



Rewilding Europe as a new agent of change?

Exploring the governance of an experimental discourse and practice in European nature conservation

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Wageningen University has been commissioned by the Netherlands Environmental Assessment Agency (PBL) to study the workings and 'effectiveness' of 'new agents of change in biodiversity governance', with a particular focus on one such agent, namely Rewilding Europe. This report is the result of the study.

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We would like to state that the content of the report reflects the perspectives of the authors, who are responsible for any shortcomings which may be found in it.

Finally, we want to state that this report functions as a stepping-stone, firstly, to compare Rewilding Europe with other agents of change in biodiversity governance to explore new ways of international biodiversity governance (PBL, forthcoming), and, secondly, to further scientific inquiries into the social development of rewilding as an experimental discourse and practice in Europe.

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Executive Summary

Rewilding is discussed here as a relatively new but contested discourse and practice in Europe. Rewilding represents an additional, entrepreneurial and somewhat bold strategy in biodiversity conservation, which aims for a return to more natural processes in places that have predominantly become shaped by human interventions. By allowing more space for nature to do its 'own' work, prominent organizations like Rewilding Europe propose to experiment with forms of passive management after initial interventions have secured basic conditions for 'natural' processes to re-occur in pilot areas across Europe. This approach is considered promising for local conservation initiatives and nature entrepreneurs (e.g. ecotourism), yet challenges traditional land use practices – including traditional biodiversity policies – in the light of the unforeseeable outcomes of rewilding experiments.



Figure 1: Vision of Rewilding through rewilding ecology and economy, by Jeroen Helmer, ARK

The vision of Rewilding Europe is ambitious as it aims to re-allow 'natural' processes into relatively large conservation landscapes, which requires a total area of 1 million hectares to become 'wilder' by 2022. To understand the role of rewilding in Europe in relation to traditional state centric approaches to conservation, we have assessed Rewilding Europe as a so-called 'new agent of change in biodiversity governance' (Kok, Ludwig, and Hajer, forthcoming). Kok et al. emphasize that new agents of change, like Rewilding Europe, are becoming more important on the international

level and can be expected to become more effective in environmental governance, as compared to traditional governmental practices. Therefore, we aim to assess the workings and effectiveness of Rewilding Europe by means of five governance aspects in a pragmatic approach towards environmental governance: (1) 'new partnerships and collaboration', (2) 'new disclosure mechanisms for broader accountability', (3) 'clumsiness and experimentation', (4) 'scaling up potential and entrenchment', and (5) 'directionality' (Kok et al., forthcoming, p. 1).

In order to understand the workings of Rewilding Europe, we first performed a discourse analysis of rewilding in an international context and henceforth, position European rewilding practices that in part resemble or differ from predominant debates. We compared these debates and practices of rewilding with 20 interviews, particularly with central team members of Rewilding Europe, staff members of local rewilding teams employed at different conservation NGOs, and ecotourism entrepreneurs (since ecotourism development proved to be crucial in current proposals for socioeconomic change connected to rewilding). On the basis of this approach, we drafted the first impressions of lessons learned by Rewilding Europe, which enabled follow-up discussions with local and central staff members to further validate findings of this report. In our analysis, we addressed the question: what would a pragmatic governance approach by (inter)national governments entail to make the best out of an initiative like Rewilding Europe?

A strong European vision as guidance

In order to make Europe wilder again, Rewilding Europe has given ample attention to the development and protection of the term 'rewilding' as it sees fit for areas facing land abandonment and related ecological decline. To overcome confusion and dispersed interpretation of the term, Rewilding Europe recently introduced its own working definition:

"Rewilding ensures natural processes and wild species to play a much more prominent role in the land- and seascapes, meaning that after initial support, nature is allowed to take more care of itself. Rewilding helps landscapes become wilder, whilst also providing opportunities for modern society to reconnect with such wilder places for the benefit of all life." (Rewilding Europe, 2015a, p. 3).

This working definition, as general as it is formulated, provides a broad message about a self-steering nature — even though nature requires help to become natural again — that can contribute to future nature-based economies. Although the concept of rewilding is not new, it has given rise to a wide range of debates in the sciences and practices of rewilding. Recent debates are directed to the growing importance and practice of a rewilding movement in continental Europe. Rewilding Europe receives intensifying attention that applauds, prescribes or criticizes its bold and large-scale approach to transform Europe into a wilder place. In response to recurrent debates, Rewilding Europe represents itself as an experimental organization that sets a return to natural processes into motion within confined pilot areas through trial-and-error. Rewilding Europe works from an opportunistic and borderless (in Dutch: 'VOC'-) mentality, not one that is limited to traditional bordered conservation that tends to produce and sustain static nature (Jepson, 2015).

The directionality of Rewilding Europe becomes visible in the close support of local rewilding teams across pilot areas in Europe where alternative visions and practices of rewilding become naturally contested between the central and the local rewilding teams. On the one hand, these contestations have proven to be productive in guarding the core principles and reputation of Rewilding Europe, while on the other hand, its frictions generate productive lessons for future rewilding action across its growing network. This in part translates into ways in which rewilding partners have been cautiously, or have refrained from, communicating with local people in targeted rural areas, where concepts like rewilding are still unknown or risk being affiliated with a range of negative connotations of transforming former productive landscapes (used e.g. for agriculture, pastoralism, or hunting).

The new rewilding entrepreneurs, mostly related to ecotourism, rely greatly on long-standing experience with similar enterprise developments in African conservation brought in by partner organizations like Conservation Capital. The newly introduced opportunities match well with the vision of large-scale nature developments such as the Serengeti or Yellow Stone NP, uphold promises to new livelihood opportunities for some, but might turn out to be risky in the absence of a niche market, an entrepreneurial culture and experience with such conservation enterprises in Europe.

Rewilding Europe as a new partnership and collaboration is based on the notion that partnerships are not just about knowledge building and information sharing, but that their effectiveness relies to a great extent on financial and political incentives. To make the ambitions of Rewilding Europe real, a range of interdependent small wins need to be established. These wins assume that: ecotourism functions within an abundance of wildlife; wildlife thrives in a dynamic and sizeable natural landscape; and natural landscapes can be accepted through a willingness of the people living in these landscapes to allow and understand a co-existence with wildlife. After all, a key partnership does not involve only local conservation organizations, but also land owners/residents in pilot areas.

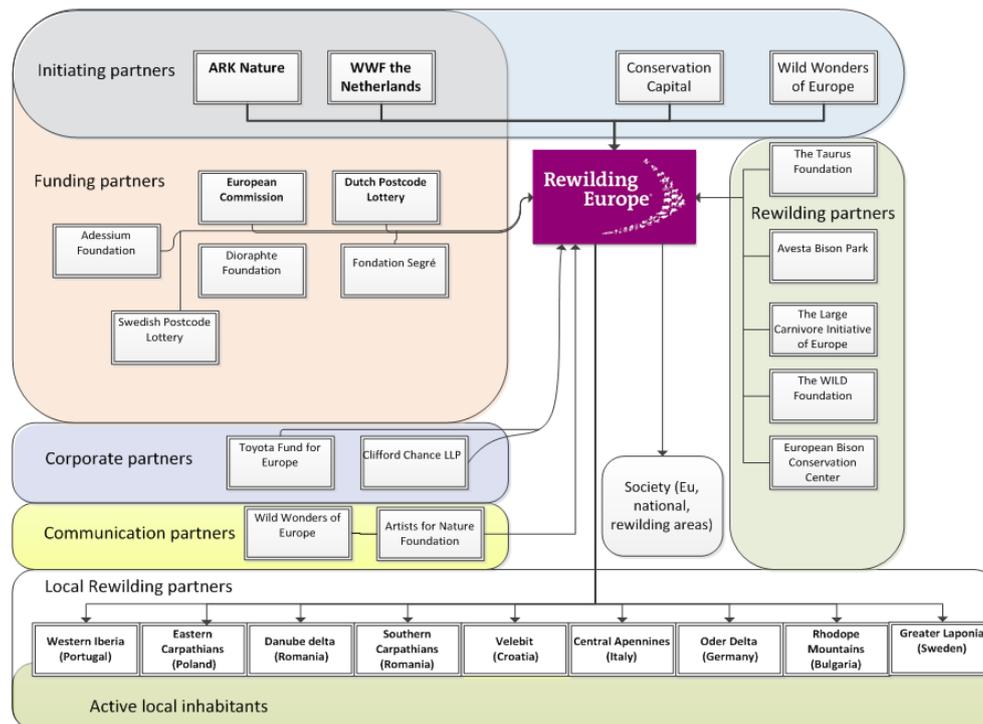


Figure 2: impression of partnerships by Rewilding Europe

An actor that is clearly invisible in local pilot areas of Rewilding Europe is a central/regional government. Rewilding Europe is still at an experimentation stage with natural processes and enterprise developments that require years to prove their productiveness. Once a substantial amount of these processes and enterprises can be demonstrated, it is expected that governments will play a more substantial role in implementing more flexible rules and regulations for rewilding interventions, be inspired by rewilding sites to implement these initiatives in other existing or new conservation sites, or function as a major knowledge base to support local rewilding teams. In particular, the role of governments might become more important when a foundation like Rewilding Europe reaches the end of its ten-year project term (to rewild 1 million hectares before 2020). Regardless of what Rewilding Europe after 2020 will become (obsolete, acquire an advisory role, develop further or become an extended foundation), the wilder areas would require the continued involvement and responsibility from a government or a 'neutral' third party to bring about long term changes or do something about the possible effects from rewilding in pilot regions. Think of potential human-wildlife conflicts, the sustaining of regional rewilding brands, or the facilitation of public debates about changing regional land use. The question is: Who can, and is willing to, take responsibility for such widespread effects of rewilding that in theory cannot stay confined to experiments in pilot areas?

New disclosure mechanisms are the ways in which environmental actors make, or are forced to make, themselves accountable for their actions. One key indicator for Rewilding Europe is to prove that Europe would indeed become a wilder place in the future. The notion of wildness is important here, yet it is still unclear how it can be defined or monitored in due course. Rewilding Europe is currently developing a so-called wildness scale that ought to provide an indication of how wild a certain place essentially is on a scale that, for example, ranges from 1 (not wild at all, e.g. a concrete pavement in a city) to 10 (extremely wild, e.g. a fully functional core rewilding area where natural processes have returned). The scale, like its examples, is still under construction, but will be of value in discussing progress in rewilding pilots, the status of non-rewilding areas, and/or new means to steer policy development.

Another key and recurrent theme in accountability is the role of funding from third parties. The application for and reporting on progress for rewilding action delimits local rewilding partners to invest in creative and crucial processes. Rewilding Europe supports local teams in this process, and currently relies particularly on generous support from funding partners like the Postcode Lottery and the European Commission. In the long term, Rewilding Europe aims to achieve more private funding, e.g. through incorporating conservation levies and covenants into newly created rewilding enterprises. A conservation covenant is a legally binding agreement with enterprises/property owners to protect/support existing wildlife/wilderness. Conservation levies are a form of rewilding tax that can support local partnerships by means of long term technical, communication, financial and legal aid, or local fundraising. General funding to pilot projects is currently restricted to 5-year plans, yet gives local partners more space to manoeuvre than traditional funding bodies such as EU Life project funds.

Besides having to account for their actions to funders, Rewilding Europe and local rewilding teams have to do the same to the local public in targeted pilot areas. Even though land abandonment is common for these areas, people continue to use land for purposes such as (frequently subsidized) agriculture, pastoralism, extensive grazing and generation of green energy. Paradoxically, Rewilding Europe depends on financial support from the European Commission, and yet questions the occasional contradicting ways in which the Common Agricultural Policy (CAP) is directed at arguably unproductive and destructive land use (cf Merckx and Pereira, 2015). Rewilding Europe is getting more invitations to discuss policy strategies like the CAP to explore alternative implementations in the future. In contrast, local discussions with local politicians or the wider public in pilot areas do not receive priority in this early stage of development of rewilding because Rewilding Europe first aims to secure evidence for rewilding experiments before discussing these widely across the borders of current pilot areas.

Clumsiness and experimentation are mechanisms that encourage a trial and error approach. Learning is the essential element of this approach as lessons learned are a valuable output. We emphasize that rewilding is a potentially quintessential clumsy approach through its recurrent pragmatism in looking for opportunities that emerge in pilot areas. Rewilding plans tend to change frequently as: future outcomes are unpredictable; funding depends on availability; its social embedding leads to unexpected outcomes. By representing rewilding as an experimental and additional approach to conservation, Rewilding Europe is not regarded as 'clumsy' from a social perspective since not all possible rewilding practices in pilot areas are allowed by Rewilding Europe to pass under its own construction of the term rewilding. Previous discussion of a steered rewilding practice by Rewilding Europe is considered crucial in sustaining a clear and identifiable approach to rewilding across continental Europe. Weekly communication with local rewilding partners, supported by 5-year plans in pilot areas, directs desirable developments of rewilding while allowing improvisation of ad hoc events (e.g. sudden

possibilities to buy land for rewilding, surprising positive or negative reactions from the public, a sudden drought). In this clumsy form of governance, which we describe as 'centralized adaptiveness', visions are fluid to support opportunistic development of areas that, in hindsight, are discussed and reflected upon while new experiments are set into motion.

Clumsiness and experimentation nevertheless contain elements of risk and uncertainty. Clumsy approaches require actors like Rewilding Europe to understand the complexity of governance processes and to adapt to changes and events in the context of a polycentric governance arena. Rewilding Europe essentially does not observe problems. Instead, the foundation actively seeks opportunities that match popular European discourses around land abandonment. Such opportunity seeking is visible through some of its goals: abandonment questions are turned into opportunities for ecotourism economies, rewilding enterprises and passive forms of land management that can lower conservation costs, common under active conservation management. Rewilding is not by definition an answer to all rural land problems in Europe, but is implemented as an experimental process with local rewilding partners in selected pilot areas. A trial-and-error approach to rewilding plans will surely expand beyond the borders of its initial concept, but can just as well lead to the production of new landscapes that are atypical, surprising or inspiring.

Upscaling is about expanding activities of an organization or a group of actors in order to increase their impact. One of Rewilding Europe's core objectives relates to so-called 'magnification' of its bold approach in Europe. This mode of scaling-up is predominantly vertical as it aims to increase the impact mainly by advocating the rewilding approach through expanding the network, supporting rewilding initiatives in and outside pilot areas, increasing communication and promotion, and stimulating the exchange of knowledge and information. The challenge to be tackled here is the lack of entrepreneurial spirit in European conservation. Rewilding Europe experimented in a collaboration with universities and applied science institutes to support a new generation of nature entrepreneurs (cf Jobse et al., 2014), which currently emphasize the expansion and support of rewilding enterprises with Rewilding Europe Capital.

Next to upscaling, Rewilding Europe constantly strives to rescale its initiative in order to anticipate previously described 'unruly' events. Where the social organization of pilot projects does not match existing physical scales (e.g. opinions and interests can vary when deciding on the 'best' ways to implement rewilding in local landscapes), either the social or the physical scales would require adjustment. Now that Rewilding Europe is working towards magnification on a European level, experiments have been envisioned for non-pilot areas to further demonstrate the effectiveness of rewilding as an additional approach to European conservation policies. In the long run, this might challenge the current experimental character of rewilding in Europe and steer it towards a more mainstream practice. Yet, such magnification would depend on the perceived long-term cost-benefits of rewilding, the functioning of new nature-based economies, and a broader political will in Europe.

To conclude, it can be said that pragmatic European discourses of rewilding prove to be less rigid in their development of nature, in contrast to common references to rewilding in an American context. This is due to attempts to re-scale time (referring to past and/or future states of wilder landscapes), to re-scale restoration approaches (kick-start hands-off versus passive restoration), and to look at lessons from experiences with new nature development projects. Nevertheless, European versions of rewilding smack of US ambitions 'to think big' and work towards more natural and dynamic landscapes instead of the rather static conservation models found in European conservation policy.

