Field Notes on the Meaning of Rewilding

Mihnea Tanasescu
Research Fellow of the Research Foundation Flanders (FWO)
Vrije Universiteit Brussel

This is the draft of a paper forthcoming in Ethics, Policy & Environment

This paper is concerned with the concept of rewilding. This nascent and increasingly popular notion has generated lively debate, from conservation biology to the social sciences. Section 1 will present the uses of the terms in academic texts so far. Section 2 will look at how one of the most prominent rewilding organizations in Europe – Rewilding Europe (RE) – attempts to use the theory in the implementation of rewilding projects, and section 3 will examine the tensions that Rewilding Europe[1] has encountered on the ground, specifically in the Romanian Danube Delta[2]. The last section will show how the difficulties encountered on the ground contribute to the emergent meaning of rewilding. There, I propose understanding rewilding in both ecological and semiotic terms.

1

For the purposes of the present argument, I will mostly focus on European rewilding. What I mean by European rewilding is twofold: first, it means focusing on European examples and experiences, and second recognizing that European cultural histories accentuate the concept in specific ways. In this first section I am interested in how the term has so far been used in academic literature. In presenting these uses I am not claiming that they are either accurate or inaccurate, warranted or not. I am simply interested in setting the context of how the meaning of rewilding has been shaped so far. This is done in order to then show what happens, and what is learned, when the academic and activist discourse (see section 2) are put into practice. The juxtaposition between theoretical and practical use will, I hope, prove useful for the further development of the concept.

---

[1] Rewilding Europe is a non-profit organization that aims to rewild one million hectares of land in Europe by 2020. Founded in 2011, it has quickly become the foremost rewilding organization in Europe. See www.rewildingeurope.com for more.

[2] The empirical sections, as well as all other references to the specific projects of Rewilding Europe, rely on conversations with Alexandra Panait (Danube Delta team leader) and Deli Saavedra (Rewilding Europe Regional Manager), as well as observations of the Danube Delta Rewilding Europe project undertaken by the author in March, 2015.

One of the prevalent uses of rewilding so far has been as a kind of synonym for restoration. Naem (2013) quite simply defines rewilding as "the process of reintroducing locally extinct species". But unlike classical restoration[3], the idea behind reintroductions is that animals are important in fashioning environments, and that not having them amounts to having dysfunctional environments (for example Vera, 2009; Zimov et. al., 2012). Brown et. al. (2011) put the point thus: "the conservation of biodiversity is best served through the protection of species at or near the top of the food chain in large, connected areas". These so-called 'keystone species', for their pivotal role in ecosystem dynamics, are usually large herbivores or carnivores: bison, deer, ox, boar, wolves, bear, lynx, wolverine, and so on[4]. So rewilding here is understood as "the reintroduction of keystone species and ecosystem engineers to restore function to impoverished ecosystems" (Sandom et. al. 2013). It stands to reason that to 'rewild' a place in the sense of reintroducing big animals, there needs to be enough space to accommodate them, and preferably connections with other similar spaces. We will return to the connections and spaces shortly.

The idea of a strong link between species reintroduction and ecological function is fundamental. Whereas restoration does not necessarily aim at connection with other restored places, nor at natural self-sufficiency, rewilding is also often used to denote the idea that the point of species reintroduction is to create the conditions for nature to take care of itself, which simply means that after a while people would no longer need to manage a land which has become ecologically vibrant. In a European context, this version of rewilding has taken root together with the realization that the continent is undergoing a profound land-use change. As Keenleyside and Tucker (2010) have

[3] For the major contributions to the classic debate on whether restoration can ever be successful, see Elliot (1982), Katz (1996, 2012), Light (2009).

[4] It is interesting to note the prevalence of charismatic animals as candidates for rewilding. Thought many insects could also be considered keystone species, they are drastically underrepresented when it comes to rewilding initiatives. This does not mean that there are *no* insect reintroductions connected to rewilding. See Brady and Prior (forthcoming) for an example of introducing bees. It does mean, however, that most rewilding work so far has focused on big, charismatic, species.

shown, a huge amount of formerly agricultural land is being abandoned, creating a historical opportunity for the reintroduction of locally extinct species. Rewilding Europe (RE), one of the leading rewilding organization in Europe, was jumpstarted into existence by the realization of the scale of abandonment. Keenleyside and Tucker's report[5] predicts that around 150.000 square kilometers of land will have been abandoned by 2030. The methods that the report uses make it so the predictions are far from certain; in fact, there is very little certainty as to how much land is *currently* abandoned. One of the reasons for this is the very definition of abandonment. The report uses a three-pronged definition that includes *actual abandonment*, meaning land that is no longer used for any agricultural purpose, *semi- or hidden abandonment*, namely land that "is not formally abandoned and is subject to some form of management", and *transitional abandonment*, resulting from land-use changes that might or might not be permanent.

