drawing up a tender for the mapping of waterways associated with the commonage areas. She will make recommendations on a water quality monitoring programme at the exits of the commonages and facilitate the involvement of Wicklow County Council, who have statutory responsibility for water quality in the area.

Relevant Experience: Sinead is the Community Water Officer for the Dublin and Wicklow Local Authority areas. She has previously worked in Environmental Regulation for over 9 years with particular emphasis on Water Quality, Pollution and Waste Management. She has worked within Local Authority, the Northern Ireland Environment Agency (NIEA) and most recently the Scottish Environment Agency (SEPA). Her current role as Community Water Officer for Wicklow and Dublin, sees her facilitating and supporting community groups in relation to improvement and protection initiatives or projects relating to their water environment.

Qualifications: BSc Analytical Science, PhD Environmental Protection

Brian Dunne —



Role: Wicklow Uplands Council Representative

As Coordinator of WUC Brian will play a role in liaising with the OG and WUC's Board of Directors. Brian will provide assistance to the OG where necessary. He will play a role in disseminating information about SUAS to the members of WUC and partner organisations.

Relevant Experience: Brian is responsible for all the day to day activities of WUC. This includes running projects, responding to issues raised by members, representing WUC on a number of local forums, managing staff and reporting to the Board on a monthly basis. Brian has organised many events during his time as Coordinator and was invited to facilitate a workshop on Sustainable Farming at the 2016 EUROPARC conference. In a personal capacity he is involved in various local structures and committee groups.

Qualifications: BSc Environmental Biology, MSc Plant Biology

Enda Mullen -

Role: Wicklow Mountains National Park (WMNP) and NPWS

Enda will represent the WMNP and NPWS on the OG. Many farmers rent the sheep grazing within WMNP and therefore the NPWS will have a very important role to play in SUAS. Enda will be responsible for ensuring that all the farm/ commonage plans are drawn up fully cognisant of the obligations associated with actions carried out within designated areas. She will also work closely with the ecologists to ensure that Appropriate Assessment requirements can be met efficiently.

Relevant Experience: Enda is the District Conservation Officer with the National Parks and Wildlife Service in Wicklow. She is widely known among the upland farmers in Wicklow and has worked closely with WUC and Teagasc over the years on various upland projects and most recently has been involved in a cross-border fire management initiative.

Qualifications: Higher Diploma in Conservation Management and a MSc. in Protected Area Management A summary of the level of responsibility of the OG members in the main pilot activities is shown in Fig 5.5.

OG Member Name Activity Dissemination Progress Reports CG Establishment Annual Review Water Quality Measure Results Base d Handbook Training Finance Commonage **Payments** Pat Dunne Declan Byrne Owen Carton Monica Gorman Sean Byrne Larry O'Loughlin Helen Sheridan

Fig 5.5 A summary of the level of responsibility of the Operational Group members in the main pilot activities.

The main end user engagement with the OG members will be their involvement in the CG establishment, and the management plan development and monitoring. They will individually have end user engagement on an on-going basis that will be dictated by end users needs.

Sinead Hurson

Enda Mullen

Responsibility Level

MEDIUM

LOW

HIGH

5.4 Time Input of members of the Operational Group

OG members will provide six days per years for meetings with an additional six days per year for support. Additional support days may include conference calls or remote assistance. At certain times of the year the skills and expertise of members of particular members of the OG will be required more so than others e.g. finance.

Some members of the OG have agreed to provide additional days to SUAS as their expertise is crucial to the success of the project. These members will be involved in various aspects of SUAS, as outlined in section 5.3.

A summary of the estimated number of days per year for each of the OG members is given in Table 5.4

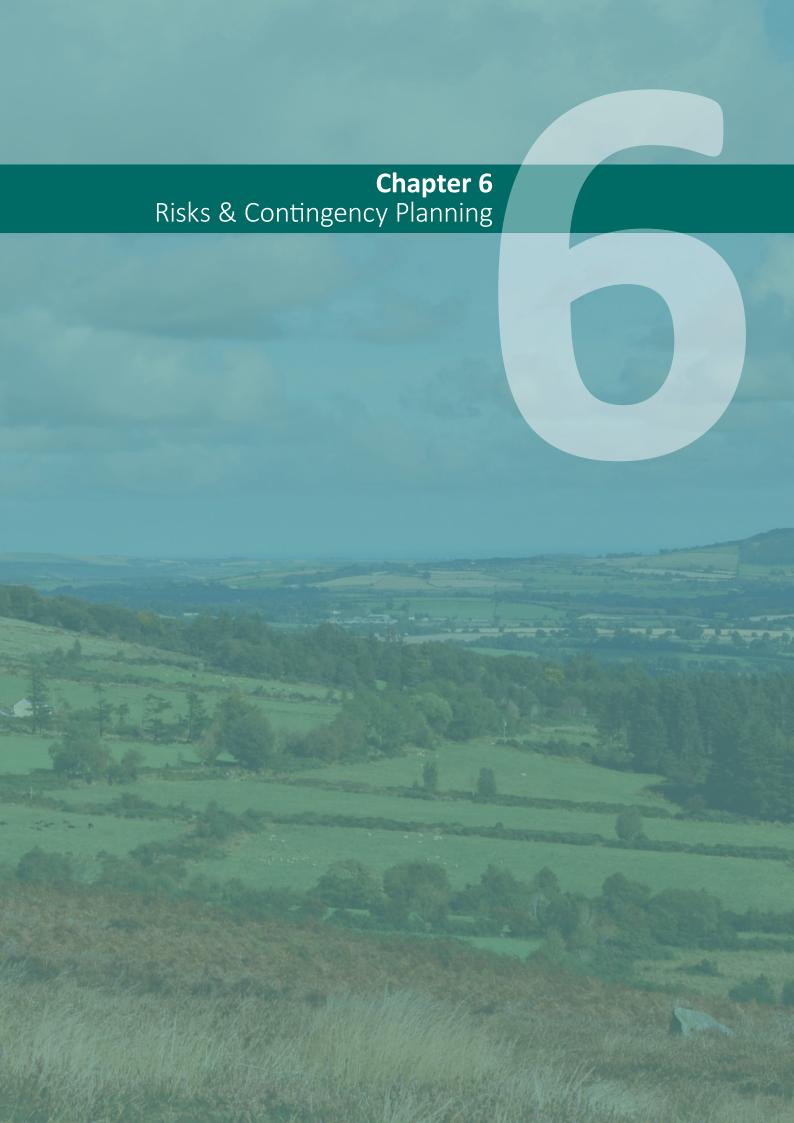
Table 5.4 Estimated days per year for each Operational Group member

Name	Meeting Days	Support Days	Additional Days	Total Days
Pat Dunne	6	6	144	156
Declan Byrne	6	6	20	32
Owen Carton	6	6	40	52
Catherine Keena	6	6	6	18
Monica Gorman	6	6	6	18
Sean Byrne	6	6	6	18
Larry O'Loughlin	6	6	20	32
Helen Sheridan	6	6	12	24
Sinead Hurson	6	6	12	24
Tom Doyle	6	6	6	18
Brian Dunne	6	6	6	18
Enda Mullen	6	6	6	18
Total				428

5.5 The Key Stakeholders

The planned engagement with stakeholders is outlined in Chapter 4. Many of the key stakeholders are already represented in the Operational Group.





6.1. SWOT Analysis

The objective of the SWOT analysis is to review the SUAS pilot proposal in terms of its overall potential to succeed. It identifies the pilots strengths and focuses on the opportunities it creates to develop an innovative upland AES. The risks associated with internal weaknesses and external threats are identified so that measures are considered to reduce the risks to the pilot.

6.1.1. SUAS Strengths

The strengths of the SUAS pilot project are:

- Strong "locally led" leadership.
- An OG with the skillsets required to support the farmers and stakeholders in successfully implementing and delivering the pilot.
- The farmers recognise their need for
 - the commonage group
 - the integrated commonage/farm management plan focused on long term farm viability.
- The pilot is ready-to-go.

WUC is the Lead Partner. WUC is a representative body for most of the uplands stakeholder groups for over 20 years. WUC, in the last 10 years has taken a leadership role in addressing the decline in the biodiversity of the Wicklow/Dublin uplands. This has resulted in a five year campaign for an agri-environmental scheme that will provide a sustainable solution to the management of the uplands. Therefore, WUC, have the proven track record and the stakeholder support to provide the strong and energetic leadership skills required for the pilot.

Teagasc is nationally and internationally recognised as a leader in agri-food research, knowledge transfer and education. It has the respect and trust of the farming community and the sector's stakeholders. In addition to the local knowledge transfer expertise in Wicklow, Teagasc has the resources to provide additional knowledge transfer and research support to the SUAS pilot.

The OG has a membership that includes the range of expertise and stakeholder connections required to successfully support and implement the project (c.f. Chapter 5). The OG includes two farmer representatives, who are also members of WUC. There are two Teagasc representatives, one, an adviser that has expertise and experience of upland farming systems and the other that is an agri-environmental specialist with over 20 years' experience in the development and implementation of national AESs. There are two UCD academics with expertise in biodiversity, rural development and adult training. Other OG members include an NPWS representative, one of the key stakeholders in the realisation of the project; an expert in project management and implementation, local water quality issues, public relations and financial administration. The strength of the OG will provide the farmers and stakeholders participating with the knowledge and practical on the ground experience they will require.

The upland farmers have already identified their need for commonage groups to help them address the viability of their farming systems and recognise the need for a facilitator to assist in making it work. The proposed SUAS Actions and Activities were co-designed by them to address their local concerns. A number of commonage farmers

have already expressed an interest in participating in the SUAS proposal if it is successful after two meetings in August 2017, held to discuss the proposed SUAS pilot.

SUAS has a very clear focus on long term farm viability. Therefore, the SUAS commonage/farm management plan integrates activities to improve biodiversity, protect water quality and the production efficiency of their enterprise. It is not a single issue scheme. Training will be provided to upskill farmers in the development and implementation of their plans. The Project Manager and the OG will guide and support them throughout the pilot.

The work and activities of WUC and Teagasc in bringing the stakeholders together to develop SUAS means that the project is ready "to hit the ground running".

6.1.2 SUAS Opportunities

The opportunities for the SUAS pilot project are:

- To evaluate a farmer and stakeholder "ownership" approach to developing and implementing a commonage agri-environmental scheme.
- To establish, evaluate and develop CGs as an approach to address the land management of commonages.
- To develop, implement and evaluate integrated commonage/farm management plans for commonages.
- To evaluate water quality status of the commonages, identify any potential risks and develop activities to address them.
- To propose and evaluate activities that they have identified and to address particular challenges on their own commonages.
- For the CG to take responsibility for recording their activities and submitting payment claims on a group basis.
- To publish a Commonage Management Handbook based on the experiences gained and lessons learnt during the project period.

SUAS offers the opportunity for farmers and stakeholders to take ownership of a scheme for their commonages and uplands from developing, implementing, monitoring and reporting. It will confer on them a unique degree of selfgovernance that allows the farmers, in conjunction with stakeholders to collectively take control of the pilot.

This is an innovative and ambitious action and it will require a major shift in farmer's and stakeholder's attitudes to the development and operation of an AES. They now have the opportunity to own, operate and deliver it rather than just implementing measures handed down to them.

Individual commonage right holders will be provided with the opportunity to establish a CG that will take responsibility for the management of their commonage. It will provide a platform for managing the commonage as a unit, rather than by the rights-holders acting individually. It will facilitate addressing general and specific commonage management issues. The group will encourage a more balanced and productive approach in dealing with key stakeholders on contentious issues and with other external stakeholder groups. Interactions between the groups and the key external stakeholders will be facilitated and coordinated by Project Manager and OG.

The CGs will have the opportunity to develop and implement

their integrated management plans. This will involve assessing the baselines for biodiversity, water and the individual farm enterprises. The CGs, in conjunction with key external stakeholders, the Project Manager and OG, will set five-year targets for what they want to achieve. Based on these, they will identify the activities and they will undertake to achieve the targets and implement them. The impact of the activities will be monitored on an ongoing basis. The experiences of the CGs in implementing the measures, will be considered to identify lessons learnt that might be used to improve the activities and/ or help identify new ones. The plans will be reviewed biannually against these results and updated if required.

SUAS provides an opportunity to investigate water quality in the commonages. The EPA has identified several upland rivers as being at risk. There is no information from current water sampling programmes indicating the contribution of commonage land management to the risk. This will be investigated and a water quality monitoring programme put in place with the support of Wicklow County Council and LAWCO to provide an assessment of the potential risk from the land management of the uplands. This investigation will also consider if the activities used by the CGs, e.g. burning and spraying, have the potential to impact on water quality and if so how they might be addressed.

SUAS provides an opportunity to evaluate an auction based payment scheme. The scheme is designed to promote farmer learning about the environmental challenges they face and to come up with their own solutions. These solutions can be ones they develop themselves or in conjunction with stakeholders, to provide local solutions to local challenges.

It provides an opportunity for the CG to collectively take responsibility for collecting, collating and submitting the financial claims associated with the implementation of the activities. It is proposed to develop an electronic activity recording system that will not only assist farmers with the submission of their time records and recoverable costs but will also provide data for the Project Manager and OG that will be analysed to provide a feed-back mechanism for farmers.

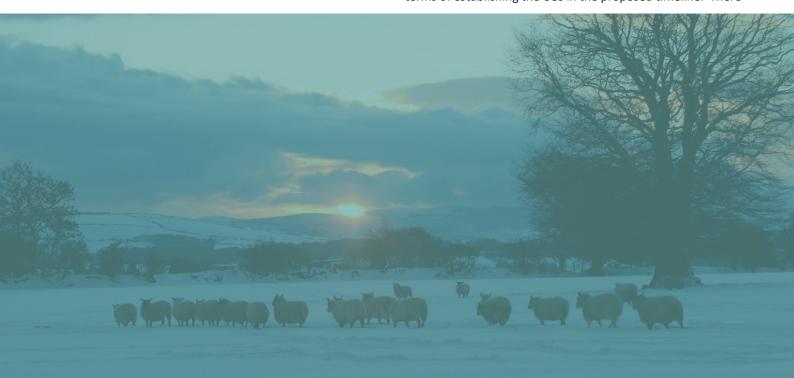
In summary, there is a significant opportunity for the Wicklow/Dublin upland farmers and local stakeholders to take ownership of the scheme and to realise a real sense of pride in their uplands. It is an opportunity to evaluate the actions and activities used in the scheme to provide guidance to policy makers, farmers and stakeholders on how similar schemes could be implemented in other Irish upland commonage areas. These will be assembled and published in a Commonage Management Handbook at the end of the pilot.

