Integration of results in large information hubs (BISE, ESP mapping tool, etc.)

Deliverable D6.6

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Preface

Deliverable 6.6 explains the importance of integrating the ESMERALDA major outputs such as the ESMERALDA MAES Explorer and the ESMERALDA MAES Method Explorer into large information hubs. This integration aims at increasing the visibility of project results and safeguarding their availability also after the project lifetime. To ensure that project outcomes are integrated into the most suitable information hub, stakeholders assessed potential information hubs and conducted a survey among them to determine which one can provide best distribution of the ESMERALDA results. The following report introduces the ESMERALDA major outcomes and describes how an integration platform has eventually been selected.

Summary

From the beginning of ESMERALDA up to the final month of the project, key updates and findings were published on the project website. To illustrate the end results of the project, the ESMERALDA MAES Explorer was created, which links users to all products and provides guidance on how to use them. The guidance tool includes the ESMERALDA MAES Methods Explorer, an interface allowing users to explore the comprehensive methods database created within the project.

ESMERALDA planned inter-operability with existing platforms to ensure the perennity of the end-products. The following three platforms were recognised as potential integration hubs:

BISE is the **Biodiversity Information System for Europe** run by the European Environment Agency. It is a single entry point for data and information on biodiversity supporting the implementation of the EU Biodiversity Strategy and the Aichi targets in Europe.

Oppla is an open platform designed for people with diverse needs and interests - from science, policy and practice; public, private and voluntary sectors; organisations large and small, as well as individuals. Its purpose is to simplify how we share, obtain and create knowledge to better manage our environment.

The **Ecosystem Services Partnership (ESP)** aims to enhance communication, coordination and cooperation, and to build a strong network of individuals and organizations. ESP enhances and encourages a diversity of approaches, while reducing unnecessary duplication of effort in the conceptualization and application of ecosystem services

After the ESMERALDA Consortium's regular discussions and a final survey submitted by potential platforms, the information hub ESP was chosen to host the ESMERALDA key outputs. However, this does not exclude the option to share and distribute MAES-related information on other platforms.

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1. ESMERALDA major project outputs

ESMERALDA created many different outcomes and tangible products, which are relevant for the implementation of the EU Biodiversity Strategy's Target 2 Action 5 in EU member states. Products include reports, country and case study fact sheets, method application cards, information on methods, and numerous publications. All these are made available open access in the easy-to-access online interface ESMERALDA MAES Explorer.

The **ESMERALDA MAES Explorer** provides guidance for MAES implementation at EU member state, regional or local level. The Explorer is available online and open access (http://www.maes-explorer.eu) and integrates all key ESMERALDA products such as numerous Deliverable reports, open access publications, including an open access text book on Mapping Ecosystem Services, method application cards, case study fact sheets, country fact sheets and links them all in an easy-to-access and nicely designed 7-step MAES framework.

The MAES Explorer also links to the **ESMERALDA MAES Methods Explorer** – an interface that allows users to explore the comprehensive database of ecosystem service mapping and assessment methods created within ESMERALDA. The purpose of this database it to collect the majority of available biophysical, social and economic methods to map and assess ecosystem services on different levels of complexity (tiers). Its aim is also to link those methods to specific ecosystem types, ecosystem services, questions from policy, business and society, tiers and case studies. The Methods Explorer interface has been developed by ESMERALDA partner PLUS and is currently available via the ESMERALDA MAES Explorer or directly at: http://database.esmeralda-project.eu/home.

2. Relevance of the result integration

A series of meetings aimed to develop ESMERALDA communication with relevant initiatives to foster future collaboration and visibility of project outcomes. ESMERALDA planned inter-operability with existing platforms to ensure the perennity of the end-products (in the context of ESMERALDA Milestone 31). During the meetings, ESMERALDA delegates met with representatives from the EC, EEA, JRC, OPPLA, ESP and BISE online platforms, designed to collect information and foster collaboration between EU projects in the spheres of biodiversity ecosystem services and ecology.

Detailed information about all of the four meetings can be found in the ESMERALDA Milestone 31 reports 1-4.

3. Overview of information hubs

The main advantage of making outputs of ESMERALDA available through OPPLA, ESP or BISE is that all systems/networks are designed to operate longer than the ESMERALDA project.

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3.1. Biodiversity Information System for Europe (BISE)

BISE is a single entry point for data and information on biodiversity supporting the implementation of the EU strategy and the Aichi targets in Europe. Bringing together facts and figures on biodiversity and ecosystem services, it links to related policies, environmental data centres, assessments and research findings from various sources. BISE is being developed to strengthen the knowledge base in support of the implementation of the EU Biodiversity Strategy and the assessment of progress in achieving the 2020 targets.