Despite the richness of the definition, abandonment remains a relative term, particularly to earlier use patterns. We can imagine a hilly landscape with patches of open grasslands, fruit trees, and forrest, all maintained through the daily interaction of people with the land for the ultimate end of making a living. When such a landscape is populated by 1000 families that are managing its character, then it is fully used. When 800 of those families move to the city, the landscape is not entirely abandoned, to be sure, but it is also no longer productive in the former sense. It starts undergoing changes, mainly related to succession (if it is on rich soil), that would not have happened had the land continued to be used. In this hypothetical example, there could be both actual and hidden abandonment. This kind of relative abandonment, when happening on a large scale, as it is happening in Europe, can be met with quite reactive policies, like paying people to keep the land *looking* a certain bucolic way. What RE saw in this situation was an opportunity: for the first time in thousands of years, enough space is becoming potentially available in Europe for experimenting with alternative land-use practices, including the rewilding of certain tracts.

[5] The report was commissioned by WWF Netherlands from the Institute for European Environmental Policy.

Though abandonment is relative, activist discourse of the kind exemplified by RE or popular writing on the subject (for example Monbiot, 2013) tends to present it as a fait accompli. In truth, and as section 3 will further demonstrate, we can more accurately speak of a profound change in land-use patterns. The term abandonment itself is misleading, suggesting that land has been willfully left behind, to fend for itself as it were. This might be the case in some places but, given that it is mostly agricultural land that is the subject of 'abandonment', at the very least the deserted land is someone's property. The preoccupation with abandonment is a particularly European one, perhaps explicable through the population density relative to size on the old continent. For Jørgensen (2015) 'productive land abandonment' (p.484) is but one of the six meanings she argues rewilding has so far acquired. Though her classification of rewilding in academic literature so far is extremely interesting and in many ways illuminating, it seems to me that all of the uses of the term that she describes are tied to the idea of restoration through reintroductions. As Prior and Ward (2016) point out in their response to Jørgensen, the point of rewilding is the restoration of natural autonomy. They define rewilding as "a process of (re)introducing or restoring wild organisms and/or ecological processes to ecosystems where such organisms and processes are either missing or are dysfunctional". This covers all of Jørgensen's different definitions of rewilding and opens the concept toward the idea of autonomy. In fact, it is autonomy which rewilding 'restores', allowing it to become truly different from classical restoration by unshackling its historic baselines and by no longer needing prolonged human management to keep an ecosystem in a preferred state. In other words, rewilding is future-oriented, which means that it aims at the independent existence of ecosystems that might or might not conform to historical precedents[6].

So far, we have seen rewilding used to convey the idea that keystone species should be reintroduced

[6] Indeed, some argue that in the so-called Anthropocene, it is increasingly unlikely to restore habitats based on historic baselines (Pearce, 2015).

to 'abandoned' land, in order to restore ecosystem function and, eventually, allow the land to take care of itself. Nogués-Bravo et al (2016) also argue that rewilding today focuses on "species introductions or reintroductions as a way to restore ecosystem functioning". They draw a distinction between four types of rewilding, but in all of them the connection with restoration via reintroductions is unmistakable. This academic framework of the concept works together with other notions: ideally, rewilding sites would be connected; for an ecosystem to be self-sustaining, it needs to be allowed to support what is often referred to as natural numbers, meaning that the number of animals should be dictated by the characteristics of the land itself. Natural numbers would then play an important role in the shaping of the ecosystem itself. This somewhat technical definition of rewilding, though true to the literature so far, is incomplete. Between the lines of academic articles, in popular writing, and in activist discourse, rewilding acquires an emotional side that supplements the more technical one and, I will argue, gives its its specific force. Jørgensen (2015) decries what she sees as the stretching of rewilding into meaninglessness once it leaves its academic home. We can also understand the plasticity of the word in relation to the different requirements that activist and academic practice place on a concept. In the following I hope to show that, in the case of rewilding, activist practice reveals the limitations of the academic definition and supplements it with a vision that further specifies the rewilding concept.