Rewilding Europe, after all, is an initiative that stands at the start of its work in 10 different pilot areas. It is difficult to make hasty conclusions by assessing how fit the approach is for mainstream European conservation. We should avoid seeing the initiative as an alternative to more static forms of conservation, but aim at seeing rewilding as an additional approach. Rewilding leads to controlled experiments with the development of nature or rewilding enterprises. Key challenges for rewilding are found in orchestrating its experimental approach in the context of highly differentiated places with unique historical and cultural contexts. This study has not emphasized a role for these contexts, but there is sufficient ground to argue that each rewilding experiment is intimately connected to its social, economic, natural and political environment. Furthermore, rewilding is new. It takes time for natural processes to return, for rewilding enterprises to break even, and for further lessons to be acquired.

Finally, we see Rewilding Europe as a bold agent of change that is effective in transforming and securing biodiversity through constant trial-and-error. We observe that much rewilding action is implemented by biologists and ecologists to allow natural processes to return, yet we wonder whether a 'social rewilding' can likewise gain shape alongside existing practices. This would require targeted landscapes to be more exposed to political debates, during which differences among actor interests can be discussed, translated, and rewilding plans made public. We do not claim that this should be implemented as another tool to make rewilding more successful. We do think however that an inclusive approach would function as an experiment within a rewilding experiment that will require social monitoring.

We henceforth propose a couple of recommendations to governments to make the most out of rewilding initiatives and discuss opportunities for future research:

- As a novel and entrepreneurial initiative in Europe, Rewilding Europe would benefit from having freedom to develop and experiment with the return to natural processes and enterprise development. This requires a need for experimentation that is granted e.g. by European authorities in the form of a more level playing field in the CAP, or by national governments taking a more flexible approach to rules and regulations, e.g. changes in the wild status of newly introduced 'wild' herbivores, or flexible land tenure systems.
- Rewilding Europe evolves as an organization which continually reshapes its concepts, upscales its practices, experiments with new modes of nature conservation and enterprise forms, and explores new modes of steering. Governmental interventions should therefore not 'pour the concept into concrete', but take on the important role as supporter and knowledge base for rewilding projects.

- Governments could facilitate rewilding by recognizing the experimental nature of rewilding and its contribution as an additional approach to nature conservation in Europe, and that this approach could produce new uncertainties and effects that would lead to both inspiration (e.g. new iconic wildlife destinations) and risks (e.g. decontrolling of natural processes). Rewilding should by no means replace existing forms of nature conservation. Existing policies such as Natura 2000 and LIFE focus predominantly on conserving habitats and species, while rewilding emphasizes experimentation with natural processes and development of nature-based economies. Natura 2000's 'favourable conservation status' is used as a reference point for biodiversity and habitat types, while rewilding could highly alter both habitats and biodiversity. This may not necessarily be negative, but can be different from what current directives prescribe. A major challenge in the near future will be to formally institutionalize rewilding as an open management tool within European directives that does not necessarily compete with traditional forms of biodiversity conservation.
- Future research should explore whether such competition will hamper European conservation practices. The current lack of rewilding studies, both ecological and social (cf Carey, 2016), should bridge the gap to monitor and discuss rewilding outcomes in Europe to understand not only its potential, but also its unanticipated effects for rural landscapes under transition.

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1 Introduction

Rewilding as a discourse and practice in European biodiversity governance is relatively novel. We see rewilding as an additional, entrepreneurial and daring strategy aimed at a return to more natural processes in places that have predominantly been shaped through human control. By allowing more space for nature to do its 'own' work, rewilding refers to a form of passive yet dynamic biodiversity conservation after initial interventions allow natural processes to re-occur. This implies a more open ended, experimental and unpredictable approach that is controversial in relation to more static (aims of) policies for biodiversity conservation that are more common in Europe (Jepson, 2015; Lorimer, J. & C. Driessen, 2014).

"By changing our perspective from traditional nature conservation towards a more development oriented approach, the reference point for European nature changes too. This reference point is no longer based in the past but in the future, and looks towards landscapes that are governed by essential natural processes, which create the necessary space for all of our original animals and plants, including humans." (Rewilding Europe, 2015a)

In making rewilding more common as a future-oriented approach for nature development in Europe, Rewilding Europe has commenced deploying ten demonstration projects to experiment with rewilding on large geographical scales with the aim to 'make Europe a wilder place' (www.rewildingeurope.com). Established rewilding pilots are found in Western Iberia, Danube Delta, Southern Carpathians, Velebit, Central Apennines, Rhodope Mountains, Eastern Carpathians, the Oder Delta, and Lapponia. These pilots, according to Rewilding Europe, ought to pragmatically 'turn problems around', such as ongoing land abandonment, socio-economic decline, and demographic change, into 'new opportunities'. On the other hand, rewilding solutions prove challenging through political debates such as the use of European agricultural subsidies and the alternative role that rewilding could play therein (Merckx & Pereira, 2015), the biopolitical appropriation of naturalistic grazing versus traditional pastoralism or extensive cattle production (Lorimer & Driessen, 2011), the intervention into natural processes (Hobbs et al., 2011), or potential exclusion of people from conservation (Hintz, 2007), to name a few. While scientists are measuring or making opinions of rewilding, Rewilding Europe pragmatically continues to work on the promotion of nature-based economies that rely on natural processes, a return of Europe's wildlife, and the introduction of marketable wilderness enterprises. The vision of Rewilding Europe is ambitious, as it aims to re-allow 'natural' processes into relatively large conservation landscapes that together target 1 million hectares to become 'wilder' before 2022.

We aim to understand how the emergence of Rewilding Europe can lead to a pragmatic rethinking of conservation practices, business development or appreciation of wilder landscapes in pilots where its philosophy becomes introduced and nature policies are implemented at national and European levels. This report specifically addresses the governance of rewilding as an approach implemented by Rewilding Europe. We adopt a pragmatic approach towards environmental governance as our conceptual framework for understanding Rewilding Europe. After discussing this approach (section 1.1), we discuss what the term rewilding refers to, how the discourse of rewilding depends on the different systems of thought in a European context, and which (other) rewilding initiatives are undertaken in Europe. We give specific illustrations of very recent rewilding interventions, especially in the pilot of Western Iberia in North-eastern Portugal, which involved activities ranging from the kick-starting of natural processes, to communication with local residents of targeted areas and novel conservation enterprise development such as ecotourism.

1.1 Pragmatic Environmental Governance

In dealing with environmental change, Kok et al. (forthcoming) emphasize that new agents of change such as Rewilding Europe are becoming more important than traditional governments, and perhaps more effective, in biodiversity governance. There is, so to speak, much 'untapped potential' for traditional governments to respond to emerging practices. To understand this potential, Kok et al. developed an approach towards environmental governance to focus on what we can learn from 'societal actions and Rewilding Europe as a new agent of change?

initiatives that business, cities, civil society and citizens increasingly take worldwide that may be more conducive to timely and effective collective problem-solving' (Kok et al., forthcoming, p. 1). To understand the workings of 'new agents of change', this approach focuses on different aspects: (1) 'new partnerships and collaboration', (2) 'new disclosure mechanisms for broader accountability', (3) 'clumsiness and experimentation', (4) 'scaling up potential and entrenchment', (5) 'directionality'.

'New partnerships and collaboration' touches on the notion that networks are not just about knowledge building and information sharing. Instead, financial and political incentives are important in explaining the effectiveness of a network (Betsill & Bulkeley, 2004). In this sense, building on co-benefits can be an effective way to strengthen new partnerships and increase the effectiveness of a collaboration (Andonova et al., 2009). Complementary to co-benefits is the aim to achieve 'small wins' (Ansell & Gash, 2008). Small wins are characterized by a low level of risk and can enhance trust among actors at the start of a collaboration. As a result, small wins can lead to 'big wins'. In cases where, for example, trust is less of an issue, it can be more effective to strive for large gains from the start of any project (Vangen & Huxham, 2003).

'New disclosure mechanisms' are about ways in which environmental actors make themselves accountable for their impacts to society and nature. New information and communication technologies have increased transparency and accountability. As a result, accountability has shifted to a larger group of stakeholders. Performance of businesses and NGOs can be assessed by comparing them to other comparable businesses and NGOs on specific targets. Through 'naming and shaming' and benchmarking, organizations can be stimulated to outperform each other (Porte et al., 2001). There are many types of disclosure and accountability mechanisms, such as certification schemes, company reporting systems, verification and auditing systems, monitoring and disclosure (Mol, 2010).

According to Verweij et al. (2006, p. 817), 'clumsy solutions' are "policies that creatively combine all opposing perspectives on what the problems are and how they should be resolved" (Verweij et al., 2006). Clumsiness and experimentation are mechanisms that encourage a trial-and-error approach. Learning is the essential element of this approach as the lessons learned are a valuable output. It is important to accept failures as an element of risk for organizations, local governments, local inhabitants, etc, when providing room for experiments (Castán Broto & Bulkeley, 2013), making risk another natural aspect of clumsy governance approaches. It remains nevertheless questionable who observes these risks. For example, risks related to biodiversity decline might be important to a conservation initiative, but not to local land owners.

'Upscaling' is about expanding activities of an organization or group of actors in order to enlarge their impact. In this respect, the main importance of upscaling for an organization is not simply to increase its organizational size or geographical area, but also to consider the effects of such upscaling activities in terms of e.g. local traction in places where projects are unfolded. Uvin et al. (2000) identify four modes of scaling up by which an organization can increase its impact: (1) increasing their size, (2) taking on new activities, (3) influencing the behaviour of other organizations, and (4) assuring their own organizational sustainability. In this sense, scaling up can be initiated in two main directions: horizontally and vertically (Menter et al., 2004). Horizontal upscaling implies that an organization expands in size. Vertical upscaling implies expanding by influencing the crowd (Bulkeley & Mol, 2003; Jowett & Dyer, 2012; Menter et al., 2004).

'Directionality' is about setting direction, or a vision for change. A common governance concept to set direction in a polycentric governance context is orchestration. In short, orchestration is a governance principle in which a single actor tries to influence its target groups through intermediaries. In this sense, orchestration is a mode of 'indirect' governance, as well as a mode of soft transformative power incorporating forms of hegemony through relationships. Although some orchestrators possess financial and material capabilities, an orchestrator is generally not able to impose laws or punishments on its target groups or intermediaries. Other types of governance used in a polycentric governance context are:

collaboration (which is direct, but soft) and delegation (which is indirect, but hard). When it comes to a monocentric governance context, traditionally hierarchy tends to become used to directly impose hard measures on a target group (Abbott et al., 2012).

1.2 Method and outline of report

To understand the potential of Rewilding Europe as a new agent of change, previous studies performed in Western Iberia (Leuvenink, 2013; Pellis, forthcoming; Pellis et al., 2013; Poppen, 2012; Walet, 2014) were complemented with additional personal or telephone interviews and a discourse analysis on the use of rewilding in a European context. We looked into scientific debates over rewilding in a European context between 2010-2015, identified a range of aspects attributed to rewilding as a concept (chapter 2 – discourses of rewilding) and we compared these with a range of aspects of rewilding practices found in diverse initiatives across Europe (chapter 2.4 and 2.5 - rewilding as a European practice). We identify Rewilding Europe as a most prominent actor in European rewilding with its own attributes and practices on the ground. To make sense of local-European practices in Rewilding Europe, we performed 21 interviews with central staff members of Rewilding Europe, local partner organizations, donors, and tourism entrepreneurs. Both interviews and selected scientific papers have been coded systematically to identify particular discourses on rewilding. We used Kodani, a qualitative coding tool, to deduct our observations openly, axially and selectively, matching scientific debates with empirical observations of rewilding (cf Boeije, 2009; Doorewaard et al., 2015).

Annex 1 shows a list of interview codes used for this report. These codes refer to observations made by respondents who chose to remain anonymous to protect the integrity of the people interviewed. A majority of the respondents is connected to one key case study, namely the pilot region of Western Iberia. We describe in detail the relationships in previously described building blocks (new partnerships, disclosure mechanisms, clumsiness, upscaling, and directionality) by Kok et al. (forthcoming) in the light of this Portuguese partnership with Rewilding Europe. We also complement our findings with examples provided on other pilot areas across Europe (section 3.4). These discussions focus on Rewilding Europe as a new 'agent of change' for environmental governance in Europe (chapter 4).

2 Discourses of Rewilding

What is rewilding, where does it come from, and how has it evolved as a discourse in a European context? Rewilding is a term formally coined in 1991 by The Wildlands Project (TWP), while related ideas had already been proposed in the United States in the 1960s by Paul Martin (cf Carey, 2016). In general, rewilding represents an alternative conservation strategy that, in a nutshell, suggests “to make wild again” (Jørgensen, 2014, p. 1), often hinting at pre-human baselines to wildness (Hintz, 2007). Opinions about such a definition vary. To address these, we identify a number of typical rewilding discourses present in literature that explain American or European rewilding.

2.1 US origins of rewilding

The US founding network of rewilding activists, amongst others Reed Noss and Dave Foreman, established a rather normative stand when they rejected traditional ways of ‘safeguarding’ nature in ‘static’ national parks. These activists hence recommended to upscale conservation land as a necessity to sustain keystone species. This stand led to the formulations to ‘think big’ and the exclusion of human activity in areas designated for new wilderness. Such thinking was further incited by a ‘refashioned’ scientific community supporting the concept of Rewilding (Hintz, 2007). Big conservation landscapes with keystone species became the basis for re-establishing a more ‘authentic’ and robust nature known to exist before the arrival of Columbus, or as some would argue or contest, before the arrival of men. US proponents envisage that these rewilding landscapes will become the habitat of large carnivores, as these species would help to restore a return to a more ‘healthy’ and ‘dynamic’ landscape with more ‘self-steering’ by natural processes, as opposed to the more static and state supported parks where nature is controlled by men. Rewilding hence becomes defined as ‘the protection or restoration of the full suite of native predators to ecosystems, thereby ‘restoring self-regulating land communities’ (Soulé & Noss, 1998, p. 23). An iconic, yet highly political, example of American rewilding is the reintroduction of the wolf in Yellow Stone National Park (Wilson, 1997).

To re-design land by means of a rewilding philosophy, the TWP proposed the use of a four-parcel design that includes: core conservation zones (large wilderness areas with no human presence/interference), corridors (making exchange and migrations possible), buffer zones (around cores where limited human intervention is allowed), and intensive human activities elsewhere (Foreman et al., 1992). The latter human presence refers to intense agriculture, industry, or urban developments that ought to become relocated elsewhere in order to make designated areas function as exclusive wilderness (Hintz, 2007).

Jørgensen (2014) recognizes the reference to the four parcel model in his genealogy of the use of rewilding between 1999–2013, indicating that there are roughly six different forms or ‘systems of thought’ about rewilding: 1. cores, corridors, carnivores; 2. Pleistocene mega-fauna replacement; 3. Island taxon replacement; 4. landscape through species reintroduction; 5. productive land abandonment; and 6. releasing captive-bred animals into the wild. These references to rewilding primarily relate to different and contradicting time references used

Box 1, Wolves in Yellow Stone NP

After an absence of around 70 years, wolves (*Canis lupus*) were introduced to Yellowstone National Park in the winter of 1995-1996 (Ripple & Beschta, 2003). Before the introduction of wolves, the park’s landscape was characterised by vast areas of low vegetation overgrazed as a result of high numbers of Elk (*Cervus canadensis*).