3.2. OPPLA

Oppla is an open platform for people with needs and interests in the fields of science, policy and practice; public, private and voluntary sectors; organisations large and small, as well as individuals. Oppla has been developed in the context of the two EU FP7 projects OpenNESS and OPERAs. Its purpose is to simplify how we share, obtain and create knowledge to better manage our environment.

A key element of the vision for Oppla is to integrate high quality outputs from different research and innovation projects to provide a common open source of information on natural capital, ecosystem services and nature-based solutions. Oppla hosts have been aware of the good work carried out in ESMERALDA and would like to include outputs of this project in Oppla and support their continued availability and development beyond the end of the project.

With over 1000 members of the Oppla community, more than 500 followers on Twitter and over 14,000 website visits, Oppla provides access to a large multinational audience dealing with ecosystem services and nature-based solutions.

3.3. Ecosystem Services Partnership (ESP)

ESP aims to enhance communication, coordination and cooperation, and to build a strong network of individuals and organizations. ESP enhances and encourages a diversity of approaches, while reducing unnecessary duplication of effort in the conceptualization and application of ecosystem services. By raising the profile of ecosystem services and promoting better practice, the ESP will also increase opportunities for financial support and help focus the funding of individual organizations for more efficient utilization of existing funds.

ESP was (via the Foundation for Sustainable Development FSD Wageningen, where the ESP Secretariat is hosted) an ESMERALDA partner responsible for networking activities. Many ESMERALDA partners are active ESP members already and current ESMERALDA partners will continue collaboration within ESP; others can become ESP members to stay in touch with the ESMERALDA colleagues and broaden their network with other ESP professionals from inside Europe and the rest of the world.

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ESP furthermore aims to keep the ESMERALDA stakeholder network alive, to keep collaborating and expand via ESP National Networks. ESP allows National Networks to have public pages to promote their network; they can have online discussions and share data via the ESP member portal. ESP conferences allow opportunities to meet and to maintain the short communication lines between the partners established during the ESMERALDA project through the regular meetings.

ESP guaranteed that ESMERALDA project information and outcomes can continue to be openly accessible via the ESP website, which is regularly visited by many ecosystem services professionals. For reference: over 20 000 people have visited the ESP website in the past year. Additionally the ESP has an audience of over 3000 newsletter subscribers, and altogether 6000+ followers on its social media channels.

3.4. Other products integrated on external platforms

The ESMERALDA people have produced numerous Open Access publications. Many scientific articles were collected in the ESMERALDA Special Issue "Mapping and Assessing Ecosystem Services: Methods and Practical Applications" in the journal One Ecosystem. Additionally, many ESMERALDA partners contributed to the "Mapping Ecosystem Services" open access book in Pensoft's Advanced Books, as a source of detailed guidance to stakeholders for ecosystem services mapping and assessment.

4. Stakeholder meetings

Stakeholder meetings were held on a regular basis with the main aim to transfer generated knowledge on relevant European ecosystem service-related knowledge platforms and to check proposed inter-operability with relevant platforms such as OPPLA, ESP and BISE, ensuring perennity of ESMERALDA end-products. In line with the recommendations of SPIRAL, ESMERALDA aims to provide outputs that support the information hub function of BISE (especially related to the Biodiversity's Strategy Target 2 Action 5). The project has explored how validated products, in particular the guidance tool for mapping and assessment of ecosystems and their services and the online platforms can become part of BISE and how the existing prototype of the ESP visualization tool (ESP-VT) can be enhanced with the ESMERALDA results. The meetings took place in the context of ESMERALDA Milestone 31 (Meetings with Stakeholders, e.g. DG ENV, EEA to discuss inter-operability of ESMERALDA outputs into OpenNESS/OPERAs Common Platform and BISE), initially scheduled for 07/2015, 01/2016, 01/2017 and finally 07/2017. In the following a short overview of the four meetings with relation to this Deliverable 6.6 is given. For more detailed information we refer to the Milestone 31 reports Parts 1-4. Table 1 gives an overview of the four ESMERALDA Milestone 31 meetings.

Table 1: Meetings in the context of ESMERALDA Milestone 31.

#	Date	Place	Main topics
1	16.09.2015	JRC Brussels	· Overviews ESMERALDA, BISE, OPPLA, EEA EIONET/ecosystem assessments, ESP-VT, Further platforms

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			· Discussion
2	20.01.2016	JRC Brussels	· Update ESMERALDA
			· ESMERALDA fact sheets for BISE
			· OPPLA business model
			· OneEcosystem and ESP-Visualisation Tool
			· Discussion
3	30.01.2017	JRC Brussels	· Update ESMERALDA
			· ESMERALDA Open Access strategy
			· ESMERALDA fact sheets update on BISE
			· BISE and OPPLA updates
			· Interoperability of ESMERALDA, BISE, OPPLA, ESP Visualisation tool, One Ecosystem
			· Discussion
4	12.06.2018	Hotel Leopold Brussels	· ESMERALDA outcomes and products
			· ESP and OPPLA as potential hosts
			· Discussion

