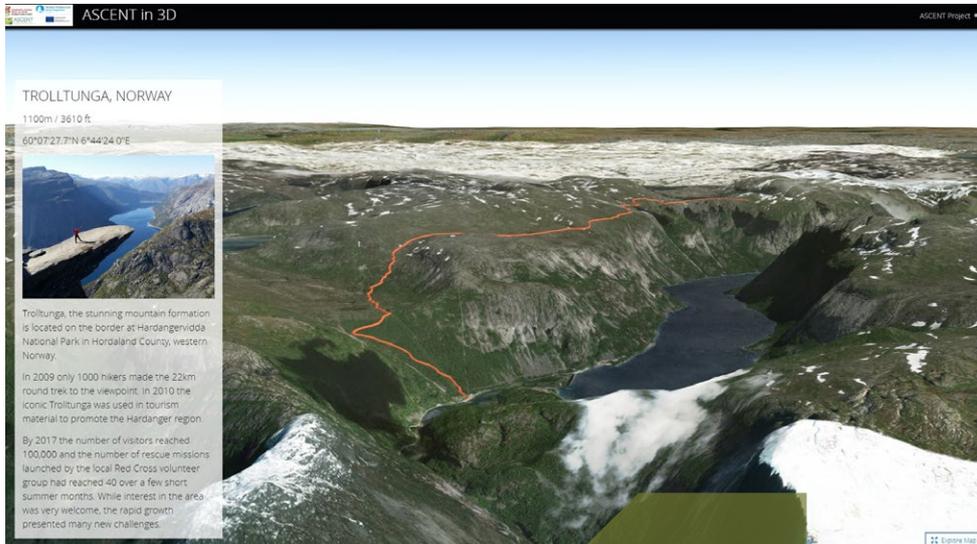


ASCENT in 3D



Deploying GIS for Decision Making

ALL SEVEN
ASCENT SITES

Deploying GIS Technology to Manage Uplands Sustainably

Exploring the applicability of appropriate ICT based tools, is central to the achievement of activity T3.1.1 within the ASCENT project. With geography providing the content and context for understanding our natural European environment, the ASCENT team in Donegal County Council took the lead in adopting Geographical Information Systems (GIS) as the enabling technology to help plan, analyse, measure, design and manage our uplands sustainably.

Donegal County Council initially applied and tested GIS technology locally at Errigal Mountain by mapping all current access routes to Errigal's summit and overlaying those on a 3D map, this proved very successful for stakeholders to view, consider and agree on a single path route to the summit.

Regarding research into the Impact of Unregulated Access, Donegal County Council liaised with a number of agencies in collating data layers specifically to Errigal, to support the report. Mapping the relevant geology, land cover soils and natural heritage data layers produced <http://arcg>.

[is/1CTeOT](http://arcg). To enhance the approach and ascertain changes over time, a visual analysis of historical aerial photography from 1995, 2005 and 2015 took place to produce a time lapse to depict the significant impact over time on the natural landscape, through increased footfall.

In collaborating with Newry Mourne and Down District Council and Mourne Heritage Trust, an interactive 3D application was produced to best visualise Slieve Donard, Slieve Gullion and Errigal Mountain upland paths - <http://arcg>.is/1veOSb, in a user friendly way. That 3D application supported discussions by all path practitioners

and stakeholders regarding the increased challenges in managing upland sites, at ASCENT's afternoon session at the workshop held in November 2017.

Building upon that approach and in testing GIS technology, Donegal County Council produced [tp://arcg](http://arcg).is/2xjtqxE to display accurate locations and associated imagery for all seven project sites. This application allowed users to easily navigate and identify all ASCENT sites. The story map was shared via social media, enabling an increased reach to the target audience in accessing information about ASCENT.

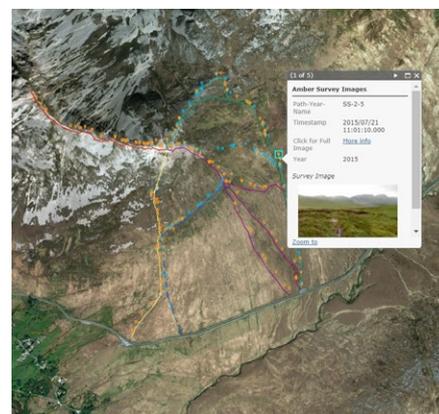
Outcome

The requirement for T3.1.1 was to map upland paths and trails for all seven ASCENT sites and to create an app based route planner, with the data collected informing the overall management plans developed by each project partner.

In enhancing the approach applied to Errigal Mountain, Donegal's ASCENT team liaised with all project partners in acquiring and converting the path and trail layers to a compatible format using ESRI's ArcMap. Further classification took place to define the path types, with the addition of attribute information including elevation and relevant imagery. A demo application was considered by project partners with the decision taken that the app would create an awareness and highlight the landscape sensitivities of each site, in line with the project's objectives.

The outcome was the development of a mapping application using cutting edge 3D GIS technology to allow users to explore 3700 vertical metres in seven project sites, across five countries, which are visited by 500,000 per annum. 'ASCENT in 3D' is accessible at www.ascent-project.eu/ascent-project-map/ and was launched in Reykjavik on November 6th 2018, by the Chair of the Steering Committee Mr Liam Ward.

A dedicated map portal was established at www.ascent-project.eu/ascent-mapgallery/ to host a suite of ASCENT maps and apps to support the project objectives, to compliment the research undertaken in an effort to better understand our uplands and natural environments.



Key Findings & Learning Points

ASCENT in 3D lends itself to the fulfilment of T3.1.1 in implementing ICT based tools across the partnership. Much co-operation occurred between project partners in progressing the mapping of upland paths and trails, in determining its effectiveness and in the dissemination of information with GIS providing the appropriate tools to achieve such.

Further applications by Donegal's project team will use drone technology, at regular intervals, to assess the impact of erosion over time. By collecting high resolution date stamped images which will map the restoration of damaged habitats through a sustainable intervention at Errigal Mountain.

Donegal County Council, through the deployment of GIS technology showcased its effectiveness as a tool for community consultation, decision making, in undertaking visitor monitoring surveys and for creating heightened user awareness for the vulnerability of ASCENT sites. The dedicated map portal and ASCENT in 3D creates a resource for a lasting project legacy in managing and monitoring natural environments sustainably over time.



Using GIS for Stakeholder Engagement

FURTHER INFORMATION

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