After the reintroduction of wolves, tall vegetation started to recover and reappear. Related landscape change is directly linked to the reintroduction of wolves as a result of *trophic cascade* (Ripple & Beschta, 2003; Ripple et al., 2001). The wolves not only reduced the number of elk, they also changed the foraging behaviour of elk. The risk of predation meant that elk became substantially more mobile, allowing the vegetation of different aspen and willow species to recover (Ripple & Beschta, 2003; Ripple et al., 2001).

by various rewilding practitioners and scientists to legitimize the kinds of rewilding practices which ought to be practiced, particularly which species should be re-introduced. *Pleistocene mega-fauna* replacements refer to wildlife existing in Northern America prior to 13.000 BP. A return of such megafauna, according to Donlan, is preferable to undesirable pest and weed development which characterizes landscapes that are recently left untouched (Donlan et al., 2006). *Taxon replacements* refer to more recent references in time in relation to ecological restoration on island settings, emphasizing the potential of species reintroductions varying between 16th-19th centuries, with less emphasis on the use of megafauna. *Landscape restoration through species reintroductions* refers to a more 'holistic' approach towards fauna reintroductions that have no strict time reference. Authors of such rewilding refer to extinctions related to ongoing human pressures on their environment. *Productive land abandonment* speaks of practices found mainly in a European context. Here the emphasis is not so much on pre-human reference points, but rather on a form of "passive management of ecological succession with the goal of restoring natural ecosystem processes and reducing human control of landscapes" (Navarro, L. M. & H. M. Pereira, 2012, p. 904). And finally, as Jørgensen (2014) mentions, there is a minor use of rewilding that refers to the *release of imprisoned animals back into wilderness*; this focusses on individual species instead of transforming whole ecosystems.

2.2 Rewilding as a European discourse

Although rewilding is commonly perceived as a movement originating from the United States, the underlying social construction of wilderness appears to have European roots. Europeans once:

"...exported' the idea of wilderness to the New World during the Age of Discovery, first as an object of dread, of ungodly places inhabited by wild animals and wild people, but subsequently as something more positive during the Romantic period when wilderness began to take on a more positive tone associated with the state of nature and the sublime" (Carver et al., 2014, p. 40).

The ambiguity over origins of rewilding ties in with the previous discussion of a rewilding genealogy that does not simply represent a linear history of thinking over time with clear origins. Instead, we start to recognize an "understanding [of] a given system of thought as a result of historical contingency rather than a teleological outcome" (Hook, 2005; in Jørgensen, 2014, p. 2). We must understand that rewilding is not a given discourse, but an evolving system of thought named after historical contingencies and clear differences in the way it becomes discussed and practiced today. For example, the 1980s brought experiments with rewilding in the Oostvaardersplassen that in part refer to the projections of Frans Vera to restore 'large natural-functioning' landscapes (Vera, 2000, 2009); or the back-breeding of Heck cattle, one of the prominent species reintroduced as Auroch replicas in Rewilding Europe pilots carried out since the 1930s (Lorimer & Driessen, 2016; Vera, 2009). Rewilding Europe claims that it was not aware of the rewilding movement in the United States (N-1) when it 'invented' the term 'rewilding' in 2010. The naming of rewilding reflects an older practice of former experiments with 'nature development' with strong roots in the Netherlands going back to the 1980s (Plan Ooievaar (Bruin et al., 1987), Nota Natuurontwikkeling, (Baerselman & Vera, 1989), Levende Rivieren, (Wereld Natuur Fonds & Helmer, 1993)) that contributed to the implementation of the Oostvaardersplassen or projects around nature developments in river areas like the Gelderse Poort (see also Bulkens, 2014).

In an intercontinental context, European rewilding differs from American rewilding in the way 'wilderness' is perceived and how it is managed. Hall describes the differences of perceptions in rewilding as 'Americans extracting culture' and 'Europeans injecting nature': "*North Americans may be much more comfortable rewilding, whereas Europeans are adept at gardening and regardening"* (Hall, 2014, p. 17). Europeans are supposedly more willing to accept humans as part of nature, while Americans generally only accept wilderness without human presence. According to Hall (2014), this is reflected in the use of reference points for wild states. Europeans will accept historical reference points with human presence,

while Americans tend to refer to a point in time before human presence. Similarly, rewilding in an American context means hands-off management, while Europeans apply a 'hands-on hands-off' approach by actively restoring areas in addition to focusing on non-intervention management. Or as Keulartz fittingly describes it: "*controlled decontrolling of ecological controls*" (2012, p. 60). Linnell et al. state that Europeans have a more non-dualistic approach towards wilderness that may be placed in a historical context: "*...modern day Europeans are technically indigenous to their continent and have therefore had a longer period to develop a nuanced association with their environment*" (2015, p. 983).

Jørgensen (2014) identified two distinct rewilding discourses relevant for a European context, namely *landscape through species reintroduction* and *productive land abandonment*. Yet, as we will argue from here, European rewilding tends to evolve as a discourse touching upon other systems of thought that can relate to A) *experimental and entrepreneurial conservation* and, to some extent, B) *Pleistocene mega-fauna replacement*.

Pleistocene mega-fauna replacement has not yet been noticeably applied into European practice. Svenning et al. nevertheless state that the current pool of large-bodied animals has evolved in the presence of mega-fauna since "*proboscideans were members of this guild in all regions except Australia, extant elephant species are relevant to consider as ecological replacements in most areas*" (2015, p. 4). Svenning et al. even go a step further in stating that "*synthetic biology could become a powerful component of trophic rewilding by overcoming limits to what can be achieved with extant species,...* Hence, a framework for integrating synthetic biology and trophic rewilding science is needed to evaluate risks and benefits" (idem, p.6).

An *experimental* rewilding discourse, on the other hand, is based on the inherent property of rewilding that leads to uncertainties through the subjective making of new nature developments.

"By definition, rewilding can only ever be an experiment in composing the wild, an experiment in making 'new' natures, in which the conservationist is always already implicated in the reality that he or she seeks to remake" (Braun, 2015, p. 108).

Others observe the experimental design of rewilding as a mode of management that 'rewilders' purposely and consciously apply, as has been observed in rewilding the Dutch Oostvaardersplassen (OVP): "*In many ways OVP is an anomaly amongst nature reserves, which are generally conceived as 'found' analogies of a prehistorical or premodern past. OVP is presented as a made site for knowing and experimenting with an uncertain future*" (Lorimer, Jamie & Clemens Driessen, 2014a, p. 50). Jepson embraces the experimental elements of rewilding and proposes to strategically expand rewilding through "*...a European network of experimental rewilding sites*" (Jepson, 2015, p. 1). These experiments could provide for new lessons in European conservation that Jepson underlines as typically rigid and protective.

Recurrent governmental management of biodiversity nevertheless maintains reasonably static assemblages of (clean and ordered) nature under the control of humans. Rewilding introduces an opposite and chaotic system of thought where natural processes are given more space to produce dynamic and unpredictable outcomes, including uncertainty for those involved in or close to its development (cf Braun, 2015; Jepson, 2015; Lorimer, Jamie & Clemens Driessen, 2014b). Rewilding, as Jepson (2015) argues, provides an interesting experimental approach that is hardly definable, unpredictable, and yet led by a strong theoretical belief in passive management, new socio-economic opportunities and wild animals returning to roam in newly developed rewilding landscapes. Braun stresses the indisputable and unlimited experimental character of rewilding:

"Rewilding [...] is not just artifice, it is experimental all the way down; one doesn't quite know what works, or even how to measure success. Rewilding is a journey into the unknown, a wager on what might work, for how long, and with which effects." (2015, p. 108).

Even though rewilding is experimental 'all the way' down the rabbit hole, it is defined in a variety of ways in literature which discusses its European context, often with a focus on particular elements of rewilding such as non-intervention, the exclusion of human presence, restoration, natural processes or a combination of these elements. Five categories are identified in this discussion: (1) 'kick-starting restoration, followed by hands-off management', (2) 'restoration ecology', (3) 'hands-off management', (4) 'nature development' as a typical Dutch mode of creating 'new nature' (Lorimer, Jamie & Clemens Driessen, 2014a), and (5) 'trophic rewilding' or introducing species in order to restore top-down trophic interactions (Svenning et al., 2015). Categories 1 to 3 encompass pre-dominant scientific definitions of rewilding in Europe that can be placed on a scale from repairing degraded ecosystems to an exclusive return of natural processes.

Kick-starting restoration, followed by hands-off management, or in other words 'passive management', is a commonly used category that combines elements of restoration ecology and hands-off management. This category covers definitions that present rewilding as initially restoring degraded ecosystems through reintroducing keystone species (e.g. proxies of ancient European cattle species), followed by long term non-intervention (Navarro, L. M. & H. M. Pereira, 2012; Sandom, C. et al., 2013; Smit et al., 2015). Restoration ecology is somewhat broader in definition, partly because some authors state that "from a scientific perspective [rewilding] falls within the framework of restoration ecology..." (Jepson, 2015, p. 1) while others are even less specific: "...rewilding usually refers to efforts to return worked over or disturbed environments to their apparent 'natural' or 'wild' state" (Braun, 2015, p. 108). The latter defines rewilding as a form of restoration ecology, yet not necessarily as a hands-off approach. Hands-off management covers definitions that consider rewilding as an intentional conservation strategy that excludes human interference without necessarily considering the need for restoration.

2.3 Rewilding as a European practice

As a novel discourse and practice in European conservation, rewilding will materialize differently in local contexts. In Europe's highly diversified landscapes we see differences among countries in, for example, the role of 'species as ecosystem engineers'. In the Netherlands, the purpose of the experiment with the Oostvaardersplassen was to reproduce a 'wood-pasture' or 'park-like' landscape by having large herbivores grazing in it (Lorimer & Driessen, 2013; Lorimer, Jamie & Clemens Driessen, 2014a, 2014b; Smit et al., 2015). In Scotland, rewilding is often intended to do the opposite: afforestation by actively planting trees and decreasing grazing pressure by reducing the number of sheep and deer. Species reintroductions in Scottish rewilding sites focus on facilitating forest regeneration, for instance by introducing wild boar for rooting or introducing carnivores for top-down trophic control (Brown et al., 2011; Sandom, C. J. et al., 2013a, 2013b).

Even though rewilding has emerged as a recognizable practice in various conservation sites across Europe, the term 'rewilding' was only incorporated into a continental approach anno 2010. Its novelty in Europe is testified by the absence of overarching European rewilding institutions, regimes or policies, which are present in, for example, various modes of biodiversity and habitat protection. Main pan-European collaborations with reference to rewilding are assemblies without any legally binding agreements. A couple of voluntary initiatives such as the Wild Europe Initiative, Rewilding Britain, or the Rewilding Europe Network have been set up to increase, support and learn from a growing rewilding movement in Europe. However, apart from Rewilding Europe, most rewilding initiatives in Europe operate on a place-specific national or local level.

Where scientific attention is growing in relation to rewilding in Europe, various normative stands have developed around its practice in scientific circles while a few organizations have recently begun to experiment with a rewilding approach across various European pilots (N-1/N-3). A prominent practice was launched by Rewilding Europe in 2010 while other organizations have recently started to use the term. Before discussing some alternative practices of rewilding, we commence with a more detailed discussion of the Rewilding Europe foundation.

2.4 Rewilding Europe (RE)

2.4.1 RE: Origins and objectives

Rewilding Europe is a foundation established on the 28th of June 2011 by four individuals from four different organizations: the Dutch World Wildlife Fund for Nature (WWF-NL), ARK Nature, Conservation Capital and Wild Wonders of Europe. Rewilding Europe envisages Europe to become “a wilder place” with “more space for wildlife, wilderness and natural processes” (cf. www.rewildingeurope.com). One million hectares of abandoned European land is projected to become rewilded by 2022 within 10 selected demonstration areas across Europe. Nine of these areas have been established so far. The rewilding pilots are at the forefront of the initiative where five objectives of Rewilding Europe are applied: 1) wilder nature, 2) wildlife comeback, 3) nature-based economy, 4) pride in the wild and 5) magnification to “inspire the scaling-up and replication of the rewilding approach across Europe” (N-3).

The central concept in rewilding is to allow natural processes to take shape again, such as natural flooding, erosion and sedimentation, natural grazing, predation by large carnivores, scavenging, seasonal migration of wildlife species, natural fires and diseases (e.g. bark beetles opening up forests), natural forest regeneration and many more. Each area has a 10-year plan which identifies key natural processes on which rewilding strategies are based and developed. Eventually this would lead to the restoring of wider natural processes that potentially benefit and reconnect ‘whole’ ecosystems, and that support a form of ‘laissez faire’ management with a prime role for nature instead of landscapes traditionally controlled by mankind (Navarro, L. M. & H. M. Pereira, 2012).

Alternatives for a wilder Europe raise a range of governance questions in places where rewilding ought to complement but not replace traditional land use practices, including more compositionalist forms of conservation (Jepson, 2015). Compositionalist conservation, as Jepson explains, represents a rather protective, conservative, calculable and static form of conservation common in European conservation practice. Compositionalist conservation contradicts in principle a more functionalist approach of rewilding that upholds a minor role for human-induced change and an openness to uncertainties found in natural processes. In theory, this would imply that rewilding provides opportunities for cost reductions in comparison to heavily managed natural reserves. Yet there is no systematic scientific evidence, but only practical evidence found in, for example, the floodplains of Dutch rivers, or the suggestion that natural grazing is much more cost-effective than subsidized mowing systems. It makes little sense to control approximated effects of rewilding in practice as this would, once again, lead to a controlling, or possible condemning, of rewilding practices through impact studies where rewilding would become measured and managed in similar ways common in European policy making. Instead, as is argued by Rewilding Europe, one can observe Rewilding Europe pilots as experiments added to common conservation practices (N-3). These pilots arguably need time to be developed, and new ways to be understood or evaluated in the coming years.

Nevertheless, there are many opinions about what rewilding in Europe is or should become. In order to deal with the many uses of the term rewilding, in part due to vast amounts of positive and negative connotations given to rewilding in scientific and public debates, Rewilding Europe launched its own working definition in its latest Annual Report of 2014:

“Rewilding ensures natural processes and wild species to play a much more prominent role in the land- and seascapes, meaning that after initial support, nature is allowed to take more care of itself. Rewilding helps landscapes become wilder, whilst also providing opportunities for modern society to reconnect with such wilder places for the benefit of all life” (Rewilding Europe, 2015a, p. 3).

Rewilding Europe emphasizes ‘learning by practice’ and that a working definition should be based on what it has learned from practices so far (N-3). What is clear here, is that rewilding is positioned as a practice that aims for *kick-starting restoration, followed by hands-off management* to allow natural processes to take the upper hand. These natural processes take place together with socio-economic

developments that need to include/exclude human presence in a modern future for wilder European landscapes.

2.4.2 RE: Land sparing and/or land sharing

Some rewilding practices have received criticism for their tendency “to erase human history and involvement with the land” (Jørgensen, 2014, p. 1). Rewilding Europe is, by definition, not principally against human involvement unless this becomes exploitive or damaging in pilots of rewilding (A-4/N-3). Overexploiting forms of agriculture, hunting and fishing ought to be replaced by forms of land-use such as ecotourism and small-scale local produce of high quality. As such, their approach seems to differ from the typical ‘edenic’ approaches that tend to point out historical baselines for rewilding before men spoiled ‘pristine’ forms of nature (Robbins & Moore, 2012). Instead, Rewilding Europe wants to “*achieve a state in which wild nature becomes a component of modern society in the 21st century*” (N-3).

Rewilding Europe furthermore promotes the use of conservation zonation. On a large scale, different zones with different land uses represent land sharing, whereas different functional zones can be identified in a close-up (N-3). Within demonstration sites of rewilding, some zones are, for example, used for natural grazing within the Tauros programme, and in other zones, fishing or hunting pressure is reduced,. These areas will eventually become scaled up whereas zonation is not rigidly implemented. Instead it is applied and adjusted according to local circumstances and events (N-4).