4.1. First ESMERALDA Milestone 31 Meeting

The first Meeting took place on 16 September 2015 in Brussels. ESMERALDA stakeholders discussed the inter-operability of ESMERALDA outputs on the platforms BISE and OPPLA and came to the following conclusions:

- Given that ESMERALDA is a direct support action to Action 5 of the EU Biodiversity Strategy, BISE is decided most evident platform to share results of the project. This is particularly relevant for information sanctioned by the Member States e.g., fact sheets, mapping guidance and maps (through interoperability with the ESP-VT)

- OPPLA may be a suitable platform to share guidance (the flexible mapping approach) but further insights are needed to understand the business model of OPPLA in order to ensure that ESMERALDA products can be made publically available at no cost.

4.2. Second ESMERALDA Milestone 31 Meeting

The second Meeting took place on 20 January 2016 in Brussels and the participants took concrete decisions on which platforms to use for different project outputs.

ESMERALDA fact sheets will be made available in BISE, as Pdfs in BISE or via link to the ESMERALDA Internal Communication Platform (ICP) as immediate action. ESMERALDA fact sheets are also used to update existing information in BISE on MAES-related activities in EU MS, adding to/replacing current information and texts.

BISE is used as central information repository for MAES activities (including MAES-related activities from the EC), replacing other fact sheets and information collection via the MAES WG.

Overall, the meeting determines the platform OPPLA may harvest the research outcomes from projects, and BISE to act as clearing house mechanisms for EU.

4.3. Third ESMERALDA Milestone 31 Meeting

The third Meeting took place on 30 January 2017 in Brussels and was dedicated to most recent updates from ESMERALDA and its Open Access strategy, discussions on the ESMERALDA fact sheet update process on BISE, updates from BISE and OPPLA and the interoperability of ESMERALDA, BISE, OPPLA, ESP and the new open access online journal One Ecosystem

4.4. Fourth ESMERALDA Milestone 31 Meeting

The fourth meeting took place during the final ESMERALDA Conference and Project meeting in Brussels on 12 June 2018. ESMERALDA planned integration of project results to existing platforms to ensure the perennity of the end-products. As most suitable potential platforms, Oppla and ESP have been identified in the three prior Milestone 31 meetings. In order to find the most suitable platform, the fourth Milestone 31 meeting was used to discuss a common future strategy with potential product hosts and developers from OPPLA (Countryscape), ESP and Pensoft. It was decided to send out a small survey to potential hosts inquiring about key information related to interest and motivation to host ESMERALDA outputs, costs, technical capacities of the platform, as well as possibilities to connect ESMERALDA products to other projects. More information can be seen in the final Milestone 31 Part 4 report.

The surveys were filled in by both potential hosts - ESP and OPPLA.

5. Conclusions and outlook

As a result of multiple discussions and the survey, the ESMERALDA Executive Board decided on its 27th and final meeting on 16 July 2018 to give ESP the opportunity to host ESMERALDA products in future. An overview of the survey evaluation is provided in Table 2.

Key points for the choice of ESP are the strong relation to many of the ESMERALDA partners (including better potential for future updates of the products), the strong involvement of the ESP Thematic Working Group on "Mapping Ecosystem Services" in ESMERALDA since the creation of the project, possible linkages to other products such as the Ecosystem Services Valuation Database (ESVD) and lastly, the lower price for information transfer to the new site.

This however, has (straight from the beginning) not been an either-or decision. All involved parties plan to co-operate and to create synergies between the different platforms by sharing their content and by cross-linking as much as possible. Besides ESP and OPPLA, MAES-related information on EU member state level will continue to be published on BISE.

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Table 2: Assessment criteria for the future of ESMERALDA products.

Criteria	ESP	OPPLA	Tendency
Interest and motivation	ESP was ESMERALDA partner; many ESMERALDA partner are ESP members (network maintenance) ESP topic-wise involved	Involved in several topic-related projects and knowledge sharing	Equal
Technical capacities	High	High	Equal
Capacities to maintain and thematically update	Links with ESP network, working groups, products, guidelines	OPPLA community and ESP involvement	Toward ESP
Possibilities of the products to be available for follow-up projects	Open access on web platform, ESP members involved in new projects	Available via web services	Toward ESP
Potential linkages to further (outside ESMERALDA) projects, products, websites, databases	Links e.g. via ESP SERVICES (including link to OPPLA) and ESVD (valuation database)	ThinkNature platform H2020 NBS demonstrator projects IPBES	Toward ESP
Costs to transfer information to the new site	EUR 5445	around € 5-10K	Toward ESP
Potential costs for maintenance in future	ca 4.000 €/year	no ongoing funding from the project required	Toward OPPLA