6.1.3 SUAS Weaknesses

The weaknesses identified are internal to the pilot.

- Costing of activities
- Ability of upland farmers to work together is not a certainty.
- Availability of strong leadership in each CG.
- Previous upland farmers experience with environmental schemes and land designation.
- The sheep flock is it mountain ready?
- Developing costings for the activities to be implemented by the CGs and farmers is challenging as there are no financial guidelines available. The work rates for both farmers and machines in the upland environment are unknowns. They are dependent on travel times and the work rates of both farmers and machines which are determined by access and terrain. The implications are the payments for some of the activities agreed in the first and second year management plans will have to be determined following their implementation. However, limits will be agreed with the CG based on their experience and that of Declan Byrne of the OG. Over the lifetime of the project evidence will be collected that will provide a basis for developing costing guidelines for uplands.

The current level of cooperation on commonages is very low. There is no evidence available on the social challenges of forming a CGs and this represents a potential weakness in terms of establishing the CGs in the proposed timeline. There



is the potential for inactive commonage shareholders to delay group formation. Potential farmer perceptions that may arise in the process include member's attitude towards upland farmers, not in the pilot, receiving significant payments from BPS, ANC and GLAS without apparently having to put in the work that they have to. There is member's concern about becoming dependent on others within the CG who do not do the activity work they agreed to do and jeopardising their payments.

However, the Wicklow/Dublin upland farmers have already stated that they see the need for CGs which provides an indication that these concerns will be addressed. The farmers have acknowledged this by identifying themselves the need for a facilitator to assist them in establishing and running the CGs. The project is providing an expert in establishing farm partnerships to facilitate the process. Monica Gorman of the OG will also provide support in facilitating the process, assisting in finding solutions and any training that maybe required resolving difficult issues. A criterion used in selecting commonage to participate in the pilot (c.f. Chapter 4) includes one based on "local knowledge" of the applicants. This will help avoid including commonages where known "frictions" between shareholders exist that might disruptive to CG formation.

Each of the established CGs will, like the pilot itself, require strong leadership. There is no certainty that such leadership will be available in all five CGs. This weakness will be addressed by providing leadership training to the CG Chairpersons on an on-going basis.

Previous farmer experience with environmental schemes and the imposition of designations in upland areas have resulted in a certain level of cynicism in the minds of some upland farmers. This may militate somewhat against them taking ownership of SUAS. The Chairpersons of CGs and OG members, Pat Dunne, Catherine Kenna and Declan Byrne have the capacity to address this issue should it arise.

There are real identified internal weaknesses with the SUAS pilot project. However, in so far as they have been identified steps are in place to address them. These include strong project leadership and an OG with the skills to address them.

6.1.4. SUAS Threats

The threats identified are external to the project and as such are outside the control of the pilot.

- Recruiting and keeping the "right" Project Manager.
- Viability of upland farmers.
- Lag times in the responses of biodiversity and water quality to activities may be longer than the project period.
- The availability of suitable sheep for grazing the uplands

The role of the Project Manager to be recruited within six months of the start-up of the pilot is critical to its success. The role is integral and critical to the delivery of Actions 1 and 2. This is not an unusual situation with the start-up and running of any project. The control SUAS has put in place includes the remuneration package offered. The salary €60k has been set high to attract the best possible candidate. In addition, the innovative nature of the pilot and its "ready-to-go" status may also be an attractive proposition for potential candidates. Finally, the composition and the quality of the OG will ensure the Project Manager is working in a very supportive environment with access to the expertise he/she will require.

The viability of the Dublin/Wicklow upland farm enterprise presents a threat. It is not unique and is a threat to the Irish non-dairying agriculture sector. The main reasons identified by the Wicklow/Dublin upland farmers for reduced grazing relate to economic return, either directly or indirectly. There is also a direct relationship between off-farm employment and managing the uplands. The level of threat associated with these issues is likely to increase with 'Brexit' and the on-going recovery of the Irish economy.

Teagasc, reports that is hard to see any upside to Brexit from the perspective of Irish farming. The Irish agri-food industry remains significantly dependent on the UK. Over 40% of the value of Irish agri-food exports is earned on the UK market. Barriers to trade with the UK that result from Brexit will have a negative impact on Irish agriculture. The exact nature of Brexit is still an unknown and as such is a threat to the viability of upland farmers. The improving Irish economy, particularly in the Dublin region, will create more off-farm job opportunities thereby reducing the interest in and incentive to manage the uplands.

The threats created by Brexit and off-farm employment are completely external and outside the control of the SUAS pilot.

The evaluations of the effectiveness of the activities in terms of the biodiversity or water quality responses have a lag-time that will exceed the lifespan of the pilot. Therefore, results-based payment schemes that provide for the delivery or progress towards favourable conservation status and high status water quality are slow and difficult to develop. There are no one size fits all solutions. Commonage and upland farmers operate on a landscape scale as opposed to individual land areas that they own and manage.

These create a threat in terms of developing the schemes to measure and verify them, the setting of indicator levels and devising payment and administration schemes. The equitable payment for the delivery of verifiable environmental goods and services are essential for the future viability of upland farming. However, unlike the Brexit or off-farm threats, the EU 2014- 2020 RDP programme, acknowledges this threat. The programme offers opportunities to address the threats and provide solutions. The SUAS pilot is just one example.

The traditional sheep breed for grazing in the Wicklow/Dublin uplands is the Cheviot. As farmers have reduced the amount of time sheep spend grazing the uplands, their focus on sheep breeding has moved away from hardiness and the need to have sheep that can survive and rear lambs on the uplands. The result is that for most farmers, their cheviot (hill) sheep are no longer suitable to put back grazing the uplands for more than a few weeks post weaning. There is no ready supply of suitable sheep that a farmer can purchase to restock the uplands, and even the availability of suitable Cheviot rams for

breeding is limited. Farmers are slow to move away from the Cheviot breed, due to tradition, but the breeding of these traits back into the sheep takes time, so the notion that farmers can suddenly just put additional sheep to the hills is unlikely to be realized. To counteract this issue, the SUAS pilot will be working alongside the Teagasc BETTER Farm Sheep programme, which is working to address this issue. Every farmer will get an individual farm plan completed which will contain a breeding/ replacement plan for their own upland flocks. There will be scope in the reverse auction measure for any farmer or CG who comes up with proposals of how to make sheep, suitable for grazing the uplands, more available to other farmers & CG's.

6.2 Key Risks and Controls •

The key risks and controls for Actions 1 and 2 are summarised in Table 6.1.

Table 6.1. The key risks and controls for Actions 1 and 2 are summarised in Table 6.1.

Risk	Likelyhood	Impact	Controls	Risk Classification
Recruiting commonages and upland farms	Unlikely	Disruptive Delay	The SUAS pilot has been in development for over four years. There is a high level of awareness among farmers as evidenced at the farmer meetings (2) and events (1) in August this year. Commonages farmers have come forward at these expressing their interest in participating.	Low
Failure to establish CGs	Unlikely	Disruptive Delay	The farmers have identified the need for the CGs. Adequate time, the availability of an expert in farm partnerships and collaborations, the specific OG support in participatory learning support, the two stage approach (i.e. form two groups initially and the other three when the first two are established) will ensure that the risk of failure is low	Low
Failure to complete first year Commonage/ Farm Management Plans on time	Moderate/High	Minor	The timelines proposed for the completion of the first year management plans is the end of Year 1. This is tight deadline. However, the risk is low because activities on the upland are minimal in late winter early spring.	Low
Failure within a CG to identify a strong Chairperson.	Unknown	Weak CG	The selection of commonages to participate will use local knowledge and the leadership potential of the commonage members in the process.	Low
Developing the CG members' skills to deliver the project.	Medium	Disruptive Delay	The pilot requires the farmers (and stakeholders) to take ownership of the pilot. The extent to which they do will determine its success. Therefore, the participatory learning approach proposed to support participants develop ownership is flexible, open and on-going for the pilot period.	Low/medium
The failure to engage with the key project stakeholders	Low/Medium	Disruptive, Pilot outcomes will be compromised.	Engagement is central to the success of the pilot and is at the core of the dissemination plan. The focus is primarily on the internal project dialogue between the CGs and key stakeholders (c.f. Chapter 9). The OG will play a key role in the process through support and facilitation.	Low

Risk	Likelyhood	Impact	Controls	Risk Classification
CGs withdrawing	Unknown but low	Disruptive	In the event of one of the CGs withdrawing from SUAS at any time during the first three years of the project, a new CG will be recruited. As already noted above, there are already farmers interested in participating in SUAS. As the pilot evolves, it can be reasonably expected that the level of interest will grow. This and the experiences gained with the CG forming process will help reduce the delays that such an event will create. It does have financial implications as baseline surveys of the new commonage will be required	Low/Medium
Conflict with GLAS	Low	Failure to comply with EIP project regulations	There are 120 commonages in County Wicklow accounting for just over 26,000 ha of which 95% are registered with GLAS. Therefore, SUAS was developed to be a GLAS multiplier rather than a competitor. The biodiversity and water quality baselines are more rigorous. The activities in management plans require higher levels of input than prescribed in GLAS.	Low
Failure to recruit and keep a suitable Project Manager	Unknown	Project will not be viable	The recruitment of a suitable Project manager is essential for a successful project outcome. It is one of the biggest project threats and is one the few areas in the proposal where there is no guarantee. However, the attractive remuneration package offered, the exciting and innovate pilot approach and potential for positive impact will assist in addressing the risk. A six month period is available at the start of the project to fill the post. In that period, OG members, Pat, Dunne, Declan Byrne and Owen Carton will be responsible to start the project in a joint capacity of interim Project Manager.	Medium/High

6.2 Contingency Plan

The ground work already completed during the pre-submission of Detailed Operational Plan stage provides a very high level of reassurance the pilot will succeed. The clear timelines, milestones and bi-annual reporting schedule outlined in Chapter 7 provide the Project Team and OG with a framework to monitor progress and address any issues arising in a timely manner.

WUC, as the Lead Partner, has the necessary experience and incentive (the project was conceived and initiated by them) to ensure the project is successfully managed and delivered. The WUC management will be augmented by a very strong and technically proficient OG. WUC represents upland stakeholders. This provides confidence that the required and necessary stakeholder dialogue by the pilot will be pro-actively managed.

Teagasc, as the supporting partner, have and continue to be involved in local, national and international projects. This experience will be available to the Teagasc staff member, Declan Byrne, should the need arise.

The Wicklow/Dublin upland farmers have supported and participated with WUC in getting the pilot to this stage. This reflects their commitment and support for the pilot.

The recruitment of a suitable Project Manager has been incentivised by the offer of a well-paid and exciting job. Failure to recruit one, or if he/she subsequently decides to leave, is the only medium/high risk for the pilot.

The contingency plan is a thorough recruitment campaign to ensure a Project Manager is recruited. The Project Lead with the support of three OG members will fulfil the Project Manager role until he/she is recruited. If following recruitment the Project Manager resigns, the initial fall-back position is for the Project Lead & OG members to fill until a new Project Manager is recruited.

6.3 Data Protection

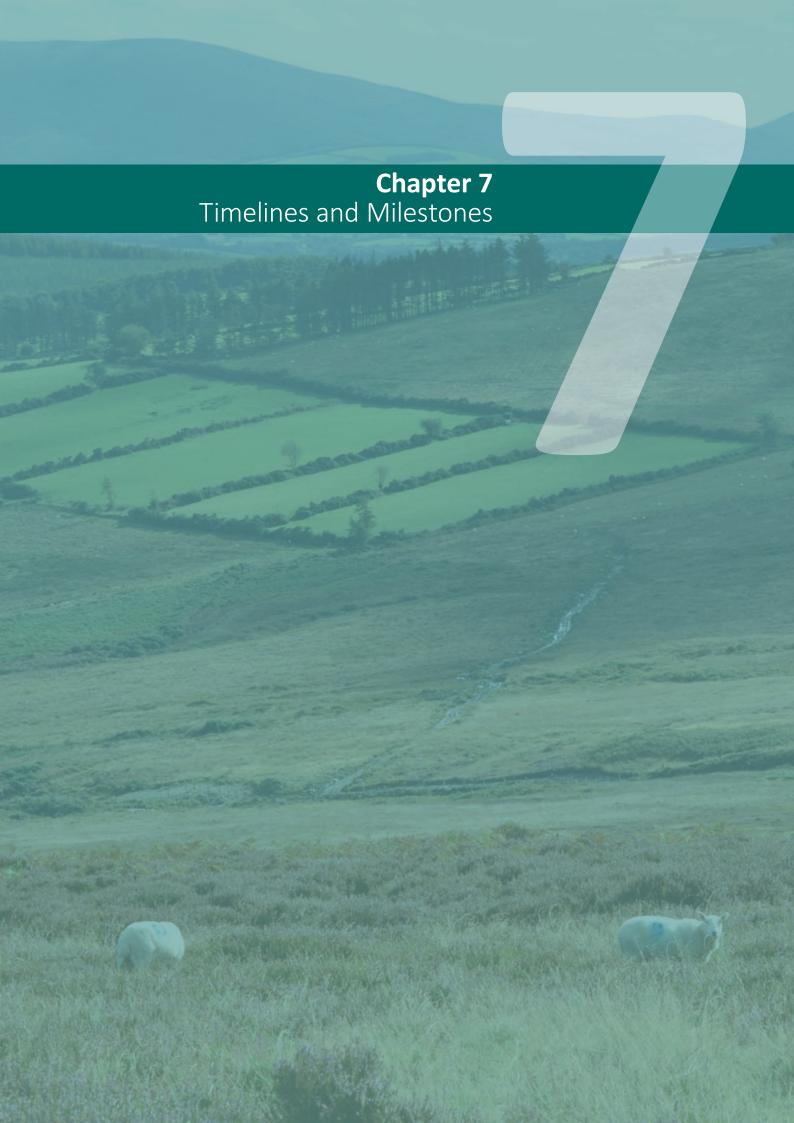
WUC data protection will be reviewed to ensure it is fully compliant with the provisions of the Data Protection Act (DPA) 1988, as amended by the Data Protection (Amendment) Act 2003. WUC will observe the eight Data Protection Principles governing the use of information relating to individuals (personal data) and the provisions of service in respect of such information.

6.4 Public Procurement

When procuring goods and services for the SUAS pilot, WUC will observe the principles of equal treatment, transparency, mutual recognition and proportionality and will deal with all suppliers and potential suppliers in an objective, fair, professional and courteous manner. WUC will adhere to the requirements of National (http://www.etenders.gov. ie/guides/guides_main.aspx) and EU (http://ec.europa. eu/growth/single-market/public-procurement/) law, and insofar as practicable, OGP guidelines (http://ogp.gov.ie/).