In sharing land together with a certain group of land users, such as wildlife hunters, traditional herders or tourists, Rewilding Europe does not uphold ‘authentic’ historical and nostalgic references. Instead, it proposes to move “forward, but [let] nature itself decide much more and man decide much less” (Rewilding Europe, 2013c). Rewilding Europe interestingly illustrates such an intermediate approach by its linear but dynamic representation of European spatial history in which various patches of landscape have unravelled and cattle domesticated through, for example, agricultural interventions. Historical human developments arguably have led to various ‘natural’ types of landscapes that now ought to become reconnected again (N-2). Such ‘rewinding’ envisions a future co-existence of humans with natural landscapes in a modern setting. Rewinding in this sense blurs traditional boundaries between nature and society to ‘make Europe a wilder place’ again. This future includes human history but re-positions human presence into a more passive role as observers in places where wilderness gains more grip, and relocates more active (i.e.

agricultural) human pressure in productive hinterlands (Merckx & Pereira, 2015).



Figure 3: Rewinding ecology and economy, by Jeroen Helmer, ARK Nature

Mercks and Pereira explain the predominance of EU subsidies which makes it hard to change Europe's countryside: "agricultural subsidies continue to be a key component of European Union policy. About 10% of the agro-forestry subsidies are targeted at supporting agri-environment schemes, and at supporting farming in Less Favoured Areas (LFA) such as mountain regions." (2015, p. 95). As such, many rewilding proponents argue that EU subsidies have led to 'perverse' incentives to maintain agricultural subsistence which oversee opportunities in supporting biodiversity or environmental services (Merckx & Pereira, 2015; Navarro, L. & H. Pereira, 2012). Such 'naming and shaming' of EU policy questions whether such Common Agricultural Policies (CAP) should persist or become invested in more innovative or technical development practices that now become obstructed in the name of sustainability (Tait, 2001).

2.4.3 RE: Conservation, Communication and Enterprise Development

Rewilding Europe proposes to rework Europe's abandoned countryside through the apprehension of three strategic pillars: conservation, communication and conservation enterprise development. These three pillars are represented by three of the initiating partners of RE: the ARK Foundation (conservation), Wild Wonders of Europe (communication), and Conservation Capital (conservation enterprise development).

To implement rewilding, Rewilding Europe has bundled its approach with expertise found in its major conservation partners: ARK Nature and WWF Netherlands. With more than 25 years of experience in pioneering nature developments in the Netherlands, these organizations provide valuable lessons from projects such as the Living Rivers, Growing with the Sea, Gelderse Poort, Kempen-Broek, Border Meuse and others. These projects have also experimented with the return of natural processes, the return of wildlife species, and connected to societal needs such as flood protection, gravel-, sand- and clay mining, drinking water production, recreation and others. For conservation to succeed in rewilding, lessons from the Dutch context are used elsewhere. Rewilding Europe has set up strategic partnerships with other organizations, such as The European Bison Conservation Centre, the Taurus Foundation and the Large Carnivore Initiative Europe. The concept of the 'herd fund' has been upscaled to the European

Box 2, How open were Europe's ancient landscapes?

Rewilding Europe claims that natural grazing by keystone species can result in more dynamic natural landscapes that were common in Europe before 6000-3000 BC (Van Wieren, 1995). A popular misconception contingent with rewilding thought is, according to Frans Vera, the idea that Europe used to be covered by closed forests alone. The discovery of large grazers like Auroch or Tarpan in Europe arguably supports the idea of a European mosaic landscape consisting of open meadows and primeval forests upon which many other processes in nature are thought to depend (Martin et al., 2008; Vera, 2000). However, this conception of semi-open wildscapes is being subjected to ongoing debate in restoration ecology.

This idea is contested in terms of the role of grazing on Europe's ancient landscapes, but also in terms of the number of large herbivores in ancient Europe (Kooijmans, 2012). The amount of fossils suggest that especially tarpan and auroch lived in low numbers in Western Europe since the last ice age (Hodder et al., 2005; Kooijmans, 2012). Pollen analyses suggests that forests did not open up until human settlement and animal domestication began to intensify. Before this time, most of the evidence largely pointed to closed forests with possible exceptions around riverbanks and other areas less favourable for forest growth (Hodder et al., 2005; Kooijmans, 2012; Mitchell, 2005). Proponents of a mosaic landscape theory hold on to the presence of oak and hazel in ancient forests. These species only germinate under light conditions, suggesting that there must be a level of openness in Europe's ancient woodlands (Kooijmans, 2012).

Regardless of whether landscapes should become more open, much, if not all, land in Europe experienced change throughout human history. European histories experienced change of knowledge production and related (agri)cultural practices. Once abundant, wildlife, such as the bear, lynx, wolf, wild horse or auroch, has been captured through human dominance for the sake of spectacle (e.g. in Roman gladiator arena's), control (e.g. domestication of cows to work for us, to feed us), or scientific/religious knowledge (Arts et al., 2012; Whatmore, 2002).

Whether European landscapes were more open or not in the past is, in any case, not a very productive question considering how human practices dominantly left their traces in contemporary Europe (N-1). Instead we should ponder whether Europe is willing and able to leave its land to more natural processes that can make its landscapes more open.

Box 3, Symbolism of the Auroch

"In the Greek myth about the founding of Europe, Zeus in the form of an aurochs bull seduces and kidnaps the beautiful princess Europa. Since then the aurochs and its descendants – our present day cattle breeds – have played an important role in the making of Europe. Zeus the bull and Europa can today be found on the Greek two Euro coin. The building of the Council of Europe in Brussels has chosen the same symbol: a statue of Europa and the bull." (Rewilding Europe, 2015f)

Wildlife Bank (EWB) to support natural grazing and wildlife comeback. To implement these rewilding actions, Rewilding Europe collaborates with numerous local stakeholders, such as authorities, land owners, hunting associations and protected area managers. Natural grazing is considered as one of the key natural processes that is missing in many areas, which when present, would facilitate many other processes such as predation and scavenging (thus restoring food chains). Considerable effort is put in setting up pilot areas for natural grazing, bringing back or allowing natural numbers of wild herbivore species (bison, red deer, ibex) or that closely resemble extinct grazers such as wild horses and bovines (which act as ecological replacements as their descendants). These herbivores arguably have the capacity to develop: "a completely different spectrum of plants [...] which in turn helps a variety of other wildlife species that thrive in open areas. By debarking trees they 'open up' closed forests, thus bringing a more diverse

succession of forest trees" (Rewilding Europe, 2015e). One crucial species for Rewilding Europe is the Aurochs, considered as "the ancestor of all cattle and thereby the most important animal in the history of mankind" (Rewilding Europe, 2015f). The importance placed upon the Aurochs as a species has been incorporated into the Tauros Programme. The Taurus foundation supports the back breeding and reintroduction of at least 150 Aurochs resembling ancient bovine characteristics and behaviour into rewilding areas over the coming twenty years.

This reversal of natural grazing contrasts with the way in which "vast parts of Europe are facing pasture and farmland abandonment at a scale never experienced before" (Rewilding Europe, 2015f). As is often stressed by Rewilding Europe, changing Europe's agriculturally dominated countryside will not happen only on local scales, but will also require a more general cultural shift in Europe, especially in the direction of growing urban areas to which young generations have migrated. An important collaboration in this respect is with Wild Wonders of Europe (WWE), an organization of nature photographers that has access to a large collection of pictures of nature showcased to wide European audiences. The iconic imagery of Europe's wilderness is, in WWE's perspective, missing in the minds of European citizens. Through active media campaigns, it claims to have reached 800 million people to teach them about "wildlife and wild places that most of us don't even know exist" (Rewilding Europe, 2015g). An extensive communication campaign has been initiated since early 2010 to show the natural qualities of Europe to a wide audience in outdoor exhibitions on a tour of European cities.

After the start of Rewilding Europe in 2010, Conservation Capital (CC) was taken on board to help develop the enterprise component of Rewilding Europe, focusing on building local nature-based economies as an alternative to low productive, heavily subsidized systems. These enterprises would generate income and jobs based on wild values, which would in turn create incentives for rewilding and more wild nature. CC has experience in the development of businesses from and for biodiversity to provide alternative financing mechanisms in developing biodiversity conservation. Its main experience was with conservation enterprise developments across Eastern or Southern Africa. CC has arranged conservation deals between private enterprises and local landowners, often in collaboration with third party conservation NGOs. CC foresees a similar potential in the development of wilderness for marketable conservation enterprises in Europe:

"Clearly there is a strong entrepreneurial culture in Europe, but we are not seeing that much evidence in the context of wilderness. There are operators out there who develop businesses based on nature, but there aren't big operators and bigger businesses... the sort of businesses

that we connect with in an African context, or connect those businesses in a conservation context to develop enterprise opportunities...from a tourism perspective there isn't that abundance of wildlife [in Europe], but that is the point of the whole Rewilding movement to rectify that, but that is a 10, 20, 30, 50 year project." (cf Kok & Timmers, 2013; emphasis added)

The three pillars - conservation, communication and rewilding enterprises - are strongly interlinked, and arguably determine the successes and failures of Rewilding pilot areas. In a 2014 evaluation, one of the highlighted challenges for Rewilding Europe was the "...chicken and egg relationship between rewilding and enterprise components" (Rewilding Europe, 2015a, pp. 14-15). In other words, the success of rewilding largely depends on local support; local support depends on its economic success; and economic success depends on the availability of marketable products, which depends on the availability, or abundance, of wild nature, wilderness and wildlife. Rewilding Europe claims that resolving this challenge will take considerable time in Europe (Rewilding Europe, 2015a), but also states that the unique selling product of such areas cannot only be based on wildlife. The combination of these elements in a rich historical setting makes Europe a unique destination and experience (N-3).

2.5 Other rewilding initiatives in Europe

Even though Rewilding Europe has pioneered the practice of rewilding in Europe, there are contingent developments that match or mismatch its efforts. Examples include the network affiliated to the Rewilding Europe Network which comprises smaller initiatives that recognize rewilding as a useful tool in existing biodiversity projects, similar practices in Rewilding Britain, and distinct regeneration of forests by Trees for Life.

The European Rewilding Network (ERN) is developed and coordinated by Rewilding Europe. Local rewilding initiatives across Europe can join as members to collaborate and to exchange knowledge on rewilding in Europe. The network was launched at the WILD10 conference in Salamanca in 2013. So far, it consists of 41 members in 18 different European countries (Rewilding Europe, 2015c). Besides actual management initiatives, agreements and enterprises can join this network. Even though members of the network support rewilding in their daily efforts to make Europe a wilder place, connected areas are not by definition equal to pilot areas of Rewilding Europe. Examples of ERN initiatives are wildlife (re-)introductions, agreements with water organizations, inclusion of more natural processes into practice by hunters and foresters, and the development of wildlife related enterprises (Rewilding Europe, 2013b).

The Wild Europe Initiative (WEI) was originally established in 2005, but was formally founded in 2009 at an EC Presidency conference in Prague. Their main goal is to promote "...a coordinated strategy for protection and restoration of wilderness and large wild areas of natural process and habitat, addressing the threats and opportunities facing them" (Wild Europe, 2015a). WEI has increasingly been embedded institutionally since its endorsement by the EU parliament. It produces policy recommendations and knowledge, which it hopes will be considered by the EU parliament when new policies and regulations are set up. However, WEI has a partnership structure and can use only collaboration and lobbying as the only means to influence formal policy-making at a European level (Wild Europe, 2015a). Supporters of WEI are Alterra Consultancy, Birdlife International, Conservation Capital, Council of Europe, ECNC/LHN, European Commission, European Nature Trust, European Wilderness Society, Europarc Federation, Institute of European Environmental Policy (IEEP), IUCN Regional Office for Europe and Global, Natuurmonumenten, Rewilding Europe, Royal Society of Wildlife Trusts, UNESCO, Wilderness Foundation UK, Wildland Research Institute, and the WWF. Rewilding is merely one component of WEI's philosophy. The concept of rewilding is loosely framed within the initiative, represented by its article on national strategies "'Re-wilding' – a wind of change gathers strength in Western Europe" (Wild Europe, 2015b). Although protecting and preserving 'wilderness' was its initial policy, WEI increasingly accepts rewilding as part of its philosophy (N-3). Here, both examples of species reintroduction, protected areas, socio-economic uplifting of idle landscapes, self-steering management and restoration are given focus.

Rewilding Britain (RB) is a recently established organization whose philosophy is very much similar with that of Rewilding Europe. Its mission is "the mass restoration of ecosystems in Britain, on land and at sea". In more detail, its aim is "to see at least one million hectares of Britain's land, and 30 per cent of [British] territorial waters, supporting natural ecological processes and key species" (Rewilding Britain, 2015). RB covers both terrestrial and aquatic ecosystems and although it focusses on recovering natural processes, another key component of its philosophy is halting biodiversity loss. Another interesting component of its vision is the emphasis on ecosystem services such as "clean air and water, carbon storage, flood control, and recreation" (Rewilding Britain, 2015). In this sense, rewilding does not merely emphasize nature's intrinsic value, but also the services it can provide for society at large. This raises questions on whether organizations like Rewilding Britain can make demands on governments, tourism companies or others to pay for these services.

By mass restoration of Britain's ecosystems, RB does not focus on any particular landscape type. Forests are, for example, not per se meant to be more open. RB is more about restoring natural processes and reintroducing extinct and diminished species. As Great Britain is an island, many species will not be able to repopulate without reintroductions. As a result, RB has a particular focus on carnivores and restoring top-down trophic interactions. Reintroducing different species of native and wild animals is one of its main goals, but it does not explicitly intend to introduce surrogate grazers such as cows and horses, although it does support projects that make use of cattle grazing such as the Knepp estate and Wild Ennerdale. It intends to reintroduce large herbivores such as the European bison and moose. In addition, RB aims to reintroduce (large) carnivores, birds and even fish. One of its projects, Trees for Life, is worth mentioning here as yet another rewilding practice in Europe.

Trees for Life is an organization based mainly on voluntary support. In 2008, it bought 10,000 acres of highlands near Loch Ness in order to restore forest regeneration. Volunteers are active in a tree nursery and have planted over one million trees so far (Trees for Life, 2015a). Trees for Life's main focus is on rewilding through replanting and regenerating vegetation. Their mission is "to restore the Caledonian Forest and all its constituent species of flora and fauna to the Scottish Highlands" (Trees for Life, 2015b). Historically, the Scottish highlands were to have been covered by forests. Deforestation practices and subsequent intensive grazing by sheep and red deer have led to vast areas of barren plains. These highlands would be restored by replanting indigenous trees and shrubs, and by reintroducing carnivores and other animals. In this light, rewilding is different from re-opening closed forests through grazing. Trees for Life aims to reduce the impact of grazing in order to reclose forests again.

All in all, we can conclude, that several other rewilding initiatives are developing throughout Europe, particularly in the UK, yet each has its own interpretation and practice of the term 'rewilding'. The majority of rewilding initiatives are from Rewilding Europe and these emphasize the development of wilder reserves through experiments in wildlife reintroductions and an alternative nature-based economy in places facing land abandonment. Rewilding Britain seems to uphold a similar approach, yet its emphasis in projects like Trees for Life differs from the more popular vision of more open European landscapes in the continental approach taken by Rewilding Europe.

3 Rewilding Europe as a new agent of change

Having discussed various discourses and practices of rewilding, we now narrow our scope towards Rewilding Europe to further understand its prominent approach to rewilding in Europe. We specifically aim to take pragmatic lessons from Rewilding Europe as a new 'agent of change in global environmental governance' (Kok et al., forthcoming).

