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Developing a mechanism for supporting better decisions on our environment based on the best available knowledge.

Draft Protocol for a Methodology to identify and understand “What is hampering the effectiveness of existing approaches that aim to restore biodiversity and ecosystem function and services”

Call No.5/2018 EKLIPSE

Prepared by the EKLIPSE Expert Working Group on:

Restoration effectiveness and the barriers of existing approaches that aim to restore biodiversity and ecosystem function and services in response to BiodivERsA request

Submitted: 7th November 2018

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60 **Opportunity to comment**

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62 We welcome your comments on this draft protocol by 9th December 2018 by filling in the form
63 here: <https://goo.gl/forms/Kb51RMWvUoAmRyo53>. The Expert Working Group, if needed in
64 consultation with the EKLIPSE Knowledge Coordination Body, will address all comments
65 received and post the comments with their responses on the EKLIPSE website as soon after the
66 deadline for comments as possible. Reviewers will also be encouraged to review the draft
67 report from this work, expected 30th April 2019.

68

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80 Introduction

81

82 A number of restoration targets and cross-sectoral actions aim to restore degraded ecosystems,
83 both as natural heritage to safeguard biodiversity and as a natural asset vital to enhanced
84 ecosystem functioning and sustainable delivery of a range of ecosystem services in Europe.
85 However, many of these efforts are not achieving their aims (Ockendon et al 2018). Effective
86 monitoring of restoration projects is also not guaranteed, such that restoration goals remain
87 unassessed or unattained, representing, in itself, a failure of restoration (González et al 2015,
88 Suding 2011). For example, in the case of water bodies subject to the Water Framework Directive,
89 after two updates of River Basin Management Plans (in 1999 and 2015), country reports showed
90 that a substantial proportion of Europe’s freshwaters did not achieve ‘good status’ (European
91 Waters: Assessment of Status and Pressures 2018). Other Directives for which restoration is
92 relevant include the EU Bathing Water Directive and the Marine Strategy Framework Directive,
93 which are concerned respectively with achieving good ecological status in lakes and rivers or good
94 environmental status in marine waters, and the Birds, Habitats and Mining Waste Directives.
95 Restoration of degraded ecosystems would also contribute significantly to the deployment of
96 Green Infrastructure (Action 6b of the EU Biodiversity Strategy) and will be a major asset of the
97 future Common Agricultural Policy

98

99 The reasons for the limited effectiveness of restoration are currently being explored at different
100 levels (scientific, applied) and from ecological, social and economic perspectives (see for example
101 Christian-Smith and Merenlender, 2010; Palmer et al 2010; ETC/ICM, 2015; Nilsson et al 2016;
102 Gellie et al 2018).

103 The Request

104

105 Following the EKLIPSE second call for requests (CfR.2/2017), the initial request focused on
106 identification of knowledge gaps on ecosystem restoration, asking “Is missing knowledge
107 hampering the effectiveness of approaches that aim to restore biodiversity and ecosystem

108 function and services?”. The requester was BiodivERsA, a network of national and regional
109 funding organizations promoting pan-European research on biodiversity and ecosystem services
110 and offering innovative opportunities for the conservation and sustainable management of
111 biodiversity.

112
113 In order to refine the request, scoping activities were carried out between October 2017 and May
114 2018 resulting in a Document of Work (Eklipse Document of work: Restoration effectiveness
115 Request, April 2018) with a revised question:

116
117 **“What is hampering the effectiveness of existing approaches that aim to restore**
118 **biodiversity and ecosystem function and services”**

119
120 Afterwards, EKLIPSE put out a call and selected experts as part of an Expert Working Group
121 (EWG). This group met in Brussels in July 2018 and in October 2018 and had several additional
122 meetings remotely. The EWG has identified a structured process for organising the work tasks.
123 This document outlines the choice of methodology, details of the methodology and expected
124 outcomes.

125 Objectives

126
127 The aim of this draft protocol is to propose a methodology to assess the current knowledge of
128 the reasons hampering restoration effectiveness and orient future research, policy and practice
129 on ecosystem restoration. This will include supporting stakeholders and actors from a wide
130 range of fields, such as ecological engineering, circular economy, water- and agriculture-smart
131 solutions, species and landscape management, and restoration practice to better contribute to
132 the EU’s conservation strategies and to support industries and economic sectors that are
133 dependent on these natural assets (e.g. water- and fibre-related/dependent industries).

134

135 Methodological Approach

136
137 The methodological approach is designed to identify the key ecological, social, economic,
138 technical, cultural, legal and political barriers which may hamper effective restoration in terms
139 of biodiversity, ecosystem functioning and ecosystem services. Our approach may identify
140 differences between Member States or ecosystem/land use type, which could inform the nature,
141 diversity or intensity of the problem. For these purposes, the EWG methodological approach
142 includes literature scoping and expert/practitioner consultation.

143

144 The steps proposed are as follows:

145

146 **STEP 1: SCOPING REVIEW:** We will carry out a scoping review using *a priori* search terms
147 defined and agreed by the EWG. The review will be based on both scientific and grey
148 literature and will be repeatable, through documenting search strings and database sources.