At least one commercial quotation in verbal form will be sought where the value of the goods or services is below €5,000. More than one quotation will be sought if there is a reasonable prospect that a saving can be achieved which exceeds the cost of seeking additional quotations. At least three commercial quotations in written / email form will be sought where the value of the goods or services is €5,000 or above and below €25,000. Where the value of the goods or services is €25,000 (currently) or greater, and less than the EU Threshold, then a request for tenders will be advertised on the eTenders platform. (The EU Threshold for goods and services is currently €209,000 (2017) and is revised every two years). Should the thresholds for advertising on eTenders be changed by the Government, then the changed values will apply. We do not envisage any procurement great than the EU threshold, but in principle, all procurements of goods and services at or above the EU threshold will be carried out in accordance with EU regulations which are in effect at the date of advertisement of the competition.





7.1 Introduction

The timelines for the implementation of the SUAS actions, dissemination activities and financial management are summarised in the GANNT chart below. A more detailed GANNT chart, milestones and narrative on each of the individual elements of the tasks is then provided.

	Year 1		Year 2		Year 3		Year 4		Year 5	
Task	Jan-June	Jul-Dec								
Establishing Commonage Groups										
Developing Commonage/Farm Management Plans										
Implementing Commonage/Farm Management Plans										
Dissemination and Outreach Plan										
Financial -Planning and Payment System										
Monitoring and Control										
Operational Group Meetings										

There are seven main tasks. The first task is establishing Commonage Groups (CGs). Five CGs are proposed and these will be formed in the first ten months of the pilot. Each CG and two upland sheep farms will then develop a Commonage Management Plan. This will take place over a period of 4 to 8 months. The implementation of the plans on the five commonage and two upland farms will begin at the start of the second project year and continue for four years until the end of the project. These three tasks are the responsibility of the Project Manager and will be monitored and controlled by the OG. Development and implementation of a dissemination and outreach plan will take place in the first six months of the project and implementation will begin in month 6 and will remain on-going for the remainder of the pilot. This task will be led by one of OG members and implemented by the Project Manager in conjunction with the CG Chairpersons. The financial planning and payment system will be developed during the first 12 months and implemented over the project period. It will be managed and delivered by IFAC. There is a monitoring and control task that is the responsibility of the OG. The OG meetings in year one will take place monthly and every two months thereafter. This will operate for the entire project period.

A summary of the milestones for each of the tasks is provided in Table 8.1.

Task	Milestones
Establishing Commonage Groups	(Jun 2018).First two Commonage Groups formed and Chairpersons elected. Two upland sheep farmers selected. (Oct 2018). Three new CGs formed and Chairpersons elected. CG meetings held – Stage 1 CGs X 6 & Stage 2 CGs X 2
Developing Commonage/Upland Management Plans	4. (Oct 2018). Baseline biodiversity and hydrology surveys completed. 5. (Nov 2018).Commonage Management Plans for two CGs and Management Plans for the two upland farms agreed. 6. (Dec 2018).Commonage Management Plans for three remaining CGs 7. (Jan 2019). Appropriate Assessments for all plans secured.
Implementation of Commonage/Upland Management Plans	8. (Jun 2019, 2020, 2021 & 2022). Six monthly (Jan – Jun) review and progress report for each CG and upland farm. 9. (Dec 2019, 2020, 2021 & 2022). Six monthly (Jul - Dec) review and progress report for each CG and upland farm; Updating of management plans for following year completed and reviewed in 2019, 2020 and 2021. Electronic Recording System developed
Dissemination and Outreach Plan	10. Four open stakeholder meetings held annually. 11 Commonage Open Day for farmers held 12. Commonage Open Day for Local Community & Stakeholders held. 13 National Commonage Day held – Jul 2022 only. 14. Four meetings with stakeholders held. 15. Number of CGs meetings held (<i>Target is 12 per annum per CG</i>). 16. Number of training sessions held. (<i>Target is four per annum per CG</i>).
Financial – Planning & Payments	17. SUAS payment scheme in place by September, 2018. 18. Electronic activity payment system available in November, 2018. 19. All payments made within requisite time periods from March 2018. 20. Interim and financial reporting completed and approved on time each year from July 2018 (February for annual and July for interim)
Monitoring and Control & Operational Group	21. Number of Operational Group meetings. (Twelve are planned annually). 22. Two Progress Reports submitted to DAFM in June and December. An annual and an interim Financial Report submitted twice annually (except in 2018) in February and July, respectively.

A project management plan will be developed for each task at the start of the project. This will be used by the OP to monitor progress and to identify what actions are required, where milestones are not being met.

Table 8.1 Summary of Milestones

Task 1 – Establishing the five (5) Commonage Groups and the selection of the two (2) upland sheep farmers

Timeline: 1st January 2018 to December 31st, 2018 (Duration 12 months)

Task - Establishing Commonage Groups	Jan-18	Feb	Mar	Apr	May	Jun	Jul	Aug	Sept	Oct	Nov	Dec	Milestones
Send out expression of interest note													
Review responses & identify candidates													
Collect additional commonage/farm information													
Select two Stage 1 candidate commonages													
Start CG establishment training					1								
Select 2 upland farmers													Two upland farms selected
Agree the CGs constitutions & elect Chairpersons						,							Two CGs formed and operational
Select 3 commonages for Stage 2													
Begin Stage 2 CG establishment training											A .		
Agree the CGs constitutions & elect Chairpersons										,	×	A	Five CGs formed and operational
GG Monthly meetings - Stage I Groups												X	Six CG meetings held
CG Monthly meetings - Stage 2 Groups													Two CG meetings held

🌟 = Milestone

The process will begin immediately following the start of the project. It will start with the request for expressions of interest (EoI) from commonage and upland farmers. Following a review of the EoIs by the OG, additional commonage and farmer data will be collected and compiled from the selected candidate commonages and farmers. This data will be reviewed by the OG and the first two commonages to begin developing their CG constitutions will be identified. The OG will also select the three commonages to participate in the stage 2 CG establishment and training stage and the two upland sheep farmers. As noted in Chapter 4, the most important selection criteria will be based on local knowledge to ensure the CG farmers selected, have the greatest potential to successfully form the CGs within the requisite time periods. The lessons learnt during the first phase of establishing CGs will help in developing resolutions to contentious problems more effectively with the Stage 2 groups. The OG will sign off on CG Constitutions.

Where the establishment process is delayed or if it becomes clear that CG formation will not happen, a replacement OG or farm will be selected. The implication for the project will be a slippage in the proposed timelines for the new CG or farm against those outlined below.

Milestone 1. 30th of June 2018 - First two Commonage Groups formed and Chairpersons elected. Two upland sheep farmers selected.

The establishing process for the Stage 2 CGs will begin in July and the target is to have this process completed by the end of October.

Milestone 2. 30th of October 2018 – Three new CGs formed and Chairpersons elected.

Milestone 3. 30th of December 2018 – The CG monthly meetings will have started.

Assessing progress: The Project Manager will be attending most of the CG establishment training sessions. This, in conjunction with the facilitator's assessment of progress towards the target, will provide a clear oversight of progress. The OG will be apprised of progress at their bi-monthly meetings. Where progress is deemed satisfactory, the Project Manager will make the recommendations to the OG for approval and implementation.

Task 2. Agreeing five (5) Commonage Management Plans and two (2) upland sheep farmers Management Plans

Timeline: 1st June 2018 to 31st January 2019 (Duration 7 months)

Task - Developing Commonage Management Plan	Jun-18	Jul	Aug	Sept	Oct	Nov	Dec	Jan-19	Milestones
Conduct biodiversity & hydroligal baselines					7	7			Baseline surveys completed
Collect CG baseline farming data									
Create CG's own baseline data									
Develop Commonage Management Plans for Stage 1 CGs.									
Develop Management Plans for upland farmers									
Agree Commonage Management Plans for Stage 1 CGs.									Stage 1 CG Comonage Mgt Plan completed
Agree Management Plans for Upland Farmers.							*		Upland Farmers Management Plans completed
Develop Commonage Management Plans for Stage 2 CGs.									
Agree Commonage Management Plans for Stage 2 CGs.								*	Stage 2 CG Commonage Management Plans completed
Appropriate Assessments of Commonage Management Plans									Appropriate Assessments approved.

The Upland/Commonage Management Plan will establish the five year targets for each commonage and farm. It will include the activities that the farmers will implement in each year. The process will begin in June 2018, when the Project Team will have secured the services of an ecologist and a hydrogeologist to undertake the baseline surveys. These surveys will begin with the two Stage 1 commonages and the two upland farms in July. They will do the surveys of the three remaining commonages when it is clear that they will successfully form a CG in late September/early October.

The CGs and upland farmers will concurrently prepare a report of their assessment of the biodiversity on their commonages/ farms. When completed the ecologist and hydrogeologist will meet with the CGs individually and explain their reports and outline suggested recommendations. There will be initial discussions that will include reviewing the farmers and ecologist's respective assessments. NPWS will be invited to join in this process to build relationships and to ensure that the management plans meet the Appropriate Assessment requirements.

The management plans will also address stock management. This part of the planning process will managed by OG member, Declan Byrne and will reflect not only flock hill grazing management, but also breeding, nutrition, animal health and stock management while on the farmer's lowland areas.

The process will take place over a period of seven months. When completed the plans will be reviewed by the OG and approved. Once approved the process of securing the Appropriate Assessment will be undertaken and completed.

Milestone 4. October 31st 2018 -Baseline biodiversity and hydrology surveys completed.

Milestone 5. November 30th 2018 - Commonage Management Plans for two CGs and Management Plans for the two upland farms agreed.

Milestone 6. December 31st 2018 - Commonage Management Plans for three remaining CGs

Milestone 7. January 31st 2019 – Appropriate Assessments for all management plans approved.

Assessing progress: The Project Manager will be fully involved in the process of developing the management plans. He/she will also facilitate the meetings between the CGs, upland farmers, the surveyors and the NPWS. This will ensure oversight of progress and the OG will be continually apprised. The OG members (Helen Sheridan, Catherine Kenna and Sinead Hurson) may at times and if appropriate participate in the process. If deemed satisfactory, the Project Manager will make the recommendations to the OG for approval and implementation.

Stakeholder involvement: The NPWS is a key stakeholder in the assessment of the progress with implementation of the biodiversity activities. As noted above, they will be invited to join in the process of developing and agreeing the plans. In January 2019, a meeting with the stakeholders will be held at which the management plans will be outlined. It will provide an opportunity for information exchange and feedback.

Task 3. Implementation of the Upland/Commonage Management Plans

Timeline: 1st February 2019 to December 31st 2022 (Duration 48 months)

Task - Implementation of Management Plans	Feb- Mar	Arp-Jun	July- Sept	Oct-Dec	Milestones
Review of Progress - First 6 months					First 6 monthly review completed
Annual biodiversity monitoring and report					
Implementation review by Project Manager and OG					
Plan Revisions for following year					Second 6 monthly review completed & revised plan

The implementation of the Upland/Commonage Management Plans will be initiated in February of 2019. In June of each year the Project Manager, the CGs and the upland farmers will discuss progress, identify issues arising and prepare a short report for the OG. Following the completion of the biodiversity monitoring exercise and an assessment of progress with the implementation of the agreed activities by the Project Manager and appropriate OG members, individual meetings with the CGs and farmers will be held. This will involve walking around the commonages/upland areas. The results of both assessments will be discussed with the CGs and farmers.

There will also be a review of the performance records for each farmer at the end of the each year. The Project manager and OG member Declan Byrne will undertake this task with the CGs and farmers. Based on the results, individual farm plans will be updated.

Where issues arise, they will be addressed and where necessary the Upland/Commonage Management Plans will be updated for the following year. Two six monthly reports will be produced by each CG and upland farmer and submitted to the OG for review and approval. The Management Plans for the following year (except in the last year, 2023) will be updated and submitted to the OG for approval. Any revised updating of Appropriate Assessment will be secured.

Milestone 8. June 30th 2019, 2020, 2021 & 2022. Six monthly (Jan – Jun) review and progress report for each CG and upland farm.

Milestone 9. December 31st 2019, 2020, 2021 & 2022. Six monthly (Jul - Dec) review and progress report for each CG and upland farm; Updating of management plans for following year completed and reviewed in 2019, 2020 and 2021.

Assessing progress: The six monthly reviews provide the on-going basis for assessing and reporting of progress. The OG will sign off on the reports. These will be compiled and submitted to DAFM as part of SUAS's reporting plan. The proposed on-the ground level of involvement of the Project Manager (i.e. attendance at CGs meetings) will ensure that problems developing with the implementation of the plans are identified early and resolved. Where this cannot be achieved within the group the

appropriate OG member will brought in to assist. If satisfactory solutions cannot be resolved at this stage, the OG will review it and suggest a course of action. Where this has major implications for the timely delivery of the project DAFM will be notified.

Stakeholder involvement: In the spring of each year a meeting with the stakeholders will be held to update them on the progress on the commonages and the farms that will be presented. The objective each year is to provide an opportunity for information exchange and feedback.

4. Dissemination, Lessons learnt and Outreach Plan

Timeline: 1st January 2018 to December 31st 2022 (Duration 60 months)

		All Years			
Dissemination, lessons learnt and outreach plan	Jan- Mar	Arp-Jun	July- Sept	Oct-Dec	Milestones
1. Public Awareness					
Annual Stakeholder meetings					No. of Meetings held
Commonage Field Day - Farmers		7			Field days held in Year 2, 3 & 4.
Commonage Field Day - Local Community & Stakeholders			7		Field days held in Year 2, 3 & 4.
School visits					No. of school visits per year - No target set
National Commonage Day - <u>Year 5 only</u>			7	7	National Commonage Day held
Press releases and publications	*	*	*	*	No. of press releases per quarter & Commonage Handbook published in June
2. Farmer and Stakeholder Learning	100				
Meetings with Stakeholders	*	*	*	*	Four planned per annum
CG monthly meetings held	*	*	*	*	12 per annum in years 2, 3, 4 & 5
No. of successful auction paymentsmade	*		*		10 per year offered in years 2, 3, 4 & 5
No .of discussion groups in Commonages or on farms/annum				*	No target set
No of training days completed				*	Four planned per year

The objective of the SUAS pilot project is to develop and evaluate an innovative and integrated approach to commonage and upland management. The innovations of establishing CGs and developing management plans that integrate environmental and farm viability objectives present an exciting and challenging opportunity. The potential outcomes from the pilot will be multiplied where there is an exchange of ideas between all the stakeholders involved and dissemination of the lessons learnt to a wider audience. These activities provide a great opportunity for promoting and developing the potential for commonages to contribute positively to the rural environments where they exist for the benefit of all.