To begin with, Rewilding Europe can be observed as a platform aiming for more wildness in Europe that requires collaborations with a wide variety of organizations and funding partners. Rewilding Europe has many rewilding, enterprise, communication and funding partners, such as: the Postcode Lotteries in the Netherlands and Sweden, the European Commission, local rewilding partners, conservation investors, multidisciplinary scientists, wildlife breeders, tourism companies, national and local governments (Figure 4). An important aspect of such partnerships is accountability and disclosure. Besides accountability in terms of funding mechanisms, we discuss here how Rewilding Europe organizes local partnerships, relationships with the wider public, and current discussions about tools to monitor and move towards 'a wilder Europe'.

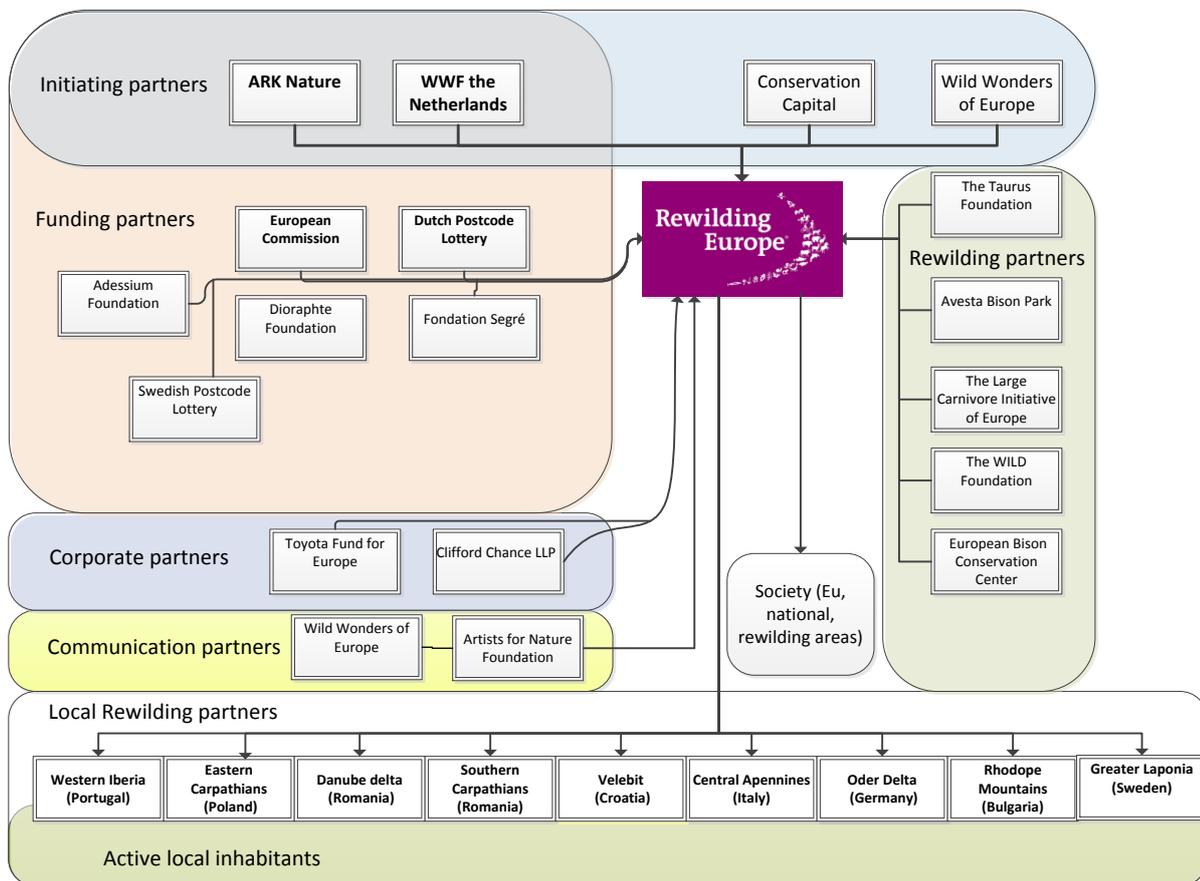


Figure 4: Map of partnerships of Rewilding Europe by function

3.1 Central partners

Rewilding Europe has different partnerships at a central level, namely: initiating partners, funding partners, rewilding partners, scientific partners, and corporate partners. Rewilding Europe has recently also established connections with communication partners. The first of these are Wild Wonders of Europe, followed by the Artists for Nature Foundation. The initiating partners are: ARK nature, WWF the Netherlands, Conservation Capital and Wild Wonders of Europe. The term 'initiating partners' is preferred to 'founding fathers' as these organizations did not develop the foundation. Rewilding Europe was founded by staff members affiliated to these organisations (N-1/-3).

Funding has been adopted as the starting point for accountability throughout the organization (Figure 5). Like any other professional organization, Rewilding Europe is required to disclose 'good governance' practices and achievements to a wider public, its donors, or its (local) partners. Disclosure is recognized as a central function of Rewilding Europe to: "...provide leadership, governance, accountability, transparency, corporate fundraising and communication..." (Rewilding Europe, 2013a, p. 51). To support this function, Rewilding Europe "... ha[s] set up a financial

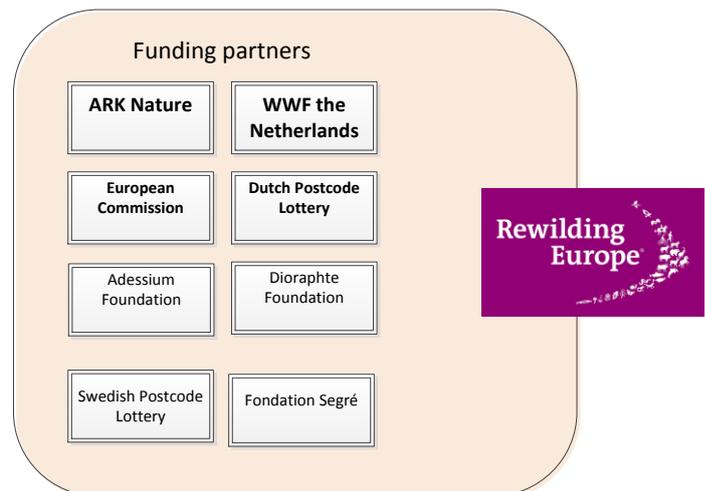


Figure 5: Funding partners of Rewilding Europe

management system and administration that meets the needs of a professional not-for-profit organization in terms of transparency and accountability" (idem; p. 21). Local partners get financial support from Rewilding Europe for which they have to report their progress on a regular basis. ARK nature and WWF Netherlands were initially funding partners. However, ARK does not provide financial means, but supports Rewilding Europe through skill and labour (N-3). Other major funding partners are the European Commission and the Dutch Postcode Lottery. The amount of reporting and the type of information required differ among the funding partners. The European Commission, for instance, requests detailed monitoring reports and management schemes in exchange for LIFE and Natura2000 subsidies (Salomone et al., 2014). The Dutch Postcode Lottery, on the other hand, considers merit in good governance, societal acceptance and impact, and the presence of other funders to ensure/prove economic viability and societal support (N-8). Likewise, funding partners such as the Dutch Postcode Lottery have to account to their own devotees on what projects their money is spent.

The type of funding determines the way in which accountability is requested. To start with, the Dutch Postcode Lottery provided funds for Rewilding Europe for a project with ARK Nature to set up the first five rewilding areas. Although these goals and objectives are discussed among the partners, the Dutch Postcode Lottery relies on Rewilding Europe's expertise where contents are concerned. It either accepts or rejects a proposal (N-8) without negotiation. 'Pleased' by the achievements of Rewilding Europe, the Dutch Postcode Lottery granted it structural funding for five years in 2012. However, in terms of accountability, structural funding from the Dutch Postcode Lottery works differently. The structural funding is un-earmarked and entrusted to Rewilding Europe to be allocated as it deems fit in a professional matter to achieve its overall objectives. Each year, Rewilding Europe provides the lottery with a progress report, fills out a questionnaire from the lottery, and submits an annual report.

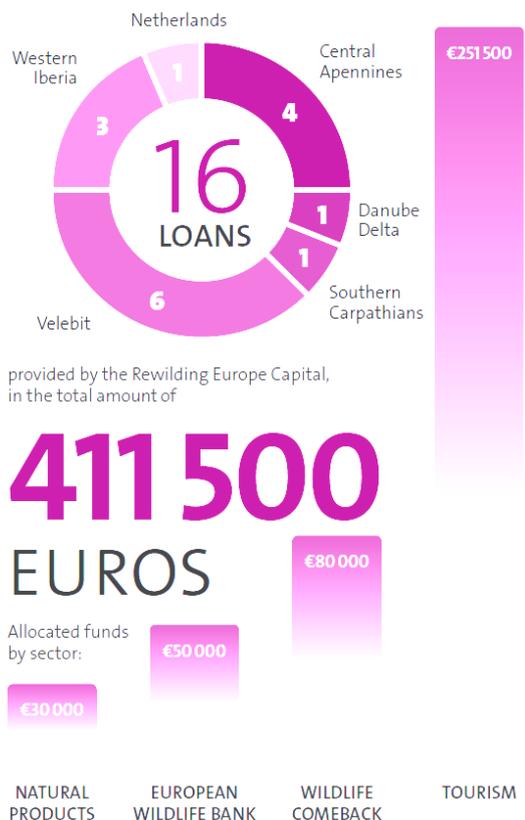


Figure 6: Enterprise support (Rewilding Europe, 2015a)

Donor income is currently used to support the initial establishment of the network, management costs, and starting funds for pilot projects. Only the future can tell how this current donor dependency, including the role of accountability, will change once conservation enterprises become beneficial to the ongoing operation of rewilding. At the moment, several enterprises are being supported or have started with the support of Rewilding Europe Capital, especially in the direction of wildlife and nature tourism (Figure 6). These enterprises have signed a conservation covenant to offset a percentage of their earnings towards supporting operations of the local rewilding partners. Rewilding Europe does not expect to become fully independent from donor funding in the future (N-6/A-4). Although conservation levies can be further developed, it is important for Rewilding Europe to reinvest in the same areas where levies come from. Local conservation, and in turn local enterprises, would benefit from the same levies. A strong market can lead to 'newcomers' competing with local businesses. New businesses, however, cannot be forced to pay levies or aid the development of the region in other ways, and this poses a future challenge in developing conservation enterprises. Rewilding Europe therefore continuously seeks to develop more mechanisms to link tourism-generated income with conservation. For example, it is looking at certification schemes as a benchmarking tool

to enable customers to know which businesses contribute to the development of the area (N-6).

There is an ongoing search for new sources of funding. Currently, Rewilding Europe Capital is working to become a scoping project of the Natural Capital Financing Facility (NCFF). The NCFF is a large fund (€100 - €125 million) financed in part by the European Investment Bank (EIB) for a wide range of topics related to sustainability and biodiversity loss. NCFF is willing to invest between €5 and €15 million in projects with the potential to remain effective and financially healthy after investment terms end (N-6). Whether such funding indeed becomes available in the future remains to be seen. What nonetheless becomes clear, is the recurrent need to look for funding to finance the operational costs of the foundation and local rewilding actions. Local rewilding partners like ATN in Western Iberia often have to put up with the fluctuating availability of funding from funders like Rewilding Europe, that still come with delineated project frames and deadlines. Such insecurity of funding, like those coming from other funding agencies such as Life projects under the EC, can only cater to short term and confined action instead of clearly defined project goals.

3.2 Local partnerships

Rewilding Europe does not implement its rewilding philosophy on location itself but works through local partnerships (Figure 7). This is noticeable in Rewilding Europe's ten-year objective to support 'Wilder Nature' in which it specifically mentions securing user rights and property rights through partnership agreements (Rewilding Europe, 2015b). Local rewilding partners are central in the development of complementary conservation activities. A rewilding philosophy can be implemented within existing parts of conservation areas already secured, like national parks, but has been formulated to reach beyond fenced and protected areas where predominant (agri-) cultural practices have left historical traces in rural areas.

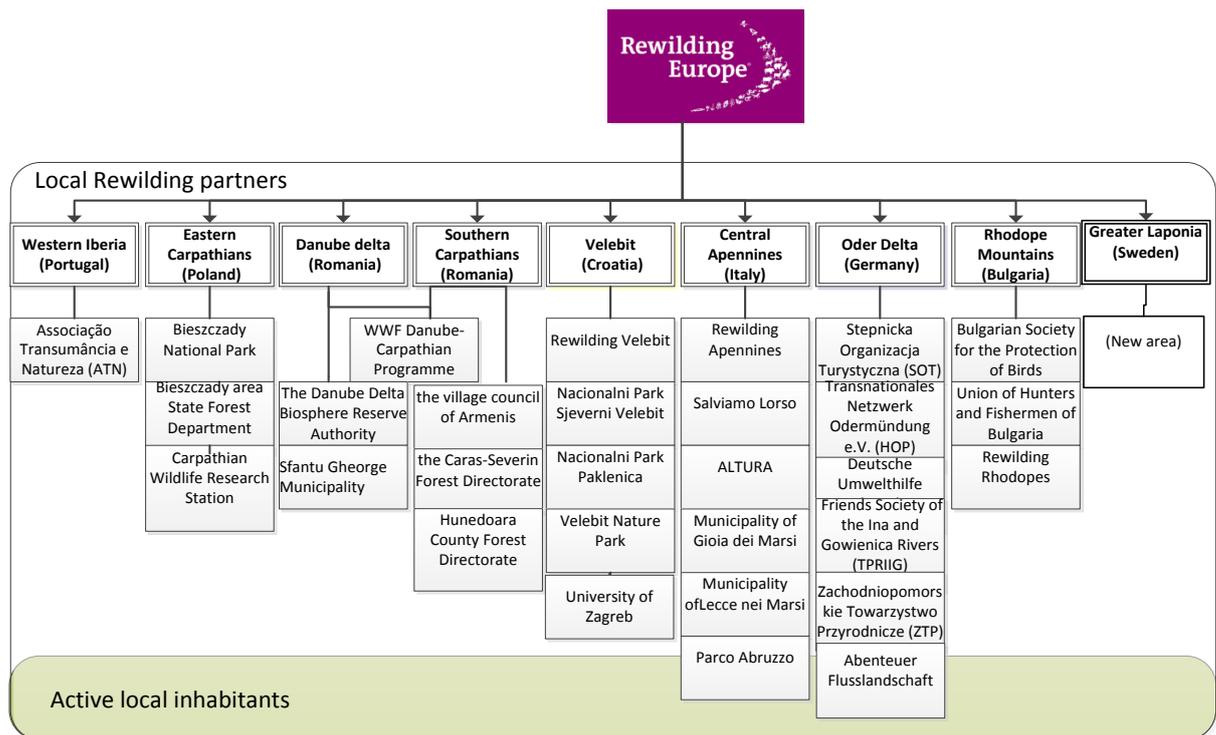


Figure 7: Local partnerships of Rewilding Europe

Rewilding Europe provides local rewilding partners with various forms of support: technical, communication, financial, legal, local fundraising. Based on 10-year visions, 5-year strategic plans are developed for each area, in close cooperation with local rewilding teams, and reflecting the five main objectives in each area. Based on the availability of funds, parts of the 5-year plans are implemented, which means that funding from Rewilding Europe is mostly restricted. The nature of the funding to Rewilding Europe (unrestricted or restricted) depends on the donor. Some provide unrestricted funding, some prefer restricted funding to a certain component (e.g. wildlife recovery) or a certain rewilding area (N-3). Local teams are accountable for the funds received from the central team, but local teams have a level of freedom how to spend these funds as long as new actions are discussed. The central team regards itself as 'the facilitator' but not 'the boss' for local teams: *"in fact I work for those guys, I try to support them so that their work is easier"* (N-4). Rewilding Europe holds on to the key elements of its rewilding philosophy. It orchestrates its vision towards the local teams, but the local teams *"reshape it into something that is feasible... they really take the lead in making it possible"* (N-4). In selecting a local pilot area, Rewilding Europe adopts three collaboration principles: "(1) Every area should host complete and naturally functioning ecosystems specific to the region with a full spectrum of native wildlife typical for the region present; (2) The areas should be embedded within the social, historical and cultural fabric of their respective region; and (3) The new land use should be based on what nature can offer and be economically viable and competitive with other alternatives." (Helmer et al., 2015).