The lure of "the howl of the wolf" (Brown et al 2011) is as important to the rewilding effort as the claimed ecological role of the wolf. Monbiot's popular 2013 book *Feral* is perhaps the best example of this, as he hinges most of his arguments for rewilding on what he calls ecological boredom. The idea is that humans are made to be engaged with a world that is full of danger and awe, namely with a world full of big animals. If that is the case, then rewilding has value beyond ecology, and into psychology. For Monbiot, "living a life in which loading the dishwasher [presents] an interesting challenge" (p.5) is living an anxious, ecologically impoverished, life. If not far away there was a

hiking trail where one could see beasts roam, that would have, for him, tremendous psychological value. Another way to capture this side of rewilding is through the idea of its aesthetic values (see Brady, 2003; Brady and Prior, forthcoming; Callicott, 1994; Junker and Buchecker, 2008). What I called the emotional appeal of rewilding can be understood as a subject's preferred way of reading a rewilded landscape (Drenthen, 2011), which could span the whole range of aesthetic values from unease and fear in front of unmanaged land to enjoyment of "terrible beauty" (Korsmeyer, 2005; Hettinger, 2010).

This, I think, is a fair overview and distillation of the academic uses of rewilding so far. However, the academic discourse both informs and is transformed by its application in rewilding projects. Activist discourse is where the theoretical understanding of rewilding interacts with practice. And in that interaction, different tensions come to the fore. I want to now turn to RE and take a look at an organization whose mission is to make rewilding a reality.

2

Rewilding Europe has emerged as a leading rewilding organization in Europe. Though young – it has only been founded in 2011 – it is extremely ambitious, something which I think, as will become clearer, is connected with the concept of rewilding itself. Staffed with people experienced in and disillusioned with conservation as usual, the organization aims to rewild one million hectares of land by 2020, through setting up 10 different pilot projects across the continent. They currently have eight operational projects[7], one is supposed to start in the near future[8], and one is still to announce itself[9]. For RE, the point of these projects is, to paraphrase Wouter Helmer, the rewilding

[7] These are: Western Iberia (border region of Portugal and Spain); Southern Carpathians (Romania); Eastern Carpathians (border region of Poland, Slovakia, and Ukraine); Danube Delta (Romania); Velebit Mountains (Croatia); Rhodope Mountains (Bulgaria); Central Apennines (Italy); Oder Delta (border region of Poland and Germany)

[8] The Greater Laponia region.

[9] Rewilding Europe announced its vision in 2011 and asked areas around Europe to nominate themselves. This

director of the organization, to *showcase spectacular nature* and thus to show the viability of large-scale rewilding throughout Europe, regardless of particular habitats.

A 'project' for Rewilding Europe is a site – a territorial location, a somewhere – that becomes an experiment in rewilding. What this looks like will be different for each site, because what it means to rewild a swamp, a grassland, or a mountain, is necessarily different. But each effort is energized by the same overarching vision. This vision complements the academic understanding of rewilding that we previously presented with its own elements, designed to support habitat restoration through species reintroduction. They present their work as based on three pillars: rewilding, enterprise, and communication (Schepers, 2015). One way to unpack this is in terms of the elements that unite their practice: *ecological integrity*, *economic rejuvenation*, *cultural and natural preservation*, and hopefully a *renewed interest* in wild nature for locals as well as europeans in general.

Ecological integrity, which could be seen as the academic core of rewilding, has to do with time-tested methods for restoring habitats. In the cases where Rewilding Europe is working, these habitats used to be highly humanized, have been since relatively abandoned, and are now lingering in-between, neither culturally central nor ecologically sound. They could receive, in other words, a push in the direction of wildness[10], which can be achieved through the reintroduction of species. As presented in section 1, this is an established technique for restoration and the backbone of rewilding in the literature, based on the idea that the ways in which a species uses the environment shapes said environment. To this end, Rewilding Europe has introduced 'wild' horses and cattle to the Velebit area in Croatia, in order to help in the maintenance of the grasslands. People once inhabited that ecological niche, keeping the landscape open through their activities. Now that most are gone,

process of self-nomination is still the way the organization recruits new projects. Out of the many nominations received, only the ones that, in they eyes of the organization, are best suited for rewilding work, are selected.