Public Awareness: The primary and probably the most traditional dissemination activity will be the running of open days on the commonages participating in SUAS. Two are planned annually. The first one each year will be targeted at farmers while the second one will be targeted at the local community and outside stakeholders. The objective will be to describe how the CGs were formed and to provide an insight to the management plans that they have developed – the why, the how and what activities they plan to implement. Each year updates will be provided on progress towards targets and lessons learnt. The Local Community & Stakeholder Field and School visits will focus on showing how the CGs are working towards managing the biodiversity and waterways for the benefit of all.

The local primary and secondary schools are an important dissemination target. Based on the initial CG biodiversity assessment of their commonage, the CGs will be asked to prepare a brief history of their commonage, the traditional farm practices and its current status in terms of biodiversity, preferably in the form of a pamphlet. In other words "our Commonage is Special" or "all you need to know about commonage" or "what our commonage has". By arrangement with the local schools, some of the CG farmers will visit the schools and talk to the students about their commonage. This will encourage the students to visit the commonage and see it for themselves. These pamphlets will be updated over the period of the project to reflect any changes occurring and to introduce commonage water quality aspects. It may lead to students taking on school projects. In this context, the close ties to UCD agriculture faculty, through two members of the OG, also offers opportunity for student engagement at under and post graduate levels.

In the final year, a national Commonage Day will be held to highlight the outcomes of the pilot project. It will be used to launch the publication of a Handbook for Commonage and Upland sheep Farmers on the lessons learnt in the process and provide working guidelines for other commonages interested in replicating a similar scheme in their own Commonages. The Handbook will be very relevant to policy makers in developing future commonage schemes.

Farmer and Stakeholder Learning: This will be a very important output from the pilot. It will be facilitated by developing and nurturing an integrated approach to commonage management. Farmers will learn from farmers through the CG framework. NPWS and ecologists will be working with farmers in developing and updating the management plans. This will lead to a greater understanding of the currently different perspectives and attitudes of both parties. Based on this learning, trust will be improved and by combining their respective knowledge a better outcome is guaranteed. This process will be facilitated by holding four open stakeholder meetings per annum. In addition, there will four targeted stakeholder meetings annually to

discuss/review specific issues arising. SUAS will be represented at these meetings by the CG Chair persons, the Project Manager and an appropriate member of the OG if deemed necessary. However, the objective is to engage with the widest possible range of stakeholders and the initial focus will be on those groups that have the greatest interest in the uplands and where known issues exist between them and the commonage farming community.

The CGs meetings and training sessions are the primary internal mechanism for facilitating learning and sharing of the wide range skills required to take on the SUAS pilot approach. An indicator of its progress and benefits will be the number and quality of the auction payment bids made. The number of visiting discussion groups will help with the dissemination of the lessons learnt to a much wider farmer audience. The extent to which this will happen is difficult to predict so no targets have heen set

Milestone 10. Four stakeholder meetings meeting held annually.

Milestone 11. Commonage Field Day for farmers held

Milestone 12. Commonage Field Day for Local Community & Stakeholders held.

Milestone 13. July 31st 2022. National Commonage Day held.

Milestone 14. Four meetings with stakeholders held.

Milestone 15. Number of CGs held – Target is 12 per annum per CG.

Milestone 16. Number of training sessions held -Target is four per annum per CG.

Assessing progress: The six-monthly reviews provide the basis for assessing progress. It will be monitored by the Project Team member attending the CGs monthly meetings. The OG will have oversight based on the reports submitted by the project Manager. Larry O'Loughlin of the OG will have special responsibility for the dissemination activity.

5. Financial – payments and reporting

Timeline: 1st January 2018 to December 31st 2022 (Duration 60 months)

Task - Financial - Payments & Planning	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sept	Oct	Nov	Dec	Milestones
Setting up account and payment system													System operating by September '18
Developing activity sheets and electronic activity recording system												T	System operating by November '18
Payment runs to farmers for time				T									Twice annual farmer payments made on time - all years from Sept '18
Payment runs to external consultants	, ,												Payments made within four weeks of receipt from April '18
Payment runs to CGs for receipted costs of goods services	&												Payments for invoiced CG /farmers cost made within four weeks of receipt from April '18
Financial Reporting								•			0		Financial reports twice annually
Meeting Auditors													As required.

The objective is to put in place a robust, efficient and compliant financial management system. This will be set up by IFAC, the accountancy firm that will be engaged by WUC. Tom Doyle of IFAC is a member of the OG. A payment system based on an assessment of the system requirement will be developed by IFAC and is targeted for completion by September 2018. A tender will be published in January for the development of an electronic activity recording sheet for participating farmers that is integrated with the payment system. The target completion date is November 2018. Farmer payment runs will be made twice annually in March and October. All receipted invoices from external consultants and from CGs and farmers for services/goods supplied will be made within four weeks of receipt and approval by the OG. An interim financial report will be prepared for the end of July and an annual financial report will be published in February following approval by the OG. IFAC will be available to meet DAFM or EU auditors as required.

Milestone 17. SUAS payment scheme in place by September, 2018.

Milestone 18. Electronic activity payment system available in November, 2018.

Milestone 19. All payments made within requisite time periods from March 2018.

Milestone 20. Interim and financial reporting completed and approved on time each year from July 2018 (February for annual and July for interim)

Assessing progress: This will be achieved by the delivery of the interim and financial reports. The OG will have responsibility for assessing progress. Tom Doyle of the OG will have special responsibility for the dissemination activity. Compliance by DAFM and/or EU auditors will provide an additional measure of assessing compliance with national and EU financial regulations.

6 & 7. Monitoring and Control & Operational Group

Timeline: 1st January 2018 to December 31st 2022 (Duration 60 months)

Task - Monitoring and Control & Operational Group	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug Sept	Sept	Oct	Nov	Dec	Milestones	
Operational Group Meetings												*	Number of Operational Group meetings.	
Reporting schedule		*				*	*					*	All technical and financial reports completed on time	

The monitoring and control of the project is the responsibility of the Project Manager and WUC. He/she will be fully supported by the OG over the project period. The Project Manager will provide a monthly report on the activities during the month and those planned for the following months. The Project Manager will also have access to the individual members of the OG. This will be used as required to assist with the activities of the two Actions and their associated activities. The OG members will also provide guidance on issues, related to their experience, in resolving issues as they arise.

Sub-committees of the OG will be formed, if required, to support the Project Manager, with the on the ground implementation of the project.

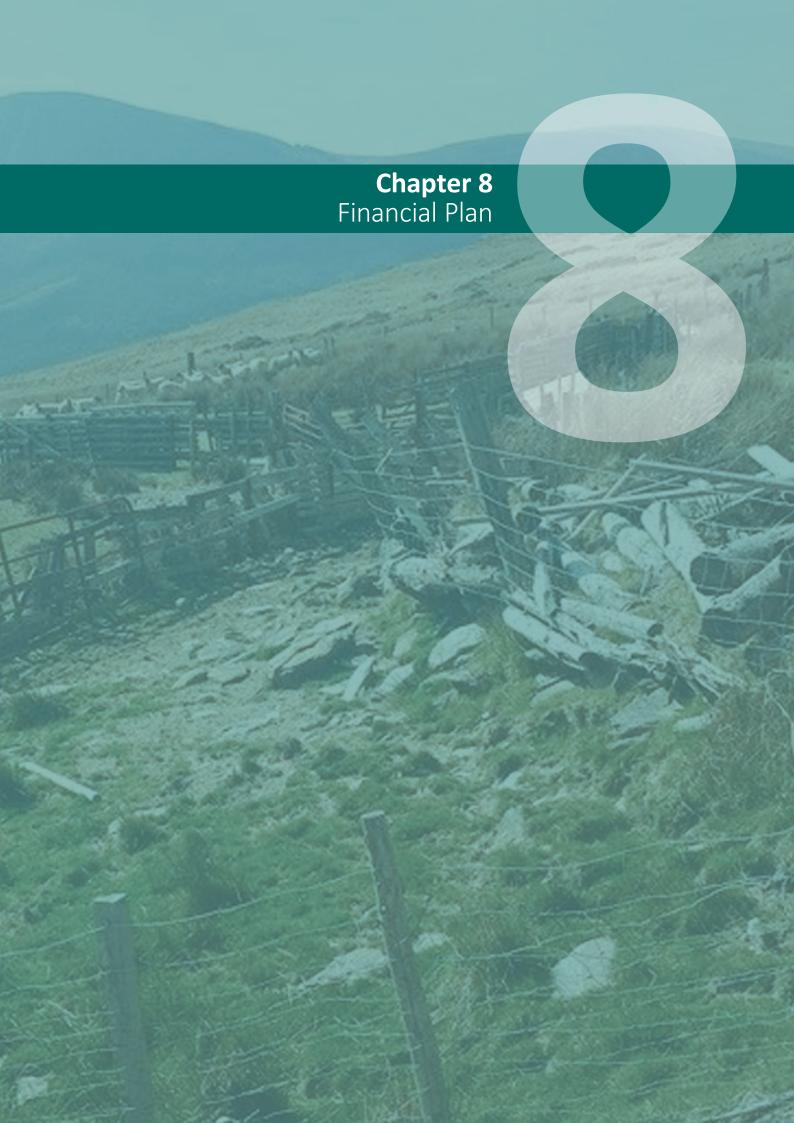
The OG will approve all progress and financial reports and submit them to DAFM. Any additional project progress reports required by DAFM will be provided on request. The OG will inform DAFM if issues arise that threaten the delivery of the project plan along with actions required to resolve them.

Milestone 21. Number of Operational Group meetings. (Twelve are planned in Year 1 and 6 in subsequent years).

Milestone 22. All progress and financial reports submitted on time. Two Progress Reports will be submitted to DAFM in June and December. An annual and an interim Financial Report will be submitted twice annually (except in 2018) in February and July, respectively.







The overall SUAS pilot costs are estimated at €1.98m (Table 8.1 and Fig 8.1). The direct costs are €1.78m or 90% of the total. The project animation costs are €53k or 7% of the total. The project running costs are €146k or 7% of the total. The project funds available for the CGs and farmers to draw down for their time and implementation of activities in Actions 1 and 2 are €1,14m or 60% of total.

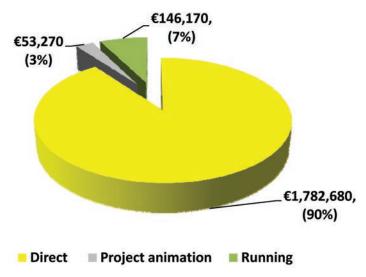


Figure 8.1. The distribution of project costs between Direct, Project Animation and Running costs.

8.1 Direct Costs

The estimated direct costs is €1.78m. The costs centres are shown in yellow in Table 8.1.

- 1. Action 1 Farmer Time (€290k): This has been allocated for farmer time input to Action 1 – the establishment of the CGs and upland farms and the development of their management plans. The implementation of Action 1 is a direct project cost. The cost is associated with the farmer time input for the establishment of the CGs and the development of the five Commonage Management Plans for the CGs and the two Management Plans for the upland farmers. In years 2 to 5, the farmer time costs are based on the time farmers will spend attending the CG meetings, preparation for field days and training courses. In general, it was assumed there will be approximately 40 farmers involved in the five CGs and the two upland hill farmers. The farmer time rate used was €15/hr.
- 2. Action 2 (€647k): This a total of €647k allocated to fund the farmers for the implementation of the activities outlined in their Commonage/Farm Management Plans. The payments made to the CGs and the two upland farmers will be based on the farmer time inputs and eligible costs incurred. It is not possible to give breakdown of how this money will be allocated between the CGs and the two upland farms as it depends on the activities agreed and achieved in their Commonage/Farm Management Plans.

Table 8.1. The overall projected costs of the SUAS Project.

Direct Costs	Year 1	Year 2	Year 3	Year 4	Year 5	Total
Direct Costs						
Action 1 - Farmer Time	€54,200	€60,590	€60,590	€60,590	€55,550	€291,520
Action 2 - Farmer Time &						
Costs		€161,700	€161,700	€161,700	€161,700	€646,800
Auction Payments		€50,000	€50,000	€50,000	€50,000	€200,000
Project Manager	€30,000	€60,000	€60,000	€60,000	€60,000	€270,000
Travel & Subsistence	€4,000	€7,000	€7,000	€6,000	€5,000	€29,000
Dissemination Events		€1,200	€1,200	€1,200	€6,960	€10,560
Printing & PR	€3,000	€3,000	€3,000	€3,000	€5,500	€17,500
IT Equipment	€3,500					€3,500
Room Hire &						
Refreshements for all CG						
meetings	€16,800	€13,300	€13,300	€13,300	€13,300	€70,000
Accountancy/Audit						
Provision	€5,000	€5,000	€5,000	€5,000	€5,000	€25,000
Operational Group	€19,600	€19,600	€19,600	€19,600	€19,600	€98,000
External Consultants	€45,200	€12,200	€12,200	€12,200	€39,000	€120,800
Sub-Total	€181,300	€393,590	€393,590	€392,590	€421,610	€1,782,680
Project Animation						
Costs						
55515						
Setting up finance System	€5,000					€5,000
Electronic Recording	C5,000					C3,000
System	€15,000					€15,000
Project Start up	€33,270					€33,270
Sub-Total	€53,270					€53,270
Running Costs	, , , , ,					
Project Manager	€3,270	6540	6540	6540	6540	€29,430
Adminstrator	€8,872	€8,872	€8,872	€8,872	€8,872	€44,360
CG Administrator	€735	€5,250	€5,250	€5,250	€5,250	€21,735
Office rental	€8,400		€8,400	€8,400	€8,400	€42,000
Telephone & Internet	€1,440	€1,320	€1,320	€1,320	€1,320	€6,720
Insurance	€385	€385	€385	€385	€385	€1,925
Sub-Total	€23,102	€30,767	€30,767	€30,767	€30,767	€146,170
Total						€1,982,120
						,,_

3. Auction Payments Option(€200k): This is based on €50k per annum or approximately €10k per annum per CG. The CGs can propose new activities they want to undertake on their commonages that are consistent with achieving their planned environmental targets. The costs that can be claimed are time and eligible costs incurred.

On average the funding for Actions 1 and 2 is equivalent to an average annual SUAS payment per CG of €54k or €6,400 per farmer participating in the pilot.