Once selected as partners, as previously mentioned, local partners receive frequent support from central rewilding staff members. In order to streamline these partnerships, as well as identify potential rewilding projects, Rewilding Europe is currently developing a so-called 'wildness scale'. This scale, which may range from 0-10, will indicate how 'wild' a particular place is or has changed over time. This does not mean that Rewilding Europe will prescribe a fixed reference to wildness or wilderness. On the contrary, the scale will be a tool to monitor whether experimentation with rewilding will lead to certain effects.

"Imagine a parking lot within the city. Even here there are possibilities that occasionally a fox or peregrine appears. On the other side, imagine pure wilderness that we do not have any longer [...] in the world. [...] Even in your backyard, if it is developed well with flowers, insects, birds, etcetera, then you have a good diversity of species from which you score a 3 or 4 [in comparison to] a yard that consists of only bricks that might lead to a score of 1 or 2." (N-3)

Even though this scale is merely illustrated here as a possible monitoring tool, it can be crucial in accounting for transformations in targeted rewilding landscapes and be used to give inspiration for other conservation projects in Europe.

3.3 Western Iberia (WI): a promising pilot

To further understand local accountability and wider pragmatic governance of rewilding, we first introduce one of Rewilding Europe's most visible and early pilot areas: Western Iberia. Western Iberia is originally situated between western Spain and north-eastern Portugal (Figure 8). This region was originally designed as a large transboundary rewilding experiment under the leadership of Fundación Naturaleza y Hombre (FNYH), a Spanish conservation NGO, and Associação Transumância e Natureza (ATN), a Portuguese counterpart, to reconnect both Montado and Dehesa landscapes in accordance with a new rewilding philosophy and regional cultural practices.

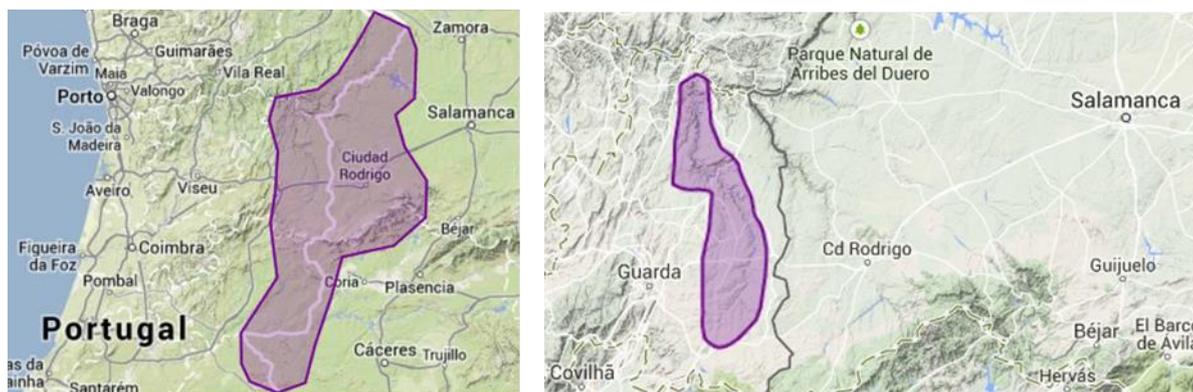


Figure 8: (left) Western Iberia in 2011, (right) Western Iberia since mid-2014

There is a vision and a five-year plan that spell out all rewilding, enterprise and communication activities to develop this area as a demonstration area for rewilding in Europe. Large herbivores, such as Maronesa /Sayaguesa cows or Garrano horses are introduced, in line with the ambition to restore natural conditions fit enough to bring back the Ibex, and even the Iberian Lynx that once lived in this region. To a great extent, species reintroductions take their cues from local rock engravings found along the Coa valley in the North-west of Portugal. These rock depictions illustrate the former presence of wild cattle, horses, ibex, and other animals and were engraved from the upper Palaeolithic up to modern time (Côa Park Foundation, 2015).

Much of the initial proposal by FNYH to rewild approximately 1 million hectares was deemed 'too ambitious' for Rewilding Europe. The project became rescaled to become a project of 100,000 hectares, a rough standard horizontal scale that has been implemented across all other pilot areas in Europe. Throughout the entire period of 2011-2014, the tripartite partnership of Rewilding Europe, FNYH and ATN continued until FNYH and Rewilding Europe decided to put a hold on the partnership due to contradicting expectations and practices: While FNYH wanted to use rewilding income into FNYH specific goals and exclusive conservation strategies, Rewilding Europe preferred to collaborate with partners to attain a central European concept, i.e. planned conservation in line with long term rewilding goals. Consequently, the partnership in Western Iberia became a project in Portugal only, excluding further collaborations with FNYH.

The renewed partnership between ATN and Rewilding Europe expands longstanding conservation efforts in and around the Faia Brava reserve managed by ATN since 2000. The new Rewilding pilot stretches from Faia Brava, along the COA river to Malcata, southeast of Guarda (Figure 8), and is about 100,000-120,000 hectares. ATN is currently making efforts to scale up its rewilding activities beyond Faia Brava. ATN's main objective is to expand its rewilding activities throughout the whole Coa Valley by establishing and connecting new pilot areas in the coming five years (ATN-4/-7). These activities need to take shape within a rural landscape characterized by ongoing land abandonment and idle land management (Box 4).

Box 4 - Dealing with idle landscapes in the 'new' Western Iberia

It is expected that the targeted region of Western Iberia will experience further land abandonment (Figure 10), population ageing (Figure 11), and land becoming idle from an agricultural point of view (Figure 9).

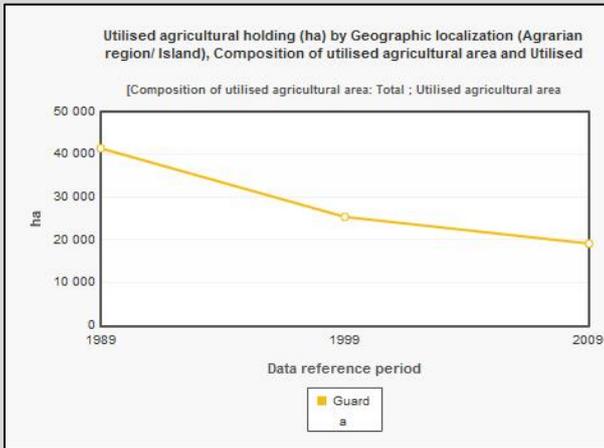


Figure 9: number of agricultural holdings (ha) for the region Guarda (Instituto Nacional de Estatística, 2015)

persons (Disselhoff, 2015). This has proven challenging for the pilot of Western Iberia in comparison with other areas, e.g. Velebit (Croatia) where large parts of state land can receive new status through new agreements between rewilding teams and local/national governments.

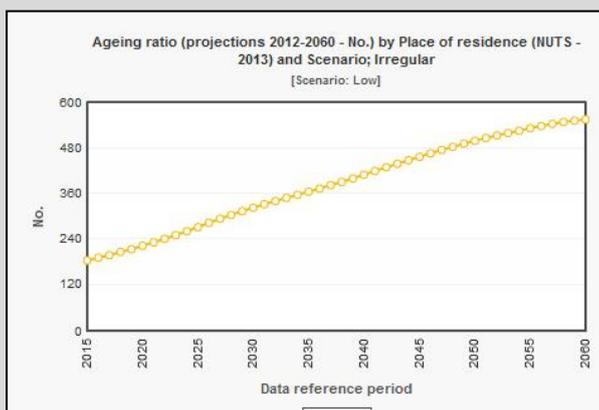


Figure 11: ageing rate projection (scenario low) for the region Centro in the period 2012-2060 (Instituto Nacional de Estatística, 2015)

a territory as a PPA" (Disselhoff, 2015; p.25). This allows the Portuguese government to re-appropriate idle land if a owner does not respond within the given time frame of 90 days (<http://www.legislacao.org>).

Much of the new rewilding plan initiated since late 2014 entails new collaborations with land owners to introduce rewilding connections between natural reserves. This will require challenging collaboration with multiple land owners, especially if one considers that a multitude of (often even unknown) landowners have left a mosaic to operate on. To give an example, the average property size in rural Portugal is less than one hectare, and often collectively owned by multiple

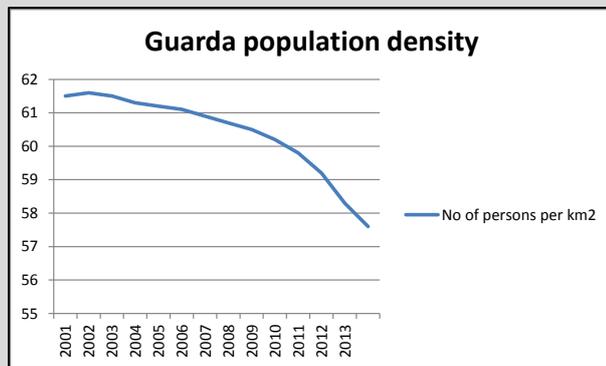


Figure 10: Population density for the region Guarda (Instituto Nacional de Estatística, 2015)

The Portuguese government has identified this obstacle, and initiated a new law since 2009 (Art. 21 of the Decree No. 142/2008 on National Protected Conservation Areas in accordance with the Ordinance No. 1181/2009 on Private Protected Area Management). This law "...establishes the legal basis for private landowners to propose and manage their land as a protected area. According to this legislation, landowners or the owners of land use rights (provided they have the agreement of the owner) or NGOs (provided they established an agreement with the owner) can propose a

3.3.1 *WI: Accountability on a local level*

In Western Iberia, ATN is accountable for the management of the project currently. ATN has to report its progress to Rewilding Europe, the EU in terms of Natura 2000 and LIFE projects, MAVA and the Portuguese government. Rewilding Europe represents one of a few conservation projects that ATN is implementing in the region around the Coa valley. The ways in which ATN reports its progress differ greatly among funding agencies or local authorities. Both EU partners and MAVA demand detailed reports. Rewilding Europe demands frequent progress updates consisting of two reports a year, large actions and finances twice a year, reporting once a month and a weekly (skype) conversation to report on short term actions. Although the type and frequency of reporting differs among funding partners, ATN has considerable freedom to apportion funds from Rewilding Europe and MAVA. On the other hand, EU subsidies have to be used strictly according the management goals of both LIFE and Natura 2000 (A-4). The Portuguese government demands a great deal of reporting from ATN. The Portuguese Environment Agency (APA), a sub-organization of the Institute for the Conservation of Nature and Forest (ICNF), demands ATN to give details about all projects, finances, documentation, member information and more. ATN states that "...we have to be an open book to them", while ATN does not receive enough support in return (A-4). ATN prefers to gain access to APA's knowledge centre that can aid and guide upcoming rewilding activities in the Coa valley. Instead of being strictly accountable, ATN opts for a more collaborative relationship with the Portuguese government in which ICNF and APA can act as consultants to bottom-up rewilding initiatives taken up by ATN (A-4).

The Portuguese government is not closely involved with rewilding practices currently undertaken by ATN. Neither is there any clear accountability or participation with inhabitants living in the targeted rewilding pilot of Western Iberia. The concept of rewilding is deemed too sensitive to be openly discussed with local inhabitants as it might lead to overly negative connotations such as landscape littering, unproductive land use, or attraction of predators. At the same time, rewilding processes are still fairly new to these areas while the expected reversal to natural processes would require many years for a new nature-based economy to become functional. The rationale of rewilding partners is hence to develop concrete proof of the potential of rewilding as a land use strategy. Until proof has been established, third party involvement is excluded from current planning and design of rewilding sites.

3.3.2 *WI: Contested visions*

In establishing rewilding landscapes, Rewilding Europe makes use of visionary art to orchestrate practices on the ground. Each pilot area is represented through such artworks to explain how future rewilding landscapes could look like. Various conceptual sketches are discussed with local rewilding partners prior to a final vision. These final visions steer towards future landscape orientations, including desirable species, tourism businesses development, vegetation and more.

The artistic vision of Western Iberia tells an interesting story about the implementation of rewilding on the ground. The vision itself has gone through four sketches prior to the final version composed in colour. The vision is made on the basis of conceptual notes made during early field visits by central Rewilding staff. These notes are further translated by means of data available in Google Earth, a wide collection of wild flora and fauna sketches made throughout Europe, and subsequent discussion by staff from both the central and the local Rewilding teams.

Figure 10 highlights the central appearance of the Iberian Lynx and various protected bird species, as well as a crucial role for large herds of herbivores and a large tented camp for wildlife tourists. Wildlife tourism and the re-introduction of species like herbivores are vital for rewilding interventions to work in Western Iberia. Nevertheless, these novel ideas, in part replicated as an Africanesque Serengeti landscape in Europe (N-1/N-2, cf Pellis et al., 2013), lead to controversies since such nature-based tourism and wildlife reintroductions are both novel for a region that traditionally depended on extractive land use of hunting, extensive cattle production, agriculture, or pastoralism.

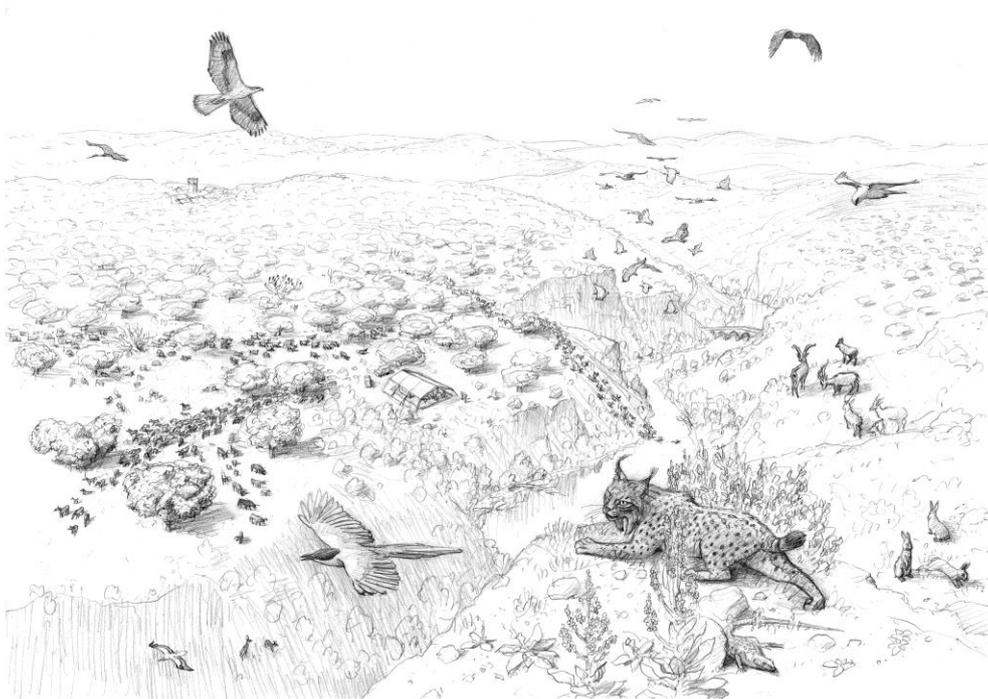


Figure 12: Sketch of Western Iberia, by Jeroen Helmer, Ark Nature

Partly because of land abandonment and subsequent idle land management, the region is plagued by recurrent wild fires, especially in drought seasons (A-1/A-2/A-3). Such abandoning of land risks the growth of fire sensitive shrubs in the former agricultural landscapes of Western. By allowing natural processes to return through e.g. natural grazing of large herbivores, patches of land can be expected to open up as these herbivores can function as 'natural fire brigades' (N-1). However, allowing land to become wilder again - whether through rewilding or complete passive management - is considered to be a form of 'littering' by local land owners used to traditional land management (A-1/A-2/A-3; cf Leuvenink, 2013; Walet, 2014). Furthermore, as rewilding experiments are going on, local landowners are experiencing a return of predators like the wolf. The wolf has recently entered the Coa valley and poses a challenge to local land owners who have not seen its presence in the last 60 years. Even though this return may be a compliment to rewilding experiments in the region, land owners reacted initially in a defensive way by fencing or poisoning an animal that is considered a threat instead of an opportunity. This illustrates how rewilding, as a concept, can lead to negative reactions by the public, and it is expected that it will take time before rewilding becomes accepted in targeted rural areas.

