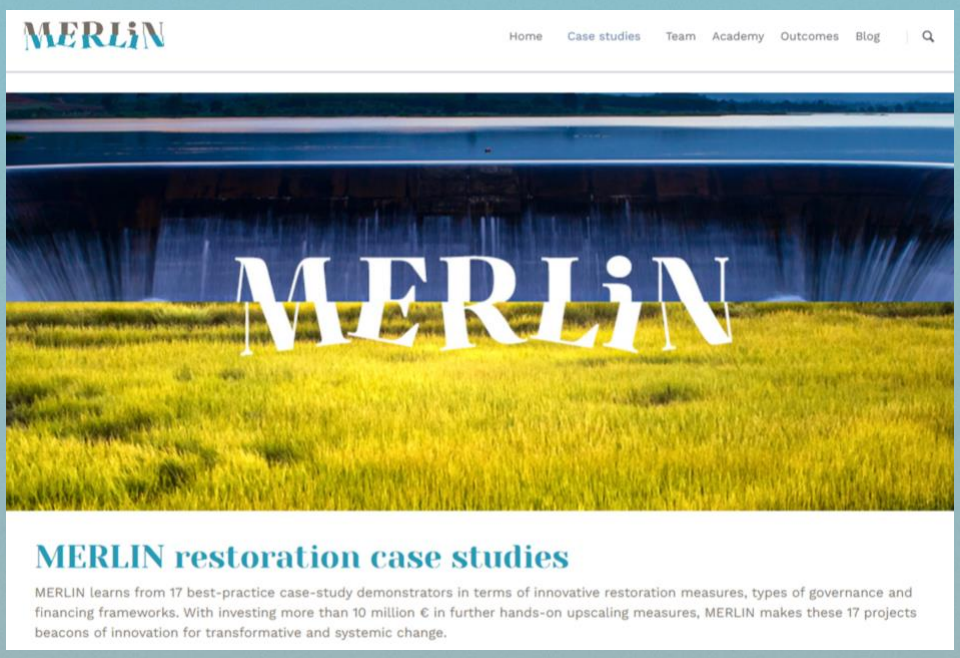


# Deliverable D1.1

# Online case-study portal to share knowledge and report findings

The MERLIN project (https://project-merlin.eu) has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement No 101036337.

www.project-merlin.eu

## Imprint

The MERLIN project (https://project-merlin.eu) has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement No 101036337.

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## MERLIN Key messages

1. The MERLIN online case-study portal is designed to share knowledge of the 17 MERLIN case studies.
2. The portal provides interactive access to information from case-study level to European scale and across the restoration types including Peatland & Wetland, Small Streams and Basins, and Large Transboundary Rivers.
3. Each case-study has a unique page through which details of the restoration activities, objectives and key stakeholders can be viewed.
4. The portal has been designed to allow dissemination of data on Case-Study Impact Assessments across MERLIN Indicators for the European Green Deal.
5. The portal will also indicate progress in the implementation of new restoration measures in the MERLIN case-studies through application of the IUCN Global Standard for evaluating Nature-Based Solutions.
6. The portal provides an important dissemination tool to inform the scientific community as well as the general public on the benefits of restoration across scales.

# MERLIN Executive Summary

This deliverable summarises the development of the first version of the 17 MERLIN Case Study Portal, including content generation, portal architecture, and reporting data visualisation and synthesis capabilities. The portal has been designed to allow presentation and synthesis of restoration interventions at the case study level across common categories.

As the restoration interventions are implemented and assessed by case study teams throughout the MERLIN project, the portal will be used to visualise progress in case-study impact across MERLIN indicators for the European Green Deal.

The portal will also indicate progress in the implementation of new restoration measures in the MERLIN case-studies through application of the IUCN Global Standard for evaluating Nature-Based Solutions.

The portal provides an important dissemination tool to inform the scientific community as well as the general public.

# Content

The MERLIN project (https://project-merlin.eu) has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement No 101036337.

# 1 MERLIN Case Study Portal

The MERLIN Case Study Portal brings together information on 17 best-practice case-study demonstrators. The portal provides synthesis across scales in terms of innovative restoration measures, governance and financing frameworks. With investing more than 10 million € in further hands-on upscaling measures, MERLIN makes these 17 projects beacons of innovation for transformative and systemic change.