- **4. Project Manager (€333K):** Just over 90% of this is allocated to direct costs. The remainder is allocated to running costs. The project manager is responsible for the overall management of the project and the implementation of all the activities associated with Actions 1 and 2.
- **5. Travel & Subsistence (€29k):** The travel and subsistence allocation covers five years of the pilot. It was estimated using standard civil service rates.
- **6. Dissemination events (€11k):** The total running cost of the two annual field days in years 2, 3 and 4 are just over €1k annually. The budget allocation for the National Commonage Day in year 5 is just under €7k.
- **7. Printing and PR (€18k):** This includes printing programmes for the, field days, the national Commonage Day, visiting groups, pamphlets, Commonage/Farm Management Plans and Commonage Handbook. It also includes office stationary costs of €2.5k.
- **8. IT Equipment(€3.5k):** This covers the cost of a laptop and desktop computer for the use of the Project Manager.
- 9. Room Hire & Refreshments (€70k): It was estimated on the following basis. WUC have no meeting room associated with their office. When they convene meeting, WUC usually rent a meeting room in the same building at a charge of €25 per hour. The OG will use this room for their scheduled bi-monthly meetings. In general, they will be used for all farmer training days. The CGs will require a meeting room for each of their 12 monthly meetings. The location to be used for these meetings will probably be local halls. There is an assumed charge for the facility at €25 hour. The CGs meetings are scheduled on average for four hours. Refreshments are generally tea/coffee/biscuits and a charge of €5/person attending was used.
- 10. Accountant & Audit Provision (€25k): WUC use the services of IFAC as their accounts. The cost is to cover their management and reporting of the SUAS budget. This includes making payments to the farmer participants following receipt of a payment approval from the Project Manager and being available to support any external audits that will arise.
- 11. Operational Group (€98k): This is based on each member attending six meetings annually and also allows for six days annually providing support to the Project Manager as the need arises. It also includes a provision for OG members to provide training. It should be noted that not all members of the OG will be charging for their time inputs. Three members of the OG (Pat Dunne, Declan Byrne and Owen Carton) will take responsibility for starting the project and continue in this role until the Project Manager is appointed.
- **12. External Consultants (€121k):** The external consultants that will be engaged include:
- Ecologist (€72k): A tender will be issued in Year 1 to

- recruit a project ecologist who will be responsible for the baseline biodiversity survey, annual biodiversity monitoring and a final survey at the end of year 5. There is time allocated for meeting with the CGs and upland farmers to explain the results of the surveys/monitoring and to discuss the activities that will be included in the Commonage/Farm Plans. The tender will also include a request to develop a blueprint for, based on the results of the surveys, which could be used as a basis for a results based-commonage payment scheme.
- Hydrogeologist (€10k): A tender will also be issued in Year 1 to recruit a hydrogeologist to i) map the waterways in the commonages and their catchment areas, ii) identify current Wicklow County Council water quality monitoring points; iii) prepare report with recommendations on a water quality monitoring programme and the most appropriate water quality activities that could be included in the management plans.
- Writer (€12k): A tender will also be issued in Year 5 to recruit a writer that will assist the Project Manager and OG to prepare the Commonage Handbook for publishing.
- Training (€9k): A budget of €9k is allocated to recruit specialist trainers as required over the pilot period.
- Establishing CGs (€11k): A budget is allocated for the facilitator and solicitor that will assist the commonage farmers in drawing up their Commonage Constitutions.
- External reviewers for Auction Payment Scheme (€6k):
 Two external reviewers will be brought in twice a year in Years 2 to 5 to review the Auction Payment Scheme bids from the CGs and upland farms.

8.2 Project Animation Costs

The pilot animation costs are €53,270. They are low because the pilot is ready to go.

- The implementation of Action 1 will begin immediately and will be managed by the Project Lead and OG members as noted above. The cost allocated to this is €33k.
- The animation costs include the cost (€5k) of IFAC setting up a financial management system for the pilot.
- A tender will be issued for the development of the electronic activity recording system. The cost of this has been estimated at €15k. This will facilitate farmers input, their time and eligible costs associated with the conduct of the agreed activities in Actions 1 and 2. It has the potential to streamline the process, reduce errors, paper and facilitate auditing, while also allowing the collection of activity for analysis and reporting.

8.3 Running Costs —

The running costs of the pilot are estimated at €146k.

- 1. Project Manager (€29k): It is estimated that approximately 10% of the Project Managers time will be allocated to administration.
- 2. The Administrator (€44k), The cost is for a SUAS administrator for the pilot period, including PRSI contribution. At present WUC employ a part time administrator who will be given an additional day per week to carry out administrative work for SUAS in the office. Utilising the existing WUC administrator will save on costs. The role will be to provide support for the Project Manager and the Lead Partner, Pat Dunne in day to

day running of the project. In addition, the Administrator will provide the link to the Finance Office in terms of passing on approved payments to be made to the CGs and farmers.

- 3. The CG Administrator (€22k): It is proposed that each of the CGs will have part time (1.5 hours per week) administrator to support the CG Chairs and to provide support for the CG members with the processing and submitting of Activity Sheets and invoices for payment. The cost per hour used was €14.00.
- 4. Office Rental Charge (€42k): The fee covers cost of SUAS office space.
- 5. Telephone and Internet (€7K).
- 6. Insurance (€2k).

8.4 Payment System

All payments to the CGs and farmers will be made via bank transfer. IFAC will develop a standalone system for the management of the SUAS finances within the WUC bank account.

Farmers participating in the activity will be required to sign in their time input based on start time and finishing time. Invoices for external services provided to the support the implementation of the activity will be collected and signed off by the Chairperson and submitted the SUAS office. No costs incurred by individual CG members will be accepted by the Project Team. The upland sheep farmer will submit his/ her costs directly to the Project Team. Following receipt and approval, they will be forwarded to the IFAC for payment. Payments involving external contractors will be made directly to them within four weeks of receipt. Payments for farmer time inputs will be made on a six monthly basis. Tom Doyle, a member of the OG, will provide expert input in the development of the process.

All other pilot direct, animation and running costs will be made within four weeks of receipt of invoice.





9.1 Introduction

The four stages of the dissemination plan are summarised in tables at the end of this chapter.

The SUAS pilot project is an innovate "locally led model" for sustainable development and change in the management of the Wicklow/Dublin uplands. The objective is to address the decline in the biodiversity, the viability of the farmers who manage it, the socio-economic concerns of local communities and the wide range of issues encountered by the diverse stakeholders who enjoy and value it. The dissemination plan proposed is centred on the two SUAS Actions and their Activities using a participatory approach.

WUC, the lead partner, acts as a forum for discussion between local farming, environmental, recreational, tourism, economic and community interests on uplands issues. They have a participatory approach as one of its core principles. The initiation of the process that has led to this pilot project proposal is based on this principle. This is evidenced by the approach used by Tubridy in the preparation of her 2013 report for WUC. Teagasc undertook a study to identify the reasons for the reduced use of the uplands by commonage farmers, through individually surveying and talking to farmers, to elicit their views, knowledge and attitudes. Fergal Maguire of Teagasc, Wicklow, published the study results in a M. Agr. Sc. thesis.

The participatory approach used by Tubridy and Maguire have ensured that the SUAS pilot is locally led and addresses the Wicklow/Dublin Upland's stakeholder's objective to improve the biodiversity and farmer viability. The sustainable development and changes required by the SUAS stakeholders cannot happen without the continued active participation of all involved.

The SUAS approach to dissemination combines a range of participatory methods that include meetings, training, farm walks, open days, discussion groups, local media and websites. The objective is to achieve equitable access to knowledge sharing, more inclusive decision-making and learning from the experiences of farmers, local communities and national stakeholders. The SUAS dissemination plan is therefore based on keeping an open dialogue among all stakeholders for the continual development and implementation of the project.

The dissemination approach is to initially engage the upland farmers in the decision-making processes, generating exchanges of views and ideas, and mediating between their different perspectives of how the CGs will be established and operated. Reaching a mutual understanding is the first step towards a broader consensus.

The next step in the dissemination process is to engage with the stakeholders who have statutory responsibility for preserving the upland biodiversity, i.e. NPWS, water quality, i.e. Wicklow County Council and farm viability, i.e. Teagasc, and other private agri-environmental consultants, so that they are partners in the development of the Commonage Management Plans. This dialogue is the foundation for building trust and ensuring mutual understanding. It will create knowledge sharing mechanisms to enable the integration of local knowledge with best practice and available scientific knowledge.

Applying this dissemination approach in the implementation of Action 1 greatly increases the opportunities of resolving conflicts and gaining solid support from the major pilot stakeholders. However, the establishment of CGs and the

development of the Commonage Management Plans require time and a safe environment for the participants. Therefore, the dissemination activities for this stage of the project will not commence until the process is complete.

The next step in the process will focus on increasing local and national stakeholder's knowledge of the project's approach, innovations and expected outcomes. The dissemination and outreach plan will make the knowledge emerging from the project available in forms that acknowledge the diversity of the stakeholders and will be presented in a practical, userfriendly format.

The final outcome of the dissemination activity is for all stakeholders to be able to make informed decisions about the efficacy of the project's innovative approaches and their application in other parts of Ireland and possibly internationally.

9.2 Dissemination and Outreach Plan

A summary of the main disseminations actions is provided in the Tables below. These outline the goal of the activity, what we will do, how and when we will do it and who does it. The overall development, management and implementation of the dissemination strategy and outreach plan will be led by Larry O'Loughlin of the OG. On the ground, implementation will be the responsibility of the Lead Partner, the Project Manager and the CG Chairpersons. There are four stages in the dissemination plan. The first two stages deal with the knowledge and information exchange required for the establishment of the CGs and the development and updating of the commonage/upland management plans.

Stage 1 Commonage Groups: The first and probably most important dissemination stage will be initiating the dialogue between the shareholders of the commonages selected to participate in the SUAS pilot project. It involves the sharing of their knowledge, perspectives of the commonages, identifying and agreeing the challenges and the need for the CG approach to addressing them - i.e. taking collective ownership of their commonage. The dissemination plan for the farmers involved in establishing the CGs is shown in Table 1 below. The output from this dissemination activity will be the successful establishment of five CGs within the planned timeframe. The monitoring of progress towards the goal will be the responsibility of the Project Manager and the OG.

Stage 2 Commonage/Upland Management Plans: The development of the Commonage/Upland Management Plans requires on-going dialogue within and between the five CGs. However, it also requires bringing in external stakeholders who have statutory roles in managing upland biodiversity. These include:

- NPWS have responsibility for the conservation of large areas in the Wicklow/Dublin uplands designated as SAC and SPA (Figure 3.x and y). Therefore, they have an important role in upland management and will be included in the process. This element will be facilitated by Enda Mullen of NPWS who is an OG member.
- SUAS, in its integrated approach, considers not only biodiversity but also the associated water quality and farm viability. The current status of the Wicklow/Dublin rivers indicates that many are at risk of not achieving the EU Water Framework Directive targets (Fig. 3. ?). However, there is very little data to indicate how the land management of the uplands, if at all, contributes to this risk. Therefore, there is a requirement for the involvement of

Wicklow County Council who have statutory responsibility for water quality in this area. The process of engaging them will be facilitated by Sinead Hurson of LAWCO who is an OG member.

- Farm viability is essential to the long-term success of SUAS. Therefore, the viability of the sheep or cattle enterprise is an important pillar of the Commonage/Upland Management Plans. Teagasc's research and knowledge transfer expertise will assist farmers improve the viability of their farms through the preparation of individual farm plans and the development of more profitable upland farming systems.
- There are the other stakeholder groups, e.g. Mountaineering Ireland, NARGC, and Tourism Providers, many of whom are WUC members. Dialogue between these groups and those stakeholders directly involved in the development of the Commonage Management Plans will be kept open and transparent.

The dissemination plan for this stage is based on a series of meetings that will facilitate knowledge exchange (Table 2).

Stage 3 Developing wider stakeholder engagement. This stage of the Dissemination Plan focuses on developing stakeholder engagement. The objective is to create awareness of the pilot and greater local ownership.

A sample list of the diverse stakeholder groups that will be targeted is provided in Table 4.?. These have both local and national dimensions. As noted above, the initial (i.e. years 2/3) dissemination plan will primarily be locally focused. However, it will specifically include other farmers in the main commonage areas around the country (e.g. Irish and Natura Hill Farmers Association). In year 4 as the results and impact of the project begin to emerge, the focus will begin to include a wider national audience.

The main dissemination activity for the stakeholders will be two annual open days. The first will have focus on the hill farming community and the second will target the local community and other stakeholder groups. The organization of these dissemination events will be by the CGs and the Project Manager. The five CGs and two upland farms will all be featured at these events, but they will be held on a different commonage each year to "showcase" them individually.

An expected outcome from these events will be requests for farmer groups to visit during the year and agricultural students in the various institutions. Any such requests will be welcomed, facilitated and encouraged. The requests will be managed by the Project Manager but the visits will be hosted by the CG or upland hill farmer. Requests from other non-farming stakeholders will be also be encouraged and facilitated.

The Lead Partner and Project Manager will look for opportunities to make presentations on the progress of the project at relevant national conferences. This avenue of dissemination will not be used until we have at least one year's monitoring results available and analysed. Access to this avenue of dissemination will be facilitated by the OG members who will have greater knowledge of suitable upcoming events.

The project actions and activities provide an opportunity for undergraduate and even post graduate projects. We will seek, through the OG membership, opportunities to engage with relevant Departments in third level institutions that may take the opportunity to use the pilot commonages for educational purposes. Funding for post graduate studies will be sought through programmes such as the Teagasc Walsh Fellowship Programme and the Irish Research Council-EPA Government of Ireland Postgraduate Scholarship programme. This activity will be facilitated and encouraged by the two UCD OG members.

Stage 4 Developing a National Profile for SUAS. The final stage of the dissemination plan focuses on developing a national profile for the SUAS project in its fifth year. A National Commonage Open Day will be held in the last summer of project. The objective of this event is to highlight the results and outcomes of the SUAS pilot to a wider public audience.

A Commonage Management Handbook, based on experience gained during the project will be published. It will provide

- Guidance on how to set up a commonage group
- Guidance on how to develop, implement and monitor a commonage/upland management plan
- An assessment of the effectiveness of the activities undertaken by the farmers and their costs
- Guidelines for the development of costings for upland activities
- A blueprint for a result based payment scheme for commonages as they progress towards and/or achieve favorable conservation status
- Guidelines for establishing a local led agri-environmental scheme in other upland areas of the country

9.3 Other dissemination activities

Other dissemination activities that will occur in parallel to the above will involve press releases to local press and radio around all the SUAS events and successes. The objective will be to create wider public awareness of, and support for the project. Larry O'Loughlin will lead this activity. He will also seek out radio and TV opportunities such as Countrywide, Ear to the Ground and Eco-Eye.