3.3.3 WI: Contested enterprise development

The new enterprises proposed by Rewilding Europe seem just as controversial, or are relatively unknown to the public in rewilding areas:

"Awareness about the economic potential provided by wild nature and wildlife is still relatively low. Only 26% of people strongly agreed with the statement that this could attract new investments, businesses, jobs and income to their region, while 21% did not have any opinion about it." (Rewilding Europe, 2015d)

The size of the central tent, see again figure 10, likewise illustrates how developments within a protected area are controversial. Not only have hospitality/tourism developments always taken place outside natural reserves and within local villages, setting up large scale businesses in a protected area challenges traditional conservation values (A-7). This, and other discussions over the future of Western Iberia, led to a final vision for Western Iberia that includes a set of smaller tents since it is:

"after all about nature and people using it. [...] You would also have to show that people can benefit from it. The ratio of men is in a corner, like a detail, [where you can] see them walk or climb a mountain, or canoe, etcetera" (N-2)



Figure 13: Final artistic vision of Western Iberia, by Jeroen Helmer, Ark Nature

The actual initiation of tourism enterprises within a natural landscape in Western Iberia materialized in May 2015 when a local hospitality entrepreneur established a tented camp in Faia Brava. This camp, named Starcamp, is inspired by the Koiya Starbed lodge in Laikipia, Kenya, and built with support of Rewilding Europe Capital and enterprise developers experienced in African conservation enterprises. The camp has proven to be a risky initiative characteristic of the experimental nature of rewilding. The fact that the camp was built within a Special Protected Area (SPA) could possibly lead to objections from the ICNF, the Portuguese nature conservation authority. To counteract potential objections or unpredictable events that are part of venturing into a rather unknown environment, the Starcamp's owner decided to build a semi-permanent structure that could instantly be remodelled or taken apart. The ICNF informally permits the construction of such an enterprise to see if such experiments would turn out to be productive in the future (A-4/A-7/E-1). It remains to be seen whether this, and other future enterprises, prove profitable enough, even though a well-developed ecotourism market in Europe is still absent.

3.3.4 WI: Contested re-introductions

In Western Iberia, Maronesa and Sayaguesa cattle and Garrano horses have been introduced in Faia Brava since the start of the collaboration with Rewilding Europe. In May 2015, more Garrano horses were released during ATN's 15 anniversary after complying to a condition of Rewilding Europe that the reserve would be enlarged through a relocation of its Northern fence. This relocation led to controversy since a wider range of privately owned plots are now included inside the enlarged territory of the Faia Brava reserve. Some local land owners disagreed with this sudden move and demanded compensation. ATN had to respond immediately and a funding campaign named 'Closing the Gaps' was started to appropriate land in collaboration with the Foundation Natura Iberica. Those not willing to sell their land demanded that the fence be partly relocated.

On a different note, the founder of ATN received a set of horses from a traditional Portuguese breed, named Sorraia's. Where Garrano horses are considered the appropriate breed by Rewilding Europe due to 'their DNA history tracing back thousands of years, the [Sorraia] horses are only about 3000 years old' (A-1). Rewilding Europe asserts that Sorraia and Garrano horses differ in many ways, arguably making Garrano horses more fit for rewilding objectives and the local circumstances present in the Faia Brava reserve. Linnartz & Meissner (2014) argue that Garrano horses prefer a cool temperate wet climate, mountainous areas with fertile slopes, are already tested in nature reserves, have predation experience, a rather unchanged phenotype since 200 AD (probably older), present an original colour type, have an overall fitness for purpose score of good and are readily available. On the other hand, Sorraia horses prefer a maritime temperate climate and fertile riverbanks in lowlands, are kept in private herds (semi-feral in Vale de Zebro), have no predation experience, are presumed to be ancient (rediscovered in feral state in 1920, mtDNA shows mixed origin and unrelated to ancient Iberian horses), do not present fully original colours, the overall fitness for purpose score is reasonable and they are rare (Linnartz & Meissner, 2014). Garrano horses are supported by Rewilding Europe in the newly established pilot areas designated for rewilding. A combination of Garrano and Sorraia horses in these areas, as argued by Rewilding Europe, could prove problematic. As a consequence, ATN recently developed a new fenced reserve of about 80 ha along the Coa riverside (near Freineda, Almeida), called Middle Coa, where five Sorraia horses are currently stationed, in an attempt to explore how they function in a region similar to Faia Brava.

3.3.5 *WI: Local communication and collaboration*

The previous discussions over a contested vision or reintroduction of herbivores are limited to recurrent debates in the partnership of Western Iberia between Rewilding Europe and ATN. What is missing, however, is a productive debate with inhabitants, local entrepreneurs, or local governments on the purposes of rewilding in transforming targeted rewilding landscapes (cf Leuvenink, 2013; Walet, 2014). ATN recognizes that communication with people in surrounding villages is critical for successful expansion of the rewilding pilot along the Coa valley, yet there are limited financial means to staff the first debates over rewilding with people on the ground. Recurrently a few pragmatic obstacles become apparent here: A) people are used to extractive land use such as agriculture, pastoralism or hunting, whereas developing nature is perceived as a form of littering the environment, B) the landscape of Western Iberia is so highly fractured into a mosaic of land ownership that it is difficult at times to approach land owners, C) there is a lack of a wider perspective, or a realization of mutual gain, which blocks connections among different private parcels or municipalities. The latter is a crucial challenge in reconnecting land use into a form of common land existing before the republican revolution in Portugal around 1910 (A-4). Common land sold to large land owners after this revolution was divided into smaller parcels over time. Another explanation often given in the context of rural Portugal is the relatively recent experience with dictatorship through which an older generation, in particular, practices a 'live and let live' mentality (A-1/A-6). This implies that one does not tend to interfere with one another and just keeps to his/her own affairs. Translating this to the process of rewilding, we do not expect there to be a great deal of concern over what happens with 'the neighbours' (e.g. rewilding pilot areas) as long as there is no trespassing onto their own land.

3.4 **Variability among pilot areas**

Western Iberia is just one of 10 demonstration areas of Rewilding Europe. There is great variability among pilot areas in terms of governance, physical geography, ecology and land use planning. Landownership and land-use rights differ between WI and other pilot areas such as Velebit (Croatia) and the Southern Carpathians (Romania). Broadly speaking, landownership is predominantly in private hands in Western Europe, whereas most land is state-owned in Eastern Europe (N-4). In both Velebit and the Southern Carpathians, land is owned by the national government. For Velebit, this means that an area of 70,000 ha was allocated for rewilding purposes relatively quickly. Although the initial process of land allocation is less of a black box for state-owned areas, the progress of rewilding depends on the distribution of land-use rights. In the Southern Carpathians, land-use rights such as hunting rights and

grazing rights are in the hands of local people and organizations, hence the need for implementing a more decentralized approach, possibly through Community Based Natural Resource Management (CBNRM). In the case of Velebit, Rewilding Europe dealt with policy issues concerned with grazing rights as foreigners are not allowed to own grazing within Croatia. In order to implement the Tauros programme in Velebit, Rewilding Europe made agreements with local families who in turn can co-benefit from subsidies. (N-4).

Accountability differs among pilot regions. Where ATN is responsible for the management of the areas in Western Iberia, management in the Southern Carpathians is done by a cooperation between WWF Romania and a team of Rewilding Europe. In the Oder Delta, Rewilding Europe works mostly with various local NGOs. In the Danube Delta, distant communities have known a long history of conservation initiatives that have been organized top-down. To overcome local resistance to new conservation initiatives (see for example Van Assche et al., 2012), local rewilding partners are designing possible ways to decentralize conservation decision making, such as internationally renowned CBNRM models practiced in Namibia (cf NACSO, 2013). Local rewilding team leaders paid a visit to such a people-oriented land management model during a field trip to Namibia in 2014.

Upscaling is very much influenced not just by the local situation in terms of land-ownership and land-use rights, but also on local ecological and geographical conditions. In Velebit, Rewilding Europe wants to rewild an area of 200,000 ha, an ecosystem ranging from the plains to the sea. The lagune area in the Oder Delta alone spans 100.000 ha. Together with the land surrounding the lagune, the total rewilding area adds up to around 300,000 ha. In greater Lapland, its relatively small population leads to an envisioned 1,000,000 ha with potential for rewilding. These examples show that both the social and the physical geography of an area play a big role in upscaling rewilding processes. Infrastructure and cultivation are taken into consideration when determining the shape of the area. Rewilding Europe starts by looking for allies, local people who are willing to embrace the rewilding concept. Cultural differences have a great influence as traditional land uses and habits vary among European regions. For instance, in contrast to Germany, people in Western Iberia are used to the sight of free roaming cattle and horses, which makes it easier for local people to accept extensive grazing as a management tool. Rewilding Europe applies a flexible approach when designating new demonstration areas for rewilding. In areas where the natural state and scenic beauty is already on a high level, Rewilding Europe might start with enterprise development. In other cases, work on the return of natural processes is prioritised as a pre-condition for future enterprise development.

4 Discussion

In this report, we described Rewilding Europe as an experimental and entrepreneurial initiative to 'make Europe wilder again'. Rewilding is a potential transformative and complementary approach to extend existing European nature conservation initiatives such as the Natura2000 network. In this section, we will reflect on the role of Rewilding Europe as a new agent of change in biodiversity governance.

The practice of Rewilding Europe is related in many ways to scientific discourses on rewilding. In terms of stereotypes, rewilding has been compared with contested American beliefs launched by The Wildlands Project since 1992. European versions of rewilding possibly resemble US perspectives 'to think big' and work towards healthier and more dynamic landscapes in comparison to relatively static preservation models dominating European conservation policy (cf Jepson, 2015). However, European discourses on rewilding prove less rigid in their 'development of nature' through attempts to re-scale time (referring to past and/or future states of wilder landscapes), to re-scale restoration approaches (active hands-off versus passive restoration), and by taking lessons learned from pragmatic nature development in e.g. the Netherlands.

In the myriad of debates and practices, Rewilding Europe distances itself from recurrent debates over rewilding and natural grazing affiliations which claim to be synonymous to rewilding. Instead, Rewilding Europe represents a wider campaign to invest in the development of natural processes in pilot areas, with attention to future orientations, dynamic natural processes, nature entrepreneurship and opportunistic approaches to rural problems. Land abandonment or decline of biodiversity are key issues translated into opportunities when natural processes are given space to restore landscapes historically changed by human activity. Both issues and their solutions have their own path dependencies, i.e. what might be considered a 'rewilding practice' today might evolve into another approach or label in the future.

Currently, Rewilding Europe has initiated nine pilot projects in Europe, and an additional project is going to be operational soon. These pilot projects illustrate the kind of transformations possible in Europe today; e.g. use of natural grazing that is more cost beneficial than ongoing mowing subsidies, the implementation of the first rewilding enterprises for a new wildlife tourism market and a market rationale as a financial model embracing natural capital. Rewilding Europe is a highly prominent initiative on the European mainland. Another key organization in Europe is Rewilding Britain, which seems to uphold similar ideals in transforming Britain's landscapes into wilder future versions of a natural past, but with a the emphasis on the production of 'open landscapes', which is also present in the visions of Rewilding Europe.

To reflect on governance challenges faced, as well as potential challenges in the future, below we discuss Rewilding Europe based on five governance aspects introduced in section 1.1: partnerships and collaborations; accountability and transparency; clumsiness and experimentation; upscaling and directionality. Based on this discussion, we present a range of recommendations that include reflections on the role of governments in dealing with rewilding in Europe.

The majority of rewilding initiatives originate from Rewilding Europe and emphasize the development of wilder reserves through experiments in wildlife reintroductions and an alternative nature-based economy in places facing land abandonment. Rewilding Britain seems to uphold a similar approach, yet its emphasis in projects like Trees for Life differs from the vision of more open European landscapes currently favoured under the continental approach by Rewilding Europe.

4.1 A strong European vision as guidance

In order to make Europe wilder again, Rewilding Europe has given ample attention to the development and protection of the term 'rewilding' as it sees fit for areas facing land abandonment and related ecological decline. To prevent confusion and dispersed interpretation of this term, Rewilding Europe has recently introduced its own working definition:

"Rewilding ensures natural processes and wild species to play a much more prominent role in the land- and seascapes, meaning that after initial support, nature is allowed to take more care of itself. Rewilding helps landscapes become wilder, whilst also providing opportunities for modern society to reconnect with such wilder places for the benefit of all life" (Rewilding Europe, 2015a, p. 3).

This working definition, as general as it is formulated, provides a broad message about the self-steering ability of nature - even though nature requires help to become natural again - that can contribute to future nature-based economies. The concept of rewilding is not new and has developed into a wide range of debates in the sciences and practices of rewilding since 1991. Recent debates are directed at the growing importance and practice of a rewilding movement in continental Europe. Rewilding Europe receives intensifying attention that applauds, prescribes or criticizes its bold and large-scale approach to transform Europe into a wilder place. In response to recurrent debates, Rewilding Europe positions itself as an experimental organization that sets a return to natural processes into motion within confined pilot areas through processes of trial-and-error. Rewilding Europe sees itself as an initiative that works from an opportunistic and borderless (in Dutch: 'VOC'-) mentality, not limited by traditional conservation methods that tend to produce and sustain static nature (cf Jepson, 2015).

The directionality of rewilding becomes visible in its close support of local rewilding teams across pilot areas in Europe where alternative visions and practices of rewilding become naturally contested between the central and the local rewilding teams. While these contestations prove to be productive in guarding the core principles and reputation of Rewilding Europe, friction also generates productive lessons for future rewilding actions across its growing network. This in part translates into ways in which rewilding partners have been cautiously, or have refrained from, communicating with local people in targeted rural areas where concepts like rewilding are still unknown or risk being affiliated with a range of negative connotations of transforming former productive landscapes (used e.g. for agriculture, pastoralism, or hunting).

The new rewilding entrepreneurs, mostly related to ecotourism, strongly rely on longstanding experience with similar enterprise developments in African conservation brought in by partner organizations such as Conservation Capital. The newly introduced opportunities match well with the vision of large scale nature developments, like the Serengeti or Yellow Stone NP, uphold promises to new livelihood opportunities for some, but might prove risky in the absence of a niche market, a lack of an entrepreneurial culture, and inexperience with such conservation enterprises in Europe.