The MERLIN Case-Study Portal Is hosted on the project website here: https://project-merlin.eu/cs-portal.html.

This report documents the layout, content, and future use of the portal as an Interactive tool with which the scientific community, stakeholder groups, and the public can track progress across the 17 MERLIN Case Studies during the lifetime of the project and beyond. The portal has been designed to allow tracking of Impact Reporting across a suite of MERLIN Indicators aligned with the Green Deal Categories. In this way, the portal will be used to disseminate information including restoration project design, resourcing, stakeholder engagement, and delivery timelines. It will allow case study teams to report on progress of implemented innovations in a systematic manner. This, in turn, will allow synthesis and comparison across all 17 MERLIN case studies and will act to inform other restoration activities across Europe and the world.

## 1.1 Content Generation

The MERLIN Case Study Portal content is provided by our community of practice (CoP). The CoP represents stakeholder groups (i.e., Scientific Partners, Implementation partners, Case Study Twins) from each of the 17 case studies. Information has been gathered from the CoP using standard survey forms designed to facilitate comparison and synthesis across MERLIN Case Study Clusters (i.e., Peatlands and Wetlands, Small streams and basins, Large Transboundary Rivers). Specific case study Information has been gathered from the CoP describing, in detail, the restoration projects that will be implemented. This Information has been summarised across common categories for each case study including, useful links, maps of case study areas, the Demonstration details (e.g., area to be restored, sectors to benefit, value of the case study etc), and the Implementation Plans (e.g., planned area to be restored, type of restoration, stakeholders Involved, and Innovation to be applied).

# 2 Portal Architecture and Layout

## 2.1 Landing Page

The portal is structured around the following architecture:

-> MERLIN Web Page [https://project-merlin.eu/]

-> Case Studies [https://project-merlin.eu/cs-portal.html]

-> 01. Kvorning case study

-> 02. Basque streams case study

-> 03. Beaver re-introduction case study

-> 04. Room for the Rhine branches case study

-> 05. Kampinos wetlands case study

-> 06. Peatlands of Bosnia and Herzegovina case study

-> 07a. Danube floodplain Austria case study

-> 07b. Danube floodplain Hungary case study

-> 08. Danube floodplain Romania case study

-> 09. Tisza case study

-> 10. Germany's Blue Belt case study

-> 11. Emscher catchment case study

-> 12. Lima catchment case study

-> 13. Sorraia floodplain case study

-> 14. Komppasuo peat extraction area case study

-> 15. Tzipori catchment case study

-> 16. Scheldt catchment

-> 17. Forth catchment case study

On entering the Case Study Portal through the MERLIN web page the user is presented with an interactive map (upper left panel; Figure 1). This map can be used to select specific case studies. Using the MERLIN Cluster Tabs to the right of the map, the user can view locations and high level Information of each of the clusters (Figure 2). Selecting a specific cluster also filters the links to the case study pages which appear below the map. The tabs for the case studies on the landing page display a photograph of the case study, the MERLIN cluster category to which the case study belongs, and the country or countries in which the case study is located.

