A Synthesis of Key Conclusions and Outcomes from the EcoAdvance Project

As part of the **EcoAdvance Project** programme, we undertook an extensive online survey and consultation with the European freshwater restoration community to understand from the people who have faced the freshwater restoration challenge what contributed to their successes and what would make projects successful. From analysis of the ~250 responses, and hundreds of searches and interviews, we created the **Prone2Success (P2S) Checklist** which emphasises the key factors that tend to make projects more prone to success. In tandem with this we produced nearly **100 different EcoAdvance Showcases**, highlighting leaders and contributors in each Member State, their work across Europe and their advice to others on how to be successful. We also mapped and **signposted key projects and initiatives** related to freshwater restoration and developed an initial **Restoration Visualisation Tool**.

The project results are available online from the **EcoAdvance Website** until 2030, and are also stored within the Zenodo Repository under the **Zenodo EcoAdvance Community**. This includes key reports and the survey data, along with each of the Showcase packages, including videos of perspective, project experience and advice.

As part of consulting and developing the P2S Checklist it was important to consider what defined a successful project. It quickly became clear that conditions for success, and associated solutions, are site and context specific; what may work in one situation may not work as well elsewhere, so it is very important to understand the context, issues and stakeholder goals from the outset. The **EcoAdvance Showcases** provide a variety of examples with first person accounts of different actors within the restoration community. These provide role models and examples that show how different people have succeeded in different aspects of restoration work. Links to associated project literature are also provided where appropriate along with cross links to relevant sections of the Nature Restoration Regulation (NRR), key references etc.

An initial **Restoration Visualisation Tool** was also developed as it became clear that communicating proposed as well as ongoing restoration projects to a variety of different stakeholders with varying degrees of restoration knowledge was an issue. This tool uses radar charts to show graphically the scope, focus and progress of projects, covering social, technical and economic factors.

These activities also allowed us to highlight areas of current understanding and practice that might benefit from greater support in the future. Examples of these include:

- Key drivers for success include focus on (i) Planning & Implementation; (ii) Stakeholder engagement and (iii) Funding availability.

- Field visits with stakeholders are the most effective way at communicating ideas and sharing different perspectives. (Followed in decreasing effectiveness by workshops, then bilateral meetings and finally through online meetings, which are the least effective.
- Greater use and wider understanding of predictive numerical models would be beneficial, however wider training and capacity building is needed to support this.
- Most effective approaches tend to use historical ecological data as a baseline; rely on scientifically proven restoration methods; include indicators from biodiversity, water quality and hydrological monitoring (i.e. integrate more closely with WFD metrics).
- Set measurable goals to track improvements in ecosystem condition
    a. Articulating goals to stakeholders and keeping them informed is a critical ingredient for success.
    b. While defining clear reference conditions to guide restoration efforts was useful, taking climate change into consideration was important to assure long term success.
    c. Base project goals on targeted ecosystem services to enhance success.
    d. Highlight synergies between ecosystem services and ecological conditions.
    e. Plan restoration over the long term and, where possible, at a larger spatial scale though small projects can jump start larger efforts
- Expectations are that the NRR will help (restoration work) by clarifying actions more effectively than national laws (where they exist).

EcoAdvance Word Cloud developed from the survey responses

Combining messages received from the survey responses and consultation to create the showcases also allowed us to identify a **series of higher level issues which affects the freshwater restoration process**. Key points include:

1. **Focus on rehabilitation rather than restoration of freshwater**, with built-in long term monitoring and the flexibility to adjust if needs be. With infinite past states, and climate change affecting how conditions may (or may not) be sustainable, rehabilitation to a defined state is better, more achievable and sustainable goal.

2. **Increase the emphasis, dedicated funding and guidance supporting stakeholder engagement** for restoration projects. The need for and value of early and widespread stakeholder engagement when planning and implementing a project was identified repeatedly throughout the EcoAdvance programme, aligning closely with findings from other projects including DALIA and MERLIN (D4.9 report key messages, Ibrahim et al, 2025). Supporting greater outreach activities through increased, targeted funding for integrating activities and initiatives would be beneficial.

3. The **different ways in which projects can be recognised as being successful** should be appreciated; these vary between stakeholders and projects, and are not necessarily driven purely by financial measurements. The relative importance of measures (in decreasing significance) were found to be:

   Sustainability of restoration > ecological improvements > societal success > post monitoring > Economic

4. **Addressing long term versus short term planning for projects (including funding)** would be beneficial, avoiding artificial deadlines created by planning and political cycles. Barriers to the success of restoration projects (in decreasing significance) were found to be:

   Lack of funding > long term vs short term planning > industry/business > national policy > local planning > Local community objections

5. **Recognising and rewarding individual achievements** can help promote wider good practice. Consider ways in which awareness and visibility of such work may be enhanced, including naming project contributors as a matter of course.

6. **Consider introducing greater support for education and training** in parallel with implementation of the NRR. A lack of understanding of ecological processes and benefits (by the general population) hinders agreement and support for restoration work.

7. **Greater reference to Ecosystem Services (ES)** to help communicate, support and justify projects would be beneficial. Translating project outcomes into the real, practical benefits of restoration work helps stakeholders give their support.

8. **Strengthening the obligation and funding for monitoring and analysing the progress of restoration works for a significant period post works would be of value**, supporting future adaptation where beneficial, especially in view of climate change potential.

9. **Greater education and promotion of WFD metrics** as part of the restoration process would be beneficial. A significant number of projects undertaken at a local level do not use these metrics. Providing flexibility and encouraging adaptive management in invoking the "one-out-all-out" premise would help managers tailor solutions to circumstances more effectively.

10. **The wider use of models for analysing and designing restoration works should be promoted**. 50% of survey respondents already use models but a further 35% would use them if they understood more.

11. **A Water-Energy-Food-Ecosystems nexus approach should be clearly recognised when implementing NRR planning programmes** to achieve an acceptable balance of strategies. Whilst the value of restoration cannot be understated, there are also other critical demands on many catchments which need to be balanced.

12. **LIFE Project funding is at the heart of many larger restoration projects**. Increasing LIFE funding will increase the amount of restoration projects implemented in Europe.