Another important dissemination activity will be the bi-annual reporting to DAFM. The Project Lead and OG will submit two progress reports to DAFM annually. The first will be a midyear interim progress in July each year. The second will be an annual progress report submitted in February. The annual reports will outline the activities and results from the year.

As part of this process, DAFM representatives will be invited to visit the SUAS project to see the project activities and outcomes on the ground. While the visit will be arranged by the Lead Partner, the hosts will be the individual CGs. This will facilitate an open discussion with the farmers rather than one lead by the Project Manager or Lead Partner.

9.5. Website and Social Media •

The WUC website will host a SUAS page to provide the background to the project, its approaches, events and outcomes. In addition, their biannual newsletter and e-zines will provide another avenue of dissemination to WUC members. WUC's social media channels can also be utilized to reach a wider audience.

The potential role of CGs developing social media channels will be explored during the first project year. It will include an evaluation of its goals, objectives, users and content. Based on the outcome, decisions will be made on whether or not social media strategy will be developed.

Table 9.1 Dissemination Plan –Stage 1 – the establishment of the Commonage Groups

Goal	What will be done	How it will be done	What will be done	When it will be done	Who will do it
The establishment of the Commonage Farmer Groups.	Create an open forum where the stakeholders in a potential CG can go through	A series of 8 meetings (both indoors and on the commonages) are	Dialogue focused on i) getting to know each other: ii) building trust; iii)	At the start of the project and completed within 10 months of the project.	Experienced external facilitators
	the processes of discussion that will lead to agreement	scheduled to create a forum for the dialogue and	discussing their individual perspectives on the		Project Manager
	on how they will work as a group, rather than individuals, to manage their commonage.	exchange. In addition, if required, study trips will be organized.	challenges facing their commonages; iv) agreeing on how they can work together as a group and v) agreeing a constitution to achieve it.		Relevant OG members if required.

Table 9.2 Dissemination Plan – Stage 2 – The development and reviews of the Commonage/Farm Management Plans

Goal	What will be done	How will it be done	What will be done	When it will be done	Who will do it
1. Taking ownership of the commonage biodiversity and water quality.	Create the opportunity for the CG farmers to grow their knowledge on the uplands biodiversity and their biodiversity goals.	By developing the dialogue between the CGs and upland farmers with ecologists who will do the baseline and monitoring studies and those with statutory responsibility for their preservation.	The CGs will write a short history of their commonage, walk it and write their own assessment of its condition. This will be used in discussions with i) the ecologist who will have completed a biodiversity baseline and ii) NPWS. By comparing the different perspectives there will be mutual learning, leading to the formulation of the activities that will be included in the management plan. Water quality will be addresses in a similar manner but will include Wicklow County Council and LAWCO.	It will be done in the second six months of the project.	THE CGs with support from the Project and the OG.
2. Engagement with stakeholders whose expertise and knowledge will be of assistance in developing the management plans.	Create dialogue with key stakeholder groups that will be involved in developing the activities associated with the land management for water quality and farm viability on the commonages.	Meetings of the CG chairs, the Project Manager and Lead Partner will be arranged with NPWS, LAWCO, Wicklow County Council and Teagasc.	Farm management data will be collected and analyzed by Teagasc. These will be used to develop the flock management element of the management plan. The hydrological survey of the commonages and relevant water quality results will be discussed. A set of activities that would lead to a water quality monitoring programme in one or more of the commonages will be agreed.	This will be done in the second six months of the project.	The Project Manager, Lead Partner and the five CG Chairpersons.

3. Initial engagement with local stakeholders to provide an opportunity to review the draft management plans	Create dialogue with local stakeholder groups about the management plans	An open evening meeting where local stakeholders will be invited.	The five CGs will outline the main elements of their proposed management plans and seek feedback. A mailing list of those attending will be drawn up and a summary of the meeting outcomes will be sent out to all those who attended. A forum for feedback will be provided on the SUAS page of the WUC website.	This will be done in month 11	The Project Manager, Lead Partner and the five CG Chairpersons
4. Engagement with stakeholders (key) whose expertise and knowledge will be of assistance in the annual review of the management plans.	Maintain and develop the dialogue with key stakeholder groups that will contribute to the annual reviews of the management plans.		There will be an annual review of the progress towards the management plans' targets. This will be based on a monitoring review conducted by the ecologist and a review of flock performance by Teagasc. It will also include a review of the farmer's assessment of the activities in terms of cost and impact. This review will be open to the key stakeholders who can offer their insights. An objective of this process is to identify new activities that might be included under the Auction Payment Scheme. The Plans will be updated for the following year based on the agreed review outcomes.	At the annual reviews of the plans in the last quarter of year 2, 3 and 4.	The Project Manager, Lead Partner and the five CG Chairpersons

Table 9.3 Dissemination Plan – Stage – Developing stakeholder engagement

Goal	What will be done	How will it be done	What will be done	When it will be done	Who will do it
Engagement with local stakeholders.	Develop and maintain dialogue with local stakeholder groups that will contribute to the annual reviews of the management plans and to inform them of the progress with the implementation of the	An open evening meeting where local stakeholders will be invited.	The five CGs will outline the main outcomes of the year's management plans and proposed updates if any and seek feedback.	This will be done in months 23, 35 and 48	The Project Manager, Leac Partner and the five CG Chairpersons
	activities and their results.	2. Two open Days will be held each year—one for upland farmers and the other for a wider group of local stakeholders.	The upland farmer events will focus on the experience and learning from a farming perspective with lots of opportunity for discussion.	This will be done in the summer months each of the second, third and fourth years.	
			The local stakeholder event will be focused around a family day where visits to parts of the commonage will be organized and "stops" to show what and why is actually happening on the commonage.		
		3. Local school visits	The CGs will prepare a simple pamphlet that describes their commonage. These will be distributed by farmers in the local schools following talks given by them. Agreement with local schools will be sought for annual visits to the	This will done in the second, third and fourth year during the last term of the school year.	
			commonage to show what is there, why it is there and how the commonage is managed.		

Table 9.4 Dissemination Plan – Stage 4 – Developing a National Profile for SUAS







Appendix 4.1 Example of a Commonage Group Constitution

1. NAME The name of the Commonage Group (CG) will be

2. OBJECTIVES

- To support and integrate the management of our commonage in a way that will facilitate members to agree, and manage the implementation of the Action and activities of the project.
- To openly engage with the SUAS Project Team, Operational Group and external stakeholders in the development and operation of the Commonage Management Plan.
- To be compliant with all record keeping, reporting and regulatory financial, environmental and farming obligations.

3. MEMBERSHIP

Membership of the CG is restricted to all who hold legal rights to grazing, or their legally nominated representative, on the commonage and have completed a membership application form.

4. OFFICERS

4.1 The Officers of the Association shall be as follows:

- Chairperson,
- Vice Chairperson,
- Secretary, (Executive Officer)

The Chairperson - will represent the CG officially and chair meetings. The Vice Chairperson – will stand in for Chairperson when he/she is not available.

The Secretary – will maintain all CG records, conduct all CG meetings and will be responsible for maintaining CG financial transactions with the SUAS Project Team.

4.2 The monthly meeting will be attended by a member of the Project Management Team. The function is to support and to provide advice. The Project Team Member will have no voting rights.

5. ELECTION OF OFFICERS

- 5.1 All Officers shall be elected at the first meeting of CG by all the CG Members. Votes will be a show of hands which will be monitored by the attending Project Team member.
- 5.2 All Officers are elected for a period of one year, but may be re-elected to the same office or another office annually.

6. ACTIVITIES

- 6.1 All other meetings will be on a monthly basis.
- 6.3 All Members shall have one vote relative to their particular right(s) or in relation to any general motion.
- 6.4 Voting will be by a show of hands which will be monitored by the attending Project Team member.
- 6.5 The Commonage Management Plan will be developed and agreed the CG Members. This will be done in conjunction with the SUAS Project Team. Support on specific issues arising will be provided by members of the OG. Developing the plan will require the active participation of NPWS and other relevant external stakeholders.
- 6.6 The implementation of the Commonage Management Plan will be reviewed at each of the monthly meetings. Issues arising will be recorded by the attending Project Team member and resolutions agreed. Where resolutions cannot be agreed the Project Team and Chair will seek to provide it before the next meeting. The OG will provide support in resolving the issue(s).
- 6.7 The monthly activity sheets for all GG members and any associated invoices will be reviewed and signed off for submission to the Project Management Team.
- 6.8 Planning and development of projects for the SUAS auction payment scheme will be developed and agreed at least twice annually.
- 6.9 Decisions on behalf of the CG will require a vote by at least 50% of the members. The aim of the CG is to have all decisions made by consensus or by a majority vote if consensus cannot be reached.

7. IRISH LAW.

The laws governing Ireland will bind all members.

- 8. CHANGES TO THE CONSTITUTION. The constitution can be changed by consensus only at the AGM.
- 9. DISSOLUTION. The CG may be dissolved if at least 75% of the members vote for it.
- 10. SIGN & DATE. This constitution was agreed by the CG members.

Date:

Signed:

Appendix 4.2 - Ecological Conservation Status Assessment conducted for Wicklow Uplands Commonage A

1. INTRODUCTION

This commonage extends from the lower slopes of 'Wicklow Valley A' to the summit of two mountains - 'A high Wicklow Mountain A' and 'A high Wicklow Mountain B' as shown on Figure 1 below. It also encompasses the ridge and col between the two mountains. Lands to the north of A high Wicklow Mountain B' which are not located within the commonage are under the ownership of the state and are included within the boundaries of the Wicklow Mountains National Park. The lands within the commonage are of international importance for the habitats and species they contain and hence are included within the boundaries of the Wicklow Mountains SAC and Wicklow Mountains SPA.

Within the commonage is a small mountain lake backed by steep cliffs which forms an attractive destination for hill walkers and a number of watercourses which are tributaries of 'A Wicklow River' rise within the site. The commonage is owned and managed by the 'Wicklow Valley A Commonage Group' which has eight members.

2. RECEIVING ENVIRONMENT

2.1 Habitats Present

Under Fossitt's (2000) habitat classification scheme the summit plateaus, the col and the ridge between the two summits are dominated by blanket bog (PB2 Upland blanket bog). This is dominated by deer grass (Trichophorum germanicum) which is showing signs of erosion with large peat haggs (PB5 Eroding bog). HH1 Dry heath vegetation has formed on much of the dried out haggs.

On the northern brow of the ridge between the two mountains above the cliffs is a narrow band of montane vegetation (HH4 Montane heath). Substantial areas are dominated by Mat grass (Nardus stricta), Heath rush (Juncus squarrosus) and the moss Racomitrium lanuginosum with many areas of bare peat. Rocky areas are dominated by a sparse mixture of Viviparous fescue (Festuca vivipara), thyme (Thymus polytrichus) and Heath bedstraw (Galium saxatile). There are some sparse populations of the arctic-alpine species Dwarf willow (Salix herbacea), Stiff sedge (Carex bigelowii) and the Alpine clubmoss (Diphasiastrum alpinum).

Below this there are substantial areas of scree (ER3 Siliceous scree and loose rock) and ER1 Exposed siliceous rock on the steep cliffs at the back of the mountain corrie where 'A upland Mountain lake' is located (FL2 Acid oligotrophic lakes).

The scree areas are characterised by Viviparous fescue, Heath bedstraw and acrocarpous mosses. The clefts in the rock faces which are inaccessible to browsing animals support Fir clubmoss (Huperzia selago), Alpine lady's-mantle (Alchemilla alpina), the Starry saxifrage (Saxifraga stellaris) and various fern species. Where there is seepage on the rock faces, small patches of hydrophilous tall herb vegetation and vegetation with affinities to ER1 Exposed siliceous rock occurs.

The steeper slopes of the commonage to the west and south east are dominated by species-poor grassland (GS3 Dry-humid acid grassland) which is dominated by the Mat grass (Nardus stricta) which is unpalatable to sheep. Small areas of grassland on these slopes and within these valleys may correspond to the Annex I habitat species-rich Nardus grassland (GS3 Dry humid acid grassland), but these are often becoming invaded by Bracken (Pteridium aquilinum) (HD1 Dense bracken). Bracken encroachment is less of an issue in the western valley which has been traditionally grazed by cattle.

To the south east of the main ridge, on the upper slopes are areas of HH3 Wet heath typically dominated by Purple moor-grass (Molinia caerulea) with some cross leaved heath (Erica tetralix).

Figure 1. Wicklow Commonage A



The headwater streams of three rivers rise within the commonage. The south eastern watercourse (FW1 Upland eroding watercourse) supplies the main drinking water supply for 'A Upland Wicklow Village' and recent water quality monitoring by the EPA at 'XX bridge' downstream indicates that this watercourse is assigned a Q value of 3-4. The previous reporting period assigned this watercourse with a Q value of 4 indicating that water quality has declined in this headwater stream.

The Annex I habitats present within the commonage include:

- 3110 Oligotrophic waters containing very few minerals of sandy plains (Littorelletalia uniflorae)
- 4010 Wet heath
- 4030 Dry heath
- 4060 Alpine and Boreal heath
- *6230 Species-rich Nardus grasslands
- *7130/7130 Blanket bog
- 8110 Siliceous scree
- 8220 Siliceous rocky slopes

2.2 Rare Plants

Rare and notable plant species known or recorded from the commonage include Fir clubmoss (Huperzia selago), Dwarf willow (Salix herbacea), Stiff sedge (Carex bigelowii), Alpine clubmoss (Diphasiastrum alpinum), Alpine lady's-mantle (Alchemilla alpina) and the Starry saxifrage (Saxifraga stellaris).

2.3 Rare Fauna

The commonage is within the known range of Merlin (Falco columbarius), which breed outside the commonage but hunt within it. The Irish hare (Lepus timidus subsp. hibernicus) is commonly observed and large herds of deer (red/Sika hybrids) graze the commonage. Other faunal records reported by the commonage owners/recorded during this survey include Common Frog (Rana temporaria), Common Lizard (Zootoca vivipara), Fox (Vulpes vulpes), Red Grouse (Lagopus lagopus), Mountain Pipit (Anthus pratensis) and Raven (Corvus corax).