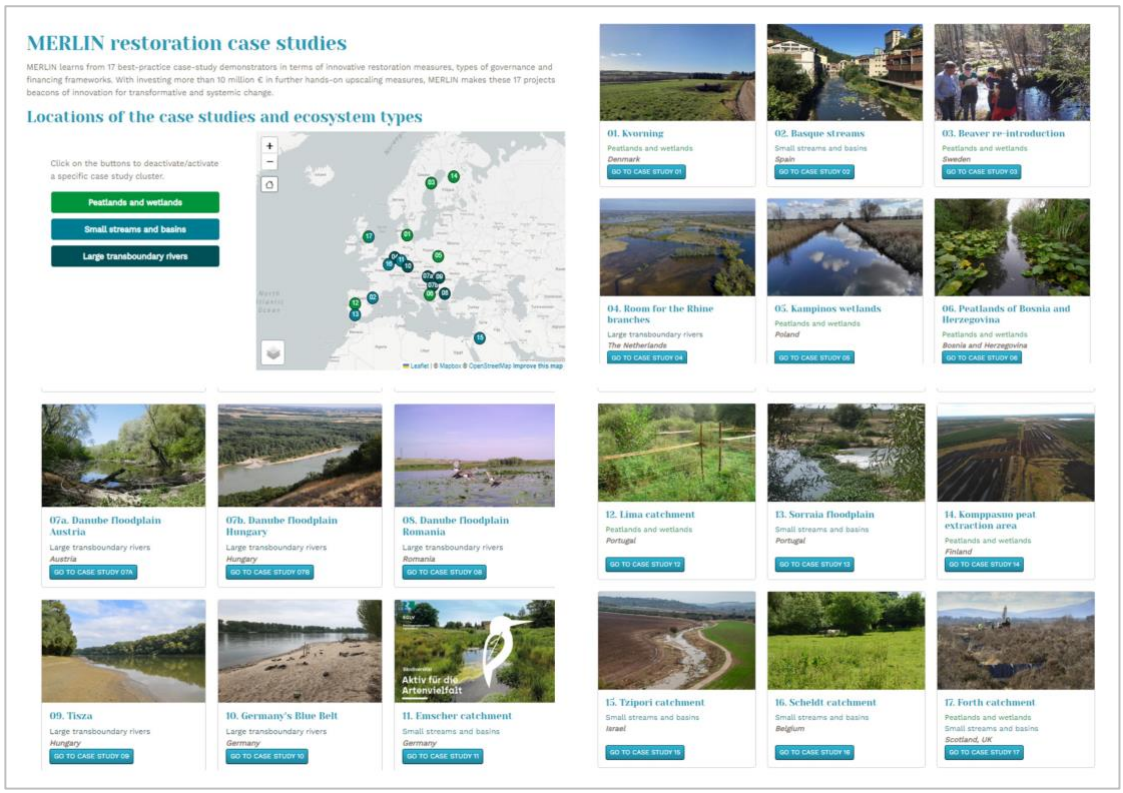


*Figure 1 - MERLIN Case Study Portal landing page with overview of all 17 case studies.*

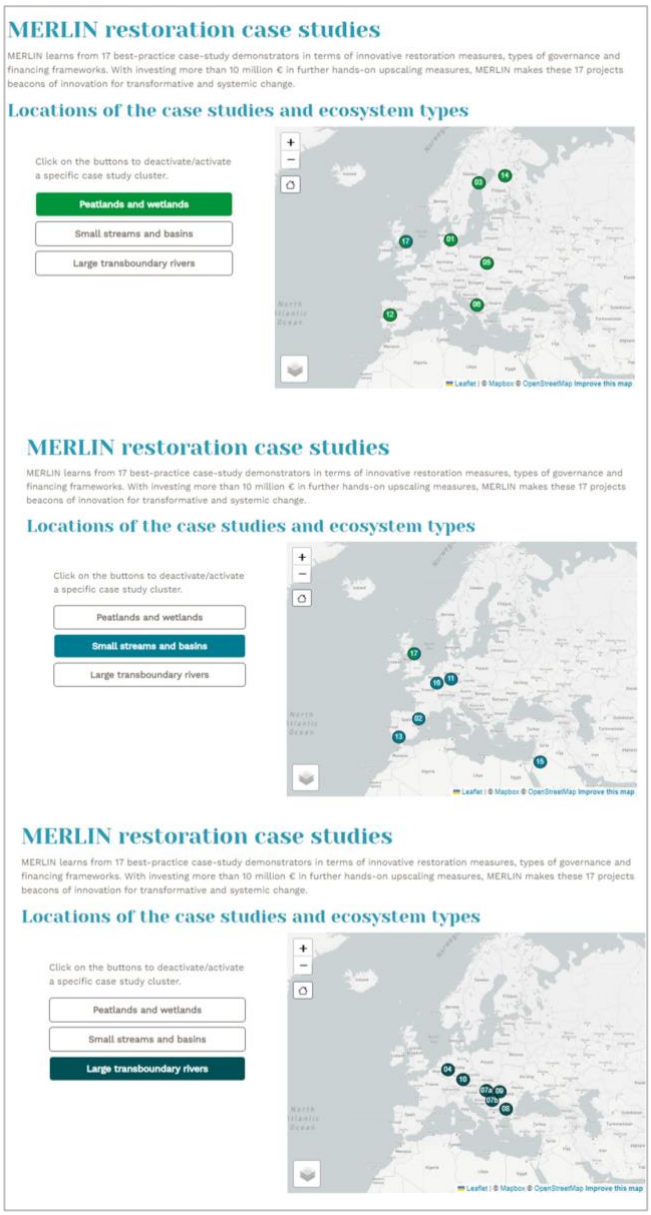


*Figure 2 - MERLIN Case Study Portal landing page demonstrating case study typology filtering capability.*