149 The barriers will be identified qualitatively in a first instance, but the team will explore the
 150 chances to perform a quantitative approach. We will identify at what stage of the restoration
 151 process the barriers emerge and the degree of difficulty involved. This will provide a first view
 152 on the status of knowledge, and of gaps and opportunities for future restoration
 153 improvements. It will assist with an identification of the main barriers which will be used to
 154 develop questions for the key actors and will also assist in identifying key stakeholders. This
 155 approach will be coordinated by a subgroup of the EWG and will include as many geographic
 156 regions and sectors as possible across Europe.

157
 158 **STEP 2: IDENTIFICATION OF THE CHAIN OF RESTORATION ACTORS ACROSS LAND USE TYPES
 159 AND LAND TENURES, AND THE AUDIENCE FOR THE REQUEST FINDINGS:** The EWG will
 160 prepare of a list of relevant actors across land use types and land tenures which deal with the
 161 development and implementation of restoration actions. The networks of EWG members,
 162 which incorporate diverse backgrounds across sectors such as water, infrastructure, urban,
 163 agriculture, forestry, blue economy, and protected areas, will be utilised. The social,
 164 ecological, technical and economic aspects of restoration will be incorporated into the
 165 process. As for the public sector, we will include actors from at least three levels, local
 166 (municipalities or other minor administrative units), regional, and national (state
 167 government), and European level (EU or multi-country initiatives). Other actors include
 168 private companies, but also social actors such as NGOs or other public initiatives dealing with
 169 restoration. This step will be performed in parallel with STEP 1, coordinated by a member of
 170 the EWG with participation of all members of the EWG. This step intends to be extended to
 171 experts such that it covers the maximum diversity of countries/regions and sectors across
 172 Europe.

173
 174 **STEP 3: IDENTIFICATION OF QUESTIONS FOR STAKEHOLDERS:** Combining results from the
 175 scoping review and considering the Experts' experiences, the EWG will make preliminary
 176 judgements on the barriers to restoration. This preliminary list of barriers will be organized
 177 in a grid, grouping them by dimension and steps of Ecological Restoration for each associated
 178 land use type, land tenure and relevant actors (Table 1). This step could further draw on
 179 stakeholder knowledge by organising focus groups or interviews with selected stakeholders.

180
 181 Table 1. Example of a potential grid to collect the list of barriers per Land use and land tenure
 182 type at different steps and dimensions of Ecological Restoration incorporating different
 183 actors

184

BARRIERS TO ECOLOGICAL RESTORATION						
LAND USE, LAND TENURE, ACTORS		Steps of Ecological Restoration (ER)				
Dimensions of ER		Planning	Implement ation	Monitoring	Assessment	Adaptive management
	Ecological					
	Social					
	Economic					

	Technical					
	Cultural					
	Legal					
	Political					

185
186 **STEP 4: DELPHI PROCESS:** The outcomes of steps 1 – 3 will provide a list of barriers which can
187 be ranked through a Delphi process; the process of formulating these can also be seen as the
188 first stage of the Delphi process. The Delphi technique is a structured, anonymous and
189 iterative survey of a panel of ‘experts’ or participants (Okoli and Pawlowski, 2004; Mukherjee
190 et al 2015). The Delphi process involves 6 stages: 1) Prepare the first round of the
191 questionnaire; 2) Select and invite respondents; 3) Collect and analyse the responses; 4)
192 Provide feedback to the participants; 5) Prepare, distribute and analyse the subsequent
193 round of questionnaire; 6) Iterate till consensus is reached. This step will enable an
194 assessment of participants’ relative ranking of the importance of the barriers that have been
195 previously listed, based on the knowledge/experience/perception of the large variety of
196 social actors involved in restoration.
197

198 Expected Outputs

199
200 The expected outputs for this request include:

- 201 1. A peer-reviewed report outlining the barriers identified. The report will group barriers in
202 the manner established as the most efficient and useful for the many actors involved in
203 Restoration across the European region and will explore the effect of stakeholder
204 involvement. Our methodology will assist in identifying how best to present the findings
205 to ensure wide and useful relevance across many and differing actors. It will also explore
206 potential explanations for those barriers and solutions to overcome them.
- 207 2. Policy briefings summarizing the main findings and recommendations of the EWG work
208 will be developed and appropriate opportunities for dissemination will be identified as
209 the work progresses.
- 210 3. In addition, communication of outputs will be performed in targeted ways to the
211 requester and other communities of interest, for example a presentation by members of
212 EKLIPSE EWG on restoration as part of a workshop/conference with key stakeholders
213 organised by EKLIPSE and the requesters of the work (BiodivERsA).

214

215 Project timelines

- 216
- 217 1. Prepare and submit draft protocol – 7th November 2018
- 218 2. Revise and finalise protocol considering review provided by open consultation – 15
219 December 2018
- 220 3. Identification of stakeholders – end of November 2018

- 221 4. Identification of questions for stakeholders – Mid December 2018
- 222 5. Scoping review – End of year 2018
- 223 6. Delphi process finished – March 2019
- 224 7. Submit draft report to EKLIPSE [review process via open consultation, organized by
- 225 EKLIPSE] – 30th April 2019
- 226 8. Final report to requesters – June 2019

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