Downstream of the commonage within the main channel of the 'XX River' is a population of Freshwater pearl mussel (Margaritifera margaritifera). Recent surveys of this population have indicated that this is an aging population and siltation and changes in flow arising from overgrazing were highlighted as pressures on this population. Other fauna known from the' XX River' include Otter (Lutra lutra), Atlantic salmon (Salmo salar) and Brown trout (Salmo trutta).

2.4 Recreation

The commonage provides access to the Wicklow uplands and is used by large numbers of hill walkers particularly at the weekends. A noticeable worn track from the corrie lake along the ridge towards the western summit has become evident within the past few years. There is also occasional scrambler bike/quad activity particularly from the south eastern portion of the commonage as people use the ridge here to gain access to the eastern summit.

3. ECOLOGICAL ASSESSMENT

3.1 Field Survey

Following the background review and desktop research the site was visited in July 2018 when the extent of habitats present within the commonage and their affinities to either Fossitt (Level 3) or Annex I habitats were mapped as shown on Figures 2 and 3 below.

Figure 2. Habitats mapped to Level Three (Fossitt, 2000) within the commonage

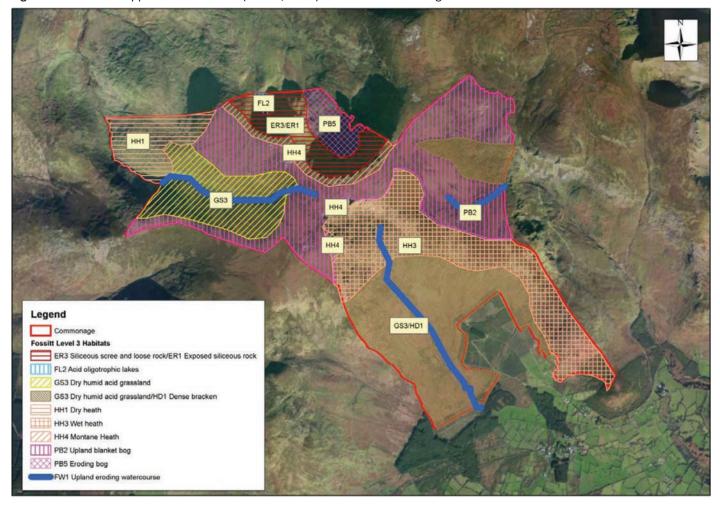


Figure 3. Habitats mapped according to their correspondence with Annex I habitats



3.2 Habitat Condition Assessments

A number of monitoring stops in each of the habitats present within the commonage were then completed following the methodology outlined in Perrin et al (2014). The results of these are shown on Figure 4. A total of 8 monitoring stops were recorded within the 4010 Wet heath habitat within the commonage. The number of monitoring stops completed depended on the size of the habitat.

EXAMPLE -WET HEATH

The results of the eight monitoring stops conducted in wet heath habitat within the commonage are presented below in Table 1 as an example.

Table 1: Monitoring criteria and failure rates for 4010 Wet heath (n = 8).

Criteria	Scale of	Number of	Number of	Failure
	assessment	assessments	failures	rate (%)
Vegetation composition				
1. Erica tetralix present	20m radius	8	6	75
2. Cover of positive indicator species ≥ 50%	Relevé	8	4	50
3. Total cover of <i>Cladonia</i> species, <i>Sphagnum</i> species, <i>Racomitrium lanuginosum</i> and pleurocarpous mosses ≥ 10%	Relevé	8	5	62.5
4. Cover of ericoid species and <i>Empetrum nigrum</i> ≥ 15%	Relevé	8	5	62.5
5. Cover of dwarf shrub species < 75%	Relevé	8	2	25
6. Cover of the following negative indicator species: <i>Agrostis</i> capillaris, <i>Holcus lanatus, Phragmites australis, Ranunculus</i> repens collectively < 1%	Relevé	8	1	12.5
7. Cover of non-native species < 1%	Relevé	8	1	12.5
8. Cover of non-native species < 1%	Local vicinity	8	1	12.5
9. Cover of scattered native trees and scrub < 20%	Local vicinity	8	0	0
10. Cover of <i>Pteridium aquilinum</i> < 10%	Local vicinity	8	3	37.5
11. Cover of <i>Juncus effusus</i> < 10%	Local vicinity	8	1	12.5
Vegetation structure				
12. Crushed, broken and/or pulled up <i>Sphagnum</i> species < 10% of <i>Sphagnum</i> cover	Relevé	8	2	25
13. Last complete growing season's shoots of ericoids, Empetrum nigrum and Myrica gale showing signs of browsing collectively < 33%	Relevé	8	7	87.5
14. No signs of burning into the moss, liverwort or lichen layer, or exposure of peat surface due to burning	Local vicinity	8	8	100
15. No signs of burning inside boundaries of sensitive areas*	Local vicinity	8	8	100
Physical structure	<u> </u>			
16 Cover of disturbed bare ground < 10%	Relevé	8	6	75
17 Cover of disturbed bare ground < 10%	Local vicinity	8	5	62.5
18 Area showing signs of drainage resulting from heavy trampling or tracking or ditches < 10%	Local vicinity	8	2	25

*Sensitive areas

- (a) Vegetation severely wind-clipped, mostly forming a mat less than 10 cm thick.
- (b) Areas where soils are thin and less than 5 cm deep.
- (c) Slopes greater than 1 in 3 (18 $^{\circ}$) and all the sides of gullies.
- (d) Ground with abundant, and/or an almost continuous carpet of Sphagnum, liverworts and/or lichens.
- (e) Pools, wet hollows, haggs and erosion gullies, and within $5-10\,\mathrm{m}$ of the edge of watercourses.
- (f) Areas above 400 m in altitude.
- (g) Areas within 50 m of functioning drains.

3.2.1 WET HEATH - CONSERVATION STATUS ASSESSMENT

Area

A review of the aerial photography from the 1990s and other data sources for the commonage indicate that there has been a reduction in the area of wet heath as a result of land reclamation and agricultural improvement resulting in an increase of acid grassland habitat. For this reason the area of 4010 Wet heath within the commonage was therefore assessed as Unfavourable – Bad.

STRUCTURE AND FUNCTIONS

In the assessment of structure and functions, 7 monitoring stops failed one criterion or more. Following a review of the ecological condition of those stops, expert judgement determined that no changes should be made, resulting in an overall failure rate of 87.5%. The structure and functions of **4010 Wet heath** were therefore assessed as **Unfavourable – Inadequate**.

The vegetation composition of 4010 Wet heath was poor, with multiple failures being recorded under several criteria. The cover of ericoid species was inadequate at 62.5% of stops, while Erica tetralix was absent from the local vicinity of 75.0% of monitoring stops. The cover of positive indicator species and the cover of Cladonia spp., Sphagnum spp. and pleurocarpous mosses were inadequate at 56.25% of monitoring stops. The cover of the negative indicator species Agrostis capillaris was excessive at one monitoring stop (12.5%). The cover of non-native species in the local vicinity of the monitoring stop was also excessive at one monitoring stop (12.5%).

The vegetation structure of 4010 Wet heath was poor in some cases with 56.25% of monitoring stops failing due to excessive grazing. The physical structure of 4010 Wet heath was poor with 25% of monitoring stops failing due to excessive drainage. The cover of disturbed bare ground was excessive within 75% of monitoring stops and in the local vicinity of 62.5% of monitoring stops.

Burning and grazing by sheep, along with associated impacts such as trampling and access by motorised vehicles, appears to be the most significant impact on the structure and functions of 4010 Wet heath in the commonage. The effects of this impact are apparent in the vegetation composition, vegetation structure and physical structure of this habitat.

The failure rates recorded under the criteria relating to vegetation composition are much higher than those for vegetation structure or physical structure. The current impacts recorded under vegetation structure and physical structure do not, therefore, account for the high levels of failure under vegetation composition. The poor vegetation composition may be a legacy of previous damage. Whilst the CFP stock reductions have undoubtedly reduced grazing pressure, this management intervention has not yet been manifested in the vegetation composition of 4010 Wet heath, indicating that recovery is ongoing.

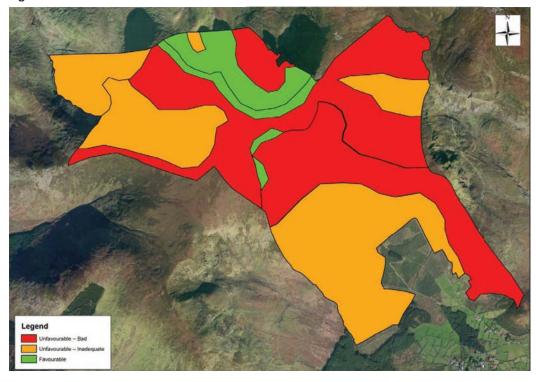
FUTURE PROSPECTS

The future prospects for the habitat are assessed as Unfavourable – Bad in the absence of active management by the commonage group.

Overall the conservation status assessment for wet heath habitat within the commonage is assessed as Unfavourable - Bad.

Annex I code	Habitat	Area	Structure and functions	Future prospects	Overall assessment
4010	Wet heath	Unfavourable	Unfavourable	Unfavourable	Untavourable
		- Inadequate	- Bad	- Bad	- Bad

Figure 4. Habitat Condition Assessment



3.2.2 RECOMMENDATIONS - WET HEATH HABITAT

A Commonage Management group has been established for the commonage and a management plan will be developed by the members which will utilise and be informed by the information provided by this report.

The management prescriptions in the plan need to address the impacts highlighted in this report if progress is to be made towards attaining Favourable status for the Annex I habitat –Wet heath. The major impacts arise from over grazing with sheep, illegal burning, historic land reclamation and some recreational access resulting in peat erosion.

Levels of livestock grazing (sheep) are being addressed through the Commonage Management Plan. Whilst historic reductions in sheep numbers appears to have resulted in some improvement to Annex I habitats, these habitats are not currently attaining Favourable status. Continued monitoring is required to establish what would be sustainable levels of livestock for this site bearing in mind that there may be a considerable delay between changes in livestock levels and a response in the vegetation. The available data does not support an increase in stocking levels.

There should be no further burning within this part of the commonage as this is having a negative impact on the wet heath habitat.

The erosion of peat is a major impact for the habitat as this provided the underlying structure on which the habitat relies. Whilst some areas of eroded peat may gradually revegetate as a result of the stock reductions, in areas of more severe erosion such as along the recreational access path active restoration measures may be needed for this habitat to achieve Favourable status. These may include temporary fencing and signage to encourage walkers to choose an alternative route, the damming of erosion gullies on the track, the stabilisation of bare eroded peat with geotextiles or heather brash, the seeding of bare peat with Sphagnum propagules and other track repairs.

Any temporary fencing erected will need flight diverters to be added to reduce potential collision risk by red grouse which use the commonage.

The deer numbers within the commonage should be reduced through the implementation of a deer management plan. Revenue generated from the management of deer could include:

- Deer letting fees received by the Commonage Management Group and other land owners. Fees of up to €10 / hectare are offered for some properties in Wicklow.
- Sale of deer carcases for venison by hunters to licenced game dealers. Payments of between €1.00 and €1.50 per kg are made for weighed carcases which, for a 47kg animal, equates to €47 to €70 per deer.
- Fees paid by commercial clients, both Irish and foreign, for recreational deer stalking and associated spend for meals, accommodation etc.

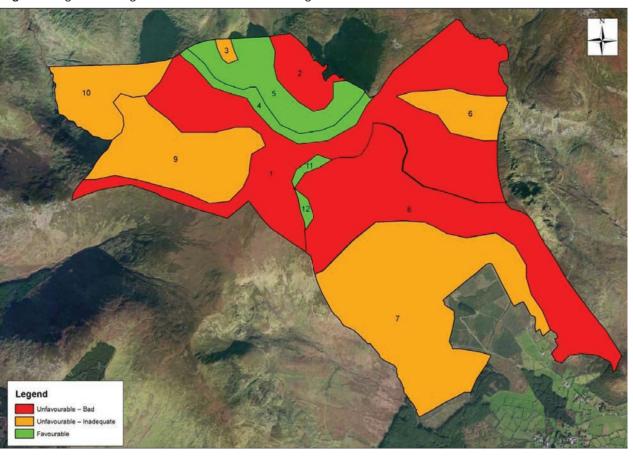
4. SUAS COMMONAGE MANAGEMENT MEASURES

Following the site visits and the habitat condition assessments, a meeting was held with the commonage group members to discuss the results. The agreed SUAS management measures for the commonage are presented below in Table 2 and mapped on Figure 5. These will be implemented over the next four years and assessed on an annual basis during a walkover survey of the site by the project ecologist. Given the exposed nature of the uplands and the time expected for habitats to recover, these walkover visits will give an indication of change and general habitat condition within the commonage and management can be adjusted as required. A full habitat condition assessment as presented here will then be completed in year five of the project.

Table 2. Agreed management measures for Commonage A.

Parcel No.	Fossitt Habitat	EU Annex I Habitat	Condition	Measure
1	PB2 Upland blanket bog	7130 Blanket bog	Unfavourable - Bad	Reduce grazing intensity, some track remedial works to the western summit, block old turbary drains
2	PB5 Eroding bog	7130 Blanket bog	Unfavourable- Bad	Reduce grazing and deer numbers, hydroseed with heather seed
3	FL2 Acid oligotrophic lakes	3110 Oligotrophic waters containing very few minerals of sandy plains (<i>Littorelletalia uniflorae</i>)	Unfavourable- Inadequate	Ease enrichment from overstocking
4	HH4 Montane Heath	4060 Alpine and boreal heath	Favourable	Monitor trampling pressure from walkers
5	ER3 Siliceous scree and loose rock/ER1 Exposed siliceous rock	8110 Siliceous scree/8220 Siliceous rocky slopes	Favourable	Deer control within this valley is required, monitor rare plant populations
6	GS3 Dry humid acid grassland/HD1 Dense bracken	*6230 Species-rich Nardus grasslands	Unfavourable - Inadequate	Control bracken
7	GS3 Dry humid acid grassland/HD1 Dense bracken	*6230 Species-rich Nardus grasslands	Unfavourable - Inadequate	Control bracken, protect water quality in adjoining watercourse through the creation of upland gully woodland
8	HH3 Wet heath	4010 Wet heath	Unfavourable - Bad	Cease burning, reduce stocking rates, monitor track erosion
9	GS3 Dry humid acid grassland	*6230 Species-rich Nardus grasslands	Unfavourable - Inadequate	Control bracken, trial grazing with cattle
10	HH1 Dry heath	4030 Dry heath	Unfavourable - Inadequate	Flail/mow gentle slopes, controlled burn on steep slopes
11	HH4 Montane Heath	4060 Alpine and boreal heath	Favourable	None required at present - monitor condition
12	HH4 Montane Heath	4060 Alpine and boreal heath	Favourable	None required at present

Figure 5. Agreed management measures for Commonage A.