## 2.2 Case Study Descriptions

Information from the CoP has been summarised and presented within unique case study pages (e.g., Figure 3). These case study pages have been created using a common format to aid comparison including:

1. an embedded map
2. project level Information
    a. MERLIN cluster category
    b. scientific partner
    c. implementation partners
    d. twinning case study
3. demonstration information
    a. type of restoration
    b. case study area
    c. location
    d. the value of the case study (e.g., flood management and biodiversity)
    e. stakeholders with an Interest In the case study
    f. key sectors that benefit from the case study
    g. a description of the restoration innovations that have been applied previously
4. implementation plan information
    a. type of restoration interventions planned
    b. the area of the case study to be restored
    c. the scope of the restoration intervention
    d. the vicinity of the intervention (e.g., rural, urban)
    e. key stakeholders to be Involved In the restoration activities
    f. a description of the innovations that will be applied in MERLIN.

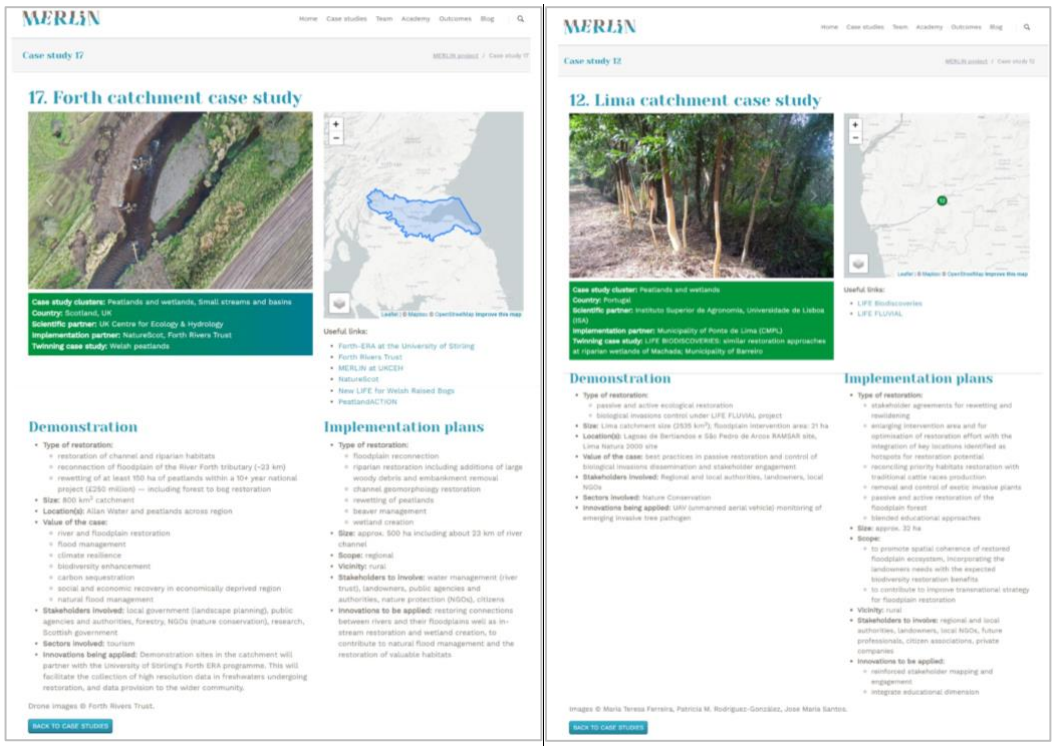


*Figure 3 - MERLIN Case Study pages for the Forth and Lima Catchments showing comparable information.*

# 3 Impact Reporting

Monitoring and evaluation of the impact of restoration measures is a key aspect of the 17 MERLIN case-studies as it allows the project managers and stakeholders to re-evaluate the measures undertaken and the need for further actions to achieve their project goals. Standardised monitoring guidance and reporting forms have been produced for each European Green Deal criterion and their associated indicators (see Deliverable 1.2). A number of "essential" indicators have been selected for seven of the European Green Deal goals to be measured by all case-studies (Table A1).