[10] In this context, the meaning of wildness is best captured by Wood's (2005) definition (in Prior and Ward, 2016): "the autonomy of the more-than-human world where events, such as animals moving about, plants growing, and rocks falling occur largely because of their own internal self-expression".

ungulates are taking over, or rather re-taking the role they once had in the environment. RE calls this 'natural grazing', an idea championed by Frans Vera in the Netherlands (see Vera, 2009). The idea is that the primeval European landscape, as it were, was characterized by alternation between forest and open grassland, and not by closed canopy forest. Animal husbandry has maintained this supposed 'original' landscape but, with the arrival of abandonment, we need to bring back the ungulates that once roamed the continent if we want to preserve the character of the European landscape. The Vera hypothesis, of alternating forest and grassland, has not been proven beyond reasonable doubt (see Mitchell, 2004). However, whether it is ecological fact or not is secondary to the cultural appeal of preserving a landscape that, in its overall shape, is already familiar.

In order to achieve ecological integrity, animals that have gone locally extinct, or else proxies (as in the case of Tauros for the aurochs[11]), are being introduced to manage abandoned land and to eventually establish natural communities that are rich (in terms of 'natural numbers') and independent of human management. So the idea of ecological integrity is understood as the restoration of natural processes through the establishment of communities of animals[12]. This element of promoting so-called integrity is basic for the work of rewilding, and present in some form or another in all cases so far (with the variant of allowing animals to reintroduce themselves). And if land abandonment would in fact have been exhaustive, then this would amount to most of what rewilding is about: a variant of restoration unhinged from baselines and aiming at natural autonomy. However, abandonment is relative, and land-rights exist even when people do not

[11] The Tauros Programme aims to recreate the extinct Aurochs, the ancient relative of modern cows. To do this, it uses a technique known as back-breeding, essentially reverse engineering the aurochs from its domesticated descendants. The programme is expected to produce the wild species in some 20 years, with the goal of having free-roaming herds of at least 150 individuals in several rewilding areas. Also see Stokstad (2015).

[12] This is evidently keeping in line with the academic understanding of rewilding. Note, however, that what rewilders want to kickstart are *processes*. Exactly what these are depends on the site in question. In a wetland, a fundamental process is the hydrological cycle, that is to say the seasonal movement of water. Inasmuch as dams and canals prevent flooding, one could say that a natural process – seasonal flooding – has been interrupted. Removing dams and naturalizing canals (allowing them to meander) would then count as restoring a process, and this would be seen as contributing to ecological integrity. So the idea of integrity is crucially tied to a notion of richness and dynamism, and therefore is quite close to the idea of biodiversity. The inherent goodness of this integrity – like the inherent goodness of biodiversity – is not usually questioned in the literature or in activist discourse.

actively manage their land. So in most rewilding territories, there are still *some* people left, and there is usually a patchwork of ownership that complicates the idea of allowing large numbers of big animals to roam. Whether out of necessity or not, rewilding in practice then comprises the idea of *economic rejuvenation*, in order to allow the people that still live on the land to make a better living. Rural lands that have been left by most of the historic inhabitants don't usually offer a great living for those left behind, and in theory people should be receptive to projects that promise to make their economic situation better. So RE proposes to help people develop enterprises that live off wild nature. To this end, Rewilding Europe Capital provides loans, which have for example helped in the development of a honey business in Croatia, or of a bed and breakfast in the Romanian Danube Delta (Schepers, 2015).

The idea of commercializing wilderness[13], in order to protect it, is simple yet controversial. Here, RE parts with classic conservation approaches, though increasingly merges with a new wave in conservation that is much more business friendly (for example, Tercek and Adams, 2013). This is in part due to the European reality – again, abandonment in Europe is always *relative* and almost never thorough, if only because of land ownership patterns. So the reality is that wilderness has the best chance of returning to the old continent inasmuch as it also helps people make a living from it. The model that RE is working from is that applied in Namibia, known as community conservancy (Boudreaux and Nelson, 2013; Suich, 2013; Hoole and Berkes, 2010; Barnes et. al. 2002). There, as in Europe, the basic question being addressed is whether rural livelihoods can co-exist with big, wild animals (Kahler et. al., 2013; O'Connell-Rodwell et. al., 2000). RE thinks so, and makes an effort to help those it convinces realize this vision. The way Alexandra Panait, the Danube Delta RE team leader, explains it, this approach is aimed at reversing the flow of money in conservation.