4.2 Partnerships and collaborations: working beyond the state

Rewilding Europe establishes connections beyond natural processes with a wider public and business community to make Europe a wilder place. In doing so, it collaborates with a growing number of partners (figure 2, section 3), such as private and public funders, local and regional conservation organizations, photography collectives, entrepreneurs, wildlife breeders, hunters and local policy makers. Interestingly, traditional governments are not usually included in establishing rewilding pilots.

"The cooperation with certain government institutions that are key for rewilding (mainly Forest and Conservation Departments) has turned out to be challenging at times, because of traditional views, frequently driven by hunting, forestry or very intense traditional/subsidized management practice interests." (Helmer et al., 2015, p. 177)

Instead, Rewilding Europe works foremost with local conservation partners and land owners to reshape natural processes, re-introduce wildlife, or establish conservation enterprises in targeted pilot areas. Time is needed for these pilots to demonstrate the effectiveness of rewilding as an alternative land use. If successful, more lessons can be learned for rewilding initiatives elsewhere; these could inspire local authorities to implement nature developments on a larger scale. Currently, local authorities have been requested to give political support to rewilding activities, e.g. arrange conservation rules to support wildlife reintroductions, allow enterprise developments on protected land, or assist in the discussion of extensive landscape transformations with the local public.

Local partnerships are crucial in the making of a wilder Europe. Without collaboration with local stakeholders in pilot areas, rewilding remains a dream, not a practice. Partners of Rewilding Europe in pilot areas therefore need to 'walk the talk', but each with their own form of speech, walking speed and rhythm. While the future of these landscapes is being visualized by Rewilding Europe, local partners have to deal with circumstances related to each locality. These could be frictions due to e.g. existing land

tenure rights, local human and non-human histories, dominant land use patterns, or political climate. These circumstances cause rewilding to develop through a constant process of success, failure and subsequent adaptation, instead of in linear progression. In dealing with unexpected encounters, central rewilding staff support local partners with knowhow from other European and/or other rewilding experiments about wildlife reintroductions, human-wildlife conflict resolution, or ecotourism development. At times, local actions need to be reversed, redirected, or put on hold.

To tie local ambitions to the European ambition of transforming 1 million hectares of land, many of the envisaged 'small wins' are based on these assumptions: ecotourism can function in an abundance of wildlife; wildlife can thrive in a dynamic and sizeable natural landscape; and natural landscapes can be accepted by people living in these landscapes, thus allowing a co-existence between men and wildlife (Rewilding Europe, 2015d). At times, steps are taken in small ways to facilitate alternative livelihoods for traditional hunters, pastoralists, or farmers who have to co-exist with wildlife in rewilding landscapes. In this way, local communities may receive incentives and benefit from novel rewilding landscapes that, in theory, can inspire neighbours to behave in a similar rewilding-friendly way. Another way to realize behavioural change advantageous to rewilding is the incorporation of conservation covenants, a legally binding agreement between land/resource owners and a conservation authority to protect/enhance the natural state of the land/resource. Under these covenants, newly developed rewilding enterprises, which rely on natural processes to function well through rewilding, are expected to return part of their revenues to rewilding developments, which can lead to larger gains for the future financing of rewilding.

4.3 Multiplicity of accountability

In making Europe a wilder place, Rewilding Europe is accountable to a wide variety of partners, each requiring different forms of transparency: different funders demand different ways of reporting on outputs; local partners require ongoing support in managing rewilding on the ground; and local communities demand clarity on what might be happening on their land. On the other hand, Rewilding Europe hopes for more openness from European institutions to enable a more level playing field in especially the Common Agricultural Policy (CAP) to "stop wasting tax-payers money on harmful subsidies" (BatLife Europe et al., November 2015; cf Merckx & Pereira, 2015). Rewilding is one of the many alternative initiatives to divert subsidies to. Currently, Rewilding Europe relies mainly on funding partnerships, particularly with the Dutch Postcode Lottery, but also with the European Commission through various Life projects. Depending on the donor, accountability for such funding can require a substantial amount of time in the application for funding. If funds are granted, the accountability of such funding can be a time-consuming practice in itself. The ideal situation is to channel un-earmarked funds - e.g. from the Postcode Lottery - to finance ongoing operational costs or to experiment with enterprise development. This does not imply that Rewilding Europe can do whatever seems appropriate, since any negative publicity on its outcomes can potentially harm the reputation of Rewilding Europe or its funders.

Ideally, local pilot projects should have similar access to un-earmarked funding, but this is not the case in practice. Local conservation partners often depend on more funding sources than Rewilding Europe alone. For them, an important challenge lies in connecting rewilding with other conservation projects, e.g. EU Life projects or national parks rewilding experiments in one site which need to be combined with conservation actions in neighbouring sites. Local conservation organizations feel that they waste substantial time by having to report to multiple funding agencies while major work has to be carried out in the field, both in nature development and in dealing with people.

Limited resources currently hinder rewilding partners from engaging in critical debates with people about the future of their land (Leuvenink, 2013; Walet, 2014). Instead, Rewilding Europe and local rewilding teams choose to carefully restrict communication with local land users in targeted pilot areas because it is difficult to explain the concept of rewilding, especially if there are not many landscape examples to refer to. Only when visions are formed do people see the cost-benefits of rewilding and be able to judge the initiative in comparison to other alternative land use options. A problem to address in the future is the potential attraction of rewilding sites for entrepreneurs who can benefit from rewilding but do not contribute to its costs, as opposed to enterprises that have established rewilding covenants. Think of more bed and breakfasts or restaurants in the vicinity of newly developed nature. Can these enterprises be asked to contribute to conservation objectives of rewilding?

4.4 Clumsiness and experimentation: Orchestrating ad hoc nature development

Even though Rewilding Europe is considered here as an experimental initiative, the organization does not fully embrace clumsy solutions. Instead of weighing all possible problems and solutions in rewilding policy, Rewilding Europe pragmatically targets land abandonments and related degradation of biodiversity through orchestrating locally differentiated solutions. Local conservation partners of rewilding require ad hoc management to work around emerging opportunities and threats while being held accountable for various conservation projects financed by different donors. This inevitably leads to frictions since Rewilding Europe cannot risk fragmented developments of its rewilding approach across Europe. Yet, rewilding can only gain traction as a European practice if it engages with differences (cf Tsing, 2005).

As a result, Rewilding Europe adopts a form of centralized adaptiveness to govern its rewilding approach across Europe, in line with a “controlled decontrolling of ecological controls” (Keulartz, 2012, p. 60). This is reflected in the constant approximation of visions, pilot sizes, species re-introductions, and enterprise developments. We interpret such approximations as unavoidable clumsiness, as plans tend to change constantly and future outcomes remain unknown (cf Jepson, 2015). It therefore makes little sense to pin down how rewilding should exactly look like in practice, except to guide local teams with suggestions and systematic planning of future developments. We have illustrated this in the context of Western Iberia where a promising Spanish-Portuguese project became a full Portuguese initiative due to incompatible strategies in implementing rewilding funding, and the fences of protected areas had to be relocated because local land owners were unwilling to let their land be used for rewilding purposes.

A problem with experimentation lies in the future accountability of these experiments and their unexpected effects. The necessity to frame funding proposals in concrete and short term results shows a potential short-sightedness. Rewilding Europe targets to rewild at least 1 million hectares across Europe by 2022. Its message to address land abandonment has taken on an urgency to tackle biodiversity degradation, yet this runs counter to the time needed before natural processes can be restored (15-20-30 or more years) and dependent ecotourism enterprises to become profitable (5-10 years). But even if we assume that rewilding objectives are met by 2022, how will the initiative continue to exist, and who can Rewilding Europe hold responsible for unanticipated effects of the new rewilding landscapes?

In addition, we notice that many are relying on experience gained from African tourism conservation enterprises concerning how local rewilding entrepreneurs are supported by Rewilding Europe and Rewilding Europe Capital. Previous studies have shown many challenges in arranging conservation enterprises in South and Eastern Africa based on a market logic. Even though these approaches have booked successes in securing more land for conservation, there is much criticism on the various effects of ‘apolitical’ and ‘neoliberal’ approaches that may contribute to e.g. unequal benefit sharing and conflicts over natural resource management (Brockington et al., 2008; Brockington & Scholfield, 2010; Büscher, 2010), or steering problems where market forces fill an institutional void in the absence of a government (Lamers et al., 2014; Pellis et al., 2015). European practices can learn from these African examples so as not to make the same mistakes.

4.5 Rescaling and upscaling rewilding across Europe

Now that Rewilding Europe has supported the initiation of pilots across Europe, a new chapter seems to open in the rescaling of its experiments, or what Rewilding Europe refers to as ‘magnification’. Magnification is part of a broader rescaling exercise that is based on different scalar mismatches which emerged during the development of the initiative. Rescaling happens across different dimensions: spatial reorganization of pilots, the enlargement of pilot areas, the shift from agricultural towards nature-based economies, the upscaling of enterprise development for rewilding, and the dissolving of the initiative after the project ends.

The reorganization of Western Iberia illustrates how central visions of Rewilding Europe frequently encounter mismatches at different social and physical scales (Termeer et al., 2010). The dominant response is to alter the social scale in order to adjust to the geophysical scale. In other cases, it can be more appropriate to adjust the geophysical scale to the social scale, e.g. changing the pilot location of Western Iberia into a Portuguese arrangement.

On a European level, Rewilding Europe discusses the upscaling of its operations in and beyond the physical boundaries of current pilot areas. This is explicitly mentioned by Rewilding Europe as part of its ten-year objective to “inspire the scaling-up and replication of the rewilding approach across Europe” (Rewilding Europe, 2015b, p. 11). This mode of upscaling is predominantly vertical as it deals with a further advocating of the rewilding approach through expanding its network, supporting rewilding initiatives, increasing communication and promotion, and stimulating the exchange of knowledge and information on rewilding.

The latter takes place not only within the European rewilding network, but increasingly also at a European policy level where Rewilding Europe is invited to share its opinion on the future of biodiversity conservation in Europe. This role might eventually lead to a horizontal rescaling of Rewilding Europe that is not expected to increase its organization, but lead to a downscale once the project is fully operational by 2022. The Rewilding Europe initiative can be seen as a kick-start for new partnerships in making Europe a wilder place. After 2022, Rewilding Europe might function as a lobby and/or support organization for rewilding initiatives across Europe.

A crucial aspect in this re- and upscaling of potential in rewilding is the implementation of an entrepreneurial culture for nature development and the support of conservation enterprises. Currently, these enterprises contribute a small portion of recurrent income to pilot areas, but in order to support a large scale development of rewilding landscapes in the future, a dramatic upscaling of entrepreneurial developments is necessary. Even though Rewilding Europe collaborates with universities and applied science institutes to change a new generation of nature entrepreneurs (cf Jobse et al., 2014), it is above all looking for new funding sources among commercial enterprises to support its enterprise development programme. Current funding of enterprise developments rely mainly on philanthropic means to get going, but substantial investments are needed to upscale this development.

Current pilot areas are designed to illustrate what rewilding can do in order to restore and protect natural processes to sustain a shift towards nature-based economies. Such rescaling is part of the vision of Rewilding Europe, which is similar to the relocating of human-induced practices in American rewilding. Nevertheless, such large transitions are hampered as long as current agricultural policies sustain agricultural landscapes across Europe (Merckx & Pereira, 2015). Yet, if these policies are changed, and if rewilding enterprises start to prove productive as an alternative, then we might see an increase of rewilding visions for more landscape developments across Europe.

“Ultimately, a large-scale shift in land use across Europe towards wilder nature and innovative ways to use this resource for employment and subsistence could be achieved, thus turning threats and problems into opportunities” (Helmer et al., 2015, p. 171)

Rewilding Europe has the potential to function as a platform to bring together knowhow from pilot rewilding areas - where conditions are ideally set for natural processes to re-occur - and other nature developments elsewhere to validate the transformative potential of rewilding for a wilder Europe. Such knowhow requires long term monitoring, yet is potentially effective in convincing a wider network of currently invisible actors, like national or European governments, to follow practices of Rewilding Europe (Muniesa & Callon, 2007).

4.6 Recommendations

We henceforth propose a couple of recommendations to governments to make the most out of rewilding initiatives and to discuss opportunities for future research:

- As a novel and entrepreneurial initiative in Europe, Rewilding Europe will benefit from the freedom to develop and experiment with a return to natural processes and enterprise development. This implies a need for experimentation that is granted e.g. by European authorities in the form of a more level playing field in the CAP, or by national governments integrating more flexibility in rules and regulations, e.g. changes in the wild status of newly introduced ‘wild’ herbivores, or flexible land tenure systems.
- Rewilding Europe continuously evolves as an organization which reshapes its concepts, upscales its practices, experiments with new modes of nature conservation and enterprises, and explores new modes of steering. Governmental interventions should as such not ‘pour the concept into

concrete', but take on the important role as supporter and knowledge base for rewilding projects.

- Governments could facilitate rewilding by recognizing the experimental nature of rewilding and its contribution as an additional approach to nature conservation in Europe, one that produces new uncertainties and effects that could lead to both inspiration (e.g. new iconic wildlife destinations) and risks (e.g. decontrolling of natural processes). Rewilding should by no means replace existing forms of nature conservation. Existing policies such as Natura 2000 and LIFE focus mainly on conserving habitats and species, while rewilding emphasizes experimentation with natural processes and the development of nature-based economies. Natura 2000's 'favourable conservation status' is used as a reference point for biodiversity and habitat types, while rewilding could greatly alter both habitats and biodiversity. Not necessarily in a negative way, but in a way different from what current directives prescribe. A major challenge in the coming future will be to formally institutionalize rewilding as an open management tool within European directives which does not necessarily compete with traditional forms of biodiversity conservation.
- Future research should explore whether such competition will hamper European conservation practices. Furthermore, the current shortage of rewilding studies, both ecological and social (cf Carey, 2016), require much monitoring and discussion of rewilding outcomes in Europe, to understand not only its potential but also the unanticipated effects for rural landscapes under transition.

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Annex 1: Coding of Interviews

Code	Position	Place	Date
N-1	Rewilding Europe, conservation manager	Nijmegen, Netherlands	March 2015
N-2	Rewilding Europe, vision artist	Nijmegen, Netherlands	March 2015
N-3	Rewilding Europe, general manager	Wageningen, Netherlands	October 2015
N-4	Rewilding Europe, regional manager	Nijmegen, Netherlands	November 2015
N-5	Rewilding Europe, regional manager	Phone interview	November 2015
N-6	Rewilding Europe, general manager	Nijmegen, Netherlands	November 2015
C-1	Rewilding Capital, enterprise developer	Faia Brava, Portugal	April 2014
C-2	Rewilding Capital, enterprise developer	Faia Brava, Portugal	April 2014
C-3	Rewilding Capital, enterprise developer	Castelo Rodrigo, Portugal	April 2013
N-7	Wing Consultancy, consultant	Wageningen, Netherlands	June 2015
E-1	Tourism entrepreneur	Cidadelhe, Portugal	April 2015
L-1	FNYH, founder	Campanarios de Azaba, Spain	May 2015
L-2	FNYH, technician	Phone interview	April 2015
A-1	ATN, founder	Castelo Rodrigo, Portugal	April 2015
A-2	ATN, technician	Figuiera de Castelo Rodrigo, Portugal	April 2015
A-3	ATN, technician	Figuiera de Castelo Rodrigo, Portugal	April 2015
A-4	ATN, manager	Castelo Rodrigo, Portugal	April 2015
A-5	ATN, technician	Figuiera de Castelo Rodrigo, Portugal	April 2014
A-6	ATN, communication manager	Figuiera de Castelo Rodrigo, Portugal	May 2015
A-7	ATN, focus group discussion	Figuiera de Castelo Rodrigo, Portugal	October 2015
N-8	Dutch Postcode Lottery, goede doelen	Phone interview	October 2015