Appendix 4.5 - Summary Proposal to be included as part of the Wicklow **Uplands Council LLAES**

(brought by Karl Byrne and Joseph Lanzillotta)

August 2017

For consideration:

A Beekeeping Initiative as part of the Sustainable Uplands Agri-Environment Scheme (SUAS) proposal towards Round 2 of the European Innovation Partnership Initiative [EIP]

The initiative:

Our project aims to connect beekeepers with farmers & land-

Essentially, this translates to farmers allowing beekeepers to locate beehives on their land(s)

This initiative is borne out of our concern with the decline in honey bee (and other pollinator) populations, both nationally and internationally and a motivation to do something proactive to help address the problem.

Similar to the ethos behind the SUAS Project, we have driven our initiative from the ground up. This translates to us researching, contacting and meeting with farmers and landowners directly, in order to discuss our idea.

Once they have given us a green light to allow access, we then go and contact local beekeeping associations and try to find a suitable match.

Our goal through this work is to set up at least 2 pilot schemes in Wicklow by the end of August 2017.

How our project fits within SUAS:

Of the four measures drawn up for SUAS, our project particularly addresses Measure 3 (Enhance particular species) and to a lesser extent Measure 4 (which includes 'supporting sustainable farming')

Measure 3:

The uplands of Wicklow provide an ideal habitat for the growth of a number of plant species. Of these species, one in particular grows in profusion on bogs and elevated sites throughout Wicklow, that being Calluna Vulgaris. Or what most of us will know it as- Common (or Ling) heather.

Heather is slightly unusual for a flowering plant in Ireland, in that it blooms relatively later in the year (July-October)

This means that it's very valuable to beekeepers.

As other plants have passed their peak flowering time, heather comes into bloom at an ideal time.

More experienced beekeepers will therefore often move their hives to upland heather sites for 2+ months during this time.

This provides the bee colony with a fresh supply of nectar to ensure their survival throughout the winter months.

It also so happens that heather honey is highly prized in Ireland, both for its taste and its rarity.

Therefore, by including an initiative to help promote the population health and survival of Apis Mellifera Mellifera (the Native Irish Honey Bee) this addresses a core goal of SUAS- that of enhancing a particular species.

Measure 4:

As beekeeping is a form of farming and is sustainable by nature- it could be considered a form of sustainable farming in itself.

As flowers and plants (including heather) benefit directly from pollination, having beehives on selected upland sites is a winwin situation, both for the bees and the overall health of the habitat itself.

It is a very low impact activity with a very low carbon footprint. It is also seasonal by nature (late July- early October) and thus could avoid prescribed burning activities at certain times of the year.

To summarise:

- Our project aims to connect beekeepers with farmers & landowners
- The uplands of Wicklow are an ideal habitat for heather
- Heather is a valuable seasonal crop for bees
- Beekeepers often put hives on heather sites between July & October
- Our project thus addresses Measure 3- 'enhance particular species' and Measure 4- 'sustainable farming'

Appendix 4.3

SUAS Commonage Management Plan 2018

Commonage Group: U. P. D. Hill

Section 1. Habitat

Section 2. Hill Management

Section 3. Water Quality

Proposed by Group: October 2017

Approved by Operational Group November 2017

Appropriate Assessment Received: November 2017

LPIS plot no:	mmonage Group: <u>U.</u>		Area:	455 ha_	
in 13 plot 110.			Arca.	433 114	
List of Shareholders:	Name	Herd Number	Share	Sheep Markings	Member of Commonage Group Y/N
Description of C	ommonage:				
General descrip	tion of the commona	ge area, incluc	ling main h	abitat types & use	

Overall Condition of the commonage:

Description of the overall condition of the commonage, paying particular attention to farming activity.

Section 1 Habitat

The agreed SUAS management activities for the U.P.D. Hill CG are shown in Table 1 and mapped on Figure 1. These will be implemented over the next four years and assessed on an annual basis during a walkover survey of the site by the pilot ecologist. Given the exposed nature of the uplands and the time expected for habitats to recover these walkover visits will give an indication of change and general habitat condition within the commonage. The management can be adapted if required.

Table 1. Agreed Habitat Activities for CG U.P.D.HILL.

Parc el No.	Fossitt Habitat	EU Annex I Habitat	Condition	Activities
1	PB2 Upland blanket bog	7130 Blanket bog	Unfavourable - Bad	Reduce grazing intensity, some track remedial works to the western summit, block old turbary drains
2	PB5 Eroding bog	7130 Blanket bog	Unfavourable- Bad	Reduce grazing and deer numbers, hydroseed with heather seed
3	FL2 Acid oligotrophic lakes	3110 Oligotrophic waters containing very few minerals of sandy plains (Littorelletalia uniflorae)	Unfavourable- Inadequate	Ease enrichment from overstocking
4	HH4 Montane Heath	4060 Alpine and boreal heath	Favourable	Monitor trampling pressure from walkers
5	ER3 Siliceous scree and loose rock/ER1 Exposed siliceous rock	8110 Siliceous scree/8220 Siliceous rocky slopes	Favourable	Deer control within this valley is required, monitor rare plant populations
6	GS3 Dry humid acid grassland/HD1 Dense bracken	*6230 Species-rich Nardus grasslands	Unfavourable - Inadequate	Control bracken
7	GS3 Dry humid acid grassland/HD1 Dense bracken	*6230 Species-rich Nardus grasslands	Unfavourable - Inadequate	Control bracken, protect water quality in adjoining watercourse through the creation of upland gully woodland

8	HH3 Wet heath	4010 Wet heath	Unfavourable -	Cease burning, reduce stocking
			Bad	rates, monitor track erosion
9	GS3 Dry humid	*6230 Species-rich	Unfavourable -	Control bracken, trial grazing with
	acid grassland	Nardus grasslands	Inadequate	cattle
10	HH1 Dry heath	4030 Dry heath	Unfavourable -	Flail/mow gentle slopes,
			Inadequate	controlled burn on steep slopes
11	HH4 Montane	4060 Alpine and	Favourable	None required at present -
	Heath	boreal heath		monitor condition
12	HH4 Montane	4060 Alpine and	Favourable	None required at present
	Heath	boreal heath		

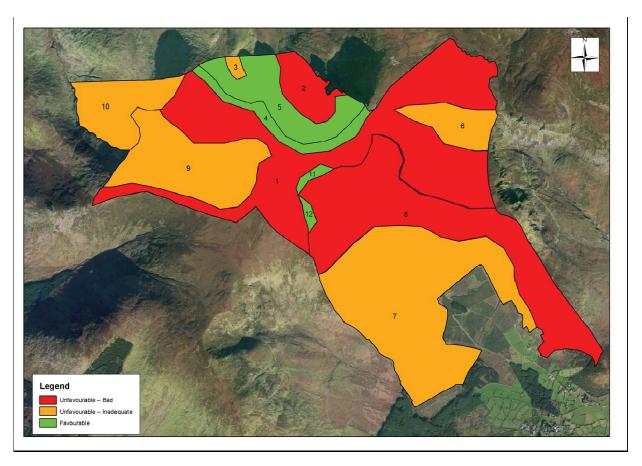


Figure 1. Agreed Habitat Activities for CG U.P.D.HILL.

Section 2. Hill Management

Habitat Management Activities Year 1 Form commonage group & agree commonage management plan actions Year 2 Three 2ha blocks of bracken in area 6 to be sprayed off with suitable selective herbicide. Get a machine to flail 2ha blocks in area 10and create fire break all around it. Year 3 Block turbary drains in block 1 Introduce cattle grazing onto area 9. Carry out controlled burning on roughly half of area 10 Year 4 Two 2ha blocks of bracken in areas 7 & 9 to be sprayed off with suitable selective herbicide. Year 5 Carry out controlled burning on remainder of area 10

Shepherding

Average time per shepherding:	6 Hours
No of times sheep are to be shepherded:	3 Times per week while sheep are on the uplands

Identified objective of the shepherding;

Sheep are to be kept from straying off the commonage onto surrounding areas.

Sheep to be moved off areas 1 & 2 regularly to reduce grazing pressure there

Monitor sheep health for signs of tick diseases.

Other works to be carried out for entire commonage

Erect new gate & gateposts at entrance A on map, in 2019.

Gathering pen to have new sheep fence to replace the old one (250m of fence required) in 2020

Details of sheep stocking rates proposed

Note - Sheep will be grazed on the upland for at least 6 months of the year.

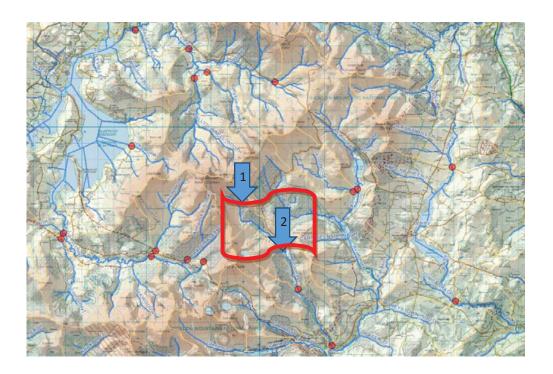
Name	Herd Number	Proposed Sheep numbers				
		2018	2019	2020	2021	2022
Total ewe numbe	rs					

Details of proposed cattle grazing:

In year 3, commence grazing 15 dry suckler cows on area 9 for months of May-August. Monitor their activity to prevent damage to soil structure or erosion problems. Place mineral buckets with them to prevent mineral deficiencies and encourage them to stay in the area. When shepherding, ensure the cattle stay in the correct area also.

Section 3 Water Quality

A biological monitoring survey of the streams in the commonage will commence this year. The sampling points are shown on the map. Sampling point 1 is the reference site and site 2 is the commonage outflow point. The sampling campaign will take place from early June to late September. Wicklow County Council will be assisting with the sampling programme. The red dots are Wicklow County Council's water quality sampling points.



Appendix 4.4

Individual Farm Plan

(to be completed individually by all CG members)

Farmer name:		
Herd number:		
Commonage(s)/Upland areas: _		
Farm Details:		
Lowland Area:	Commonage/Upland Area:	_
Current Stock Details;		
Cattle:	Sheep:	
Suckler Cows	Ewes	
0-1yr Olds	Hoggets	
1-2yr Olds		
>2yr Olds		
Sheep required to graze the uplan	nd area:	
Cattle required to graze the uplar	nd area:	
Labour:		
Details of labour available on the	farm and labour issues identified;	
Facilities:		
Summary of housing & handling f	facilities on this farm or identified issues:	

This farm plan is divided into separate sections for the different farm enterprises (may not all be relevant to everybody), with a general grassland section at the end as it is common to all enterprises.

Hill Sheep Flock Plan

Current Details:		
No. of ewes:		Target no.
No. of hoggets:		Target no.
Ewe breeds:		
No. of replacements kept each year:		
Scanning rate:		Target:
Weaning Rate:		Target:
Breeding		
1. Replacement plan:		
Replacements. required in	2018:	_
	2019:	_
	2020:	_
	2021:	_
	2022:	_
Option 1. Purchase Replaces	ments:	
Provide full details of number	ers, breeds & ages of re	eplacements to be purchased:
Option 2. Breed own replacements:		
Ewe selection for breeding replacements & numbers:		
Ram Selection:		

2. Non-replacement breeding ewes
Ram selection:
Flock management Plan
Mating Plan:
Lambing Plan, including details of lambing dates, location, supervision, etc.:
Lamb management post weaning, (e.g. sell as stores, as lowland breeding stock, finish, etc.):
Health Plan
Provide full details of health plan in place for sheep grazing the uplands:
Grazing Plan
Details upland grazing including types of sheep, numbers, timing, weaping dates
Details upland grazing including types of sheep, numbers, timing, weaning dates, shepherding, gathering, etc.:
shepherang, gamering, etc
Details of grazing on lowlands, paying particular attention to lambing time, mating time &
weaning time for lambs:

Lowland Sheep Flock Plan

Current Details:		
No. of ewes:		Target no.
No. of hoggets:		Target no.
Ewe breeds:		
Scanning rate:		Target:
Weaning Rate:		Target:
Ave weaning wt.		Target:
Breeding		
1. Replacement plan:		
Replacements required in	2018:	_
	2019:	_
	2020:	_
	2021:	_
	2022:	_
Option 1. Purchase Replace	ments:	
Provide full details of numb	ers, breeds & ages of re	eplacements to be purchased:
Option 2. Breed own repla	cements:	
Ewe selection for breeding	replacements & numbe	ers:
Ram Selection:		

2. Non-replacement breeding ewes

Ram selection:
Flock management Plan
Mating Plan:
Lambing Plan, including details of lambing dates, location, supervision, etc.:
Lamb management post weaning, (e.g. sell as stores, as lowland breeding stock, finish, etc.):
Health Plan
Provide full details of health plan in place for lowland sheep flock:
Grazing Plan
Grazing plan for the lowland sheep flock:

Lowland Cattle Plan

Production System details:
Replacement Policy:
Breeding Management/Calving season:
Grazing plan, with particular emphasis on early turnout & housing:
Herd health plan:

Upland Cattle Plan

Production system for cattle grazing the uplands: Commercial autumn calving herd, with weaned cows grazing on uplands in summer Commercial spring calving herd with cows & calves grazed on uplands in summer Hill breed cattle grazed on uplands in summer Details of proposed cattle breeds & production system **Replacement Policy: Breeding Management/Calving season:** Grazing plan, for uplands area, including dates: **Grazing plan, for lowland area:**

Herd health plan, with particular attention on upland grazing issues:			
	<u>Grassl</u>	and Pl	<u>an</u>
Soil Fertility			
Date of last soil samples Taken:	-		
Nutrient Management Plan Prepare	d:	Yes/No	
Nutrient advice followed:	,	Yes/No	
Recommendations:			
Curan Hallingting / Curaina Plan			
Grass Utilisation/Grazing Plan			
Stocking Rate:			
No. of grazing divisions:		1	No. of groups of animals:
Grazing divisions per grazing group:			
Rotational grazing practiced:	Yes/No		
Topping practiced:	Yes/No		
Date silage cut & period growing:			
Autumn closing plan completed:	Yes/No		

Spring grazing plan completed:	Yes/No
Recommendations:	
Grass Production	
% of farm reseeded in last 10 years:	
Fields identified for reseeding:	Yes/No
Details of catch crops grown:	
Problem weeds & their control:	
Pocommondations:	
recommendations.	
Recommendations:	