The data captured for these "MERLIN Essential Restoration Variables" will be displayed on the portal to visualise progress in the impact of the case-studies for a suite of the European Green Deal goals (Figure 4). We anticipate these data will be summarised for each case study and also synthesised across case-studies for each goal.

The online portal will also show progress in implementation of new restoration measures at each case-study (Figure 5), following the IUCN Gold Standard criteria for evaluating implementation of Nature-Based Solutions.

*Table A1 - MERLIN Essential Restoration Variables.*

| Criterion | Indicator |
|---|---|
| Biodiversity net gain | • Conservation status of Habitats Directive Annex I listed habitats<br>• Conservation status of species of community interest (Habitats Directive)<br>• Conservation status of Annex I (freshwater/wetland) species in the Birds Directive<br>• Species richness and diversity of native flora |
| Climate regulation | • Greenhouse gas emissions (t $CO_2$-equivalents/ha/yr) |
| Flood / drought resilience | • Storage capacity ($m^3$) of restored rivers and streams (based on surface area of rivers, streams and other water bodies)<br>• Storage capacity ($m^3$) of wetlands (based on surface area of restored wetlands and floodplains) |
| Sustainable Food Systems (F2F) and Land Use | • Land cover (ha/type)<br>• Land use (ha/type) primary intended use and any secondary uses<br>• Land tenure (public vs. private land) (ha for each type) |
| Inclusive Participation and Governance | • Number of visitors to project website<br>• Number of participants in information sessions about the project<br>• Ability to join a formal stakeholder forum/board/working group |
| Financing the transition | • Breakdown of the total restoration budget by funding source and type [%]<br>• Private finance mobilized (€) |
| Green Growth | • Number of jobs created (attributable in part to restoration activities) |

| Green Deal Goal | Indicator | CS Target | Yr 1 | Yr 2 | Yr 3 |
|---|---|---|---|---|---|
| Biodiversity net gain | Conservation status | Favourable | Unfavourable | Favourable | Favourable |
| | Ecological status | Good status | Moderate | Moderate | Good |
| | Area habitat restored | 200 ha | 0 | 0 | 200 |
| Climate regulation | Reduced emissions | Net zero | Increase | Increase | Increase |
| Flood resilience | Storage capacity | 5000 $m^3$ | 0 | 0 | 3500 |
| Drought resilience | Storage capacity | 5000 $m^3$ | 0 | 0 | 3500 |
| Sustainable food systems | Production | Stable | Zero | Increase | Increase |
| Inclusive governance | Visitors to website | 1000 | 250 | 460 | 1250 |
| | Participation | Representative | Good | Good | Good |
| Financing the transition | Private finance | 200K € | 0 | 0 | 0 |
| Green growth | Green jobs created | 10 jobs | 2 | 4 | 9 |

*Figure 4. MERLIN Case Study Portal mock-up of data table reporting for the essential MERLIN Green Deal Indicators for one case-study*

| IUCN Criterion | Yr 1 | Yr 2 | Yr 3 | Yr 4 |
|---|---|---|---|---|
| 1. Societal challenges | Strong | Strong | Strong | Strong |
| 2. Design at scale | Insufficient | Partial | Adequate | Adequate |
| 3. Biodiversity net-gain | Strong | Strong | Strong | Strong |
| 4. Economic feasibility | Partial | Partial | Partial | Partial |
| 5. Inclusive governance | Insufficient | Partial | Adequate | Adequate |
| 6. Balance trade-offs | Partial | Partial | Partial | Adequate |
| 7. Adaptive management | Strong | Strong | Strong | Strong |
| 8. Sustainability and mainstreaming | Insufficient | Insufficient | Partial | Partial |

*Figure 5. MERLIN Case Study Portal mock-up of data table reporting for the IUCN Criteria for evaluating NbS for one case-study*

# 4 Synthesis across MERLIN Green Deal Indicators

Several of the indicators relate to measures of ecosystem condition (biodiversity, zero pollution) and ecosystem services (greenhouse gas emissions, flood resilience, drought resilience). The portal will present a synthesis across the case-studies of the impact of the project on these condition and service indicators. Ultimately the monitoring data collected in MERLIN will be important evidence from real-world restoration case-studies, to evaluate whether improvements in ecosystem condition are translated into an improvement in ecosystem services.

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# 5 Outlook

The data reporting tables and synthesis tables will be added to the online portal during year 2 following receipt of case-study data.