[13] The idea of wilderness, in a European context, is best understood in relation to the idea of ecological integrity and the restoration of natural processes. Wilderness does not mean untouched, or remote from human influence, but rather autonomous. For a detailed exposition of this meaning of wilderness, see Marris (2013) and Pearce (2015). Callicott (1994b) is an earlier critique of wilderness as remote and untouched, offering instead an understanding based on allowing nature's dynamism – and therefore change – to happen autonomously.

Classic conservation sucks money into projects, and keeps doing so indefinitely. In order to achieve sustainable conservation, the idea would be to make conservation productive, and one way to do this is through local businesses. This incentivizes the protection of nature and allows people to become long-term investors in wilderness. In the Velebit (Croatia), this has meant providing a loan to beekeepers and helping them in communication and marketing campaigns that identify their honey as wild, as well as advising on accessing markets that might value such products. Similarly, in the Romanian Danube Delta they are trying to find people willing to manage floating hides for bird-watching, and have already provided a loan for a bed and breakfast that caters to nature lovers. They provide training to locals that often do not quite understand, and hence do not fully exploit, the fact that someone would travel thousands of kilometers to look at pelicans.

Together, the ideas of ecological integrity and economic rejuvenation amount to the possibility of maintaining both natural and cultural richness. Nature and culture are always mixed, and in a European context this recognition is banal. But this age-old mix is being increasingly threatened by urbanization, not least in the form of suburban sprawl. This development is fatal for rural culture, and RE is proposing to reverse the trend, by helping those that want to live on the land do so *from* a wilder land. Through its projects, it therefore aims at the maintenance of rural cultures through their gradual transformation into more wilderness-friendly ones. And the best tool for this, it wagers, is business.

Though the examples of business given so far were honey and wildlife watching, by far the greatest weight in the economic thinking of RE belongs to tourism. Indeed, the honey will be eaten by tourists, and the birds watched by them. This reliance on tourism can be problematic – is there a limit? - but it also promises to popularize the idea of wilderness and gather people around its recreation and subsequent preservation. Communication therefore becomes important, and RE is

certainly heavily involved in that effort. The organization has partnered with Wild Wonders of Europe, and together have organized photographic exhibitions to popularize the idea of European wilderness. Though rewilding is mostly presented in ecological terms (see section 1), its is also becoming clear that there is an undeniable emotional appeal, betrayed by terms like 'wonders' and the heavy use of photography in communication. What rewilding through the activist lens then looks like is an overarching approach, a *vision*, an utopian end that dares to imagine high civilization living side by side with what could be called high nature (spectacular, wonderful, healthy). This vision is political through and through, as it requires a refashioning of minds and power in order to even become imaginable. What I mean by this is that rewilding seen as ecological and economic practice necessarily implies a restructuring of established semiotic practices within different places. Semiotic practices are understood as activities of meaning-making focused on intelligibility (Wedeen, 2002). In other words, they are the ways in which what people do in the world becomes intelligible to members of the group acting in the world, as well as to observers. Of course, any action might mean different things to different participants and observers, yet still be intelligible. It is also the case that an action might be intelligible to some and non-sense to others. So if we understand rewilding as a semiotic practice among others, we have to look out for both the ways in which it might become meaningful to non-activists, and the ways in which it might be intelligible without its meaningfulness aligning across the spectrum of participants. So rewilding in activist discourse, by veering towards the political, necessarily involves itself in the intimate ways in which people make sense of themselves and their surroundings.

As rewilding has become more popular, RE has grown more anxious to have a say in the fashioning of the concept. In their latest annual review, they offer their first definition of what rewilding is. “Rewilding ensures natural processes and wild species to play a much more prominent role [sic] 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" (Schepers 2015, p.12). This definition starts with what we have seen to be the academic understanding of rewilding in section 1. The 'initial support' is often reintroductions or habitat restoration, and the idea that "nature is allowed to take more care of itself" speaks directly to the autonomy that Prior and Ward (2016) find to be the hallmark of rewilding. This autonomy is what would qualify a place to be called wild, which means that for rewilding a wild place can also be, in many respects, new, inasmuch as it is allowed to take care of itself. The notion of benefit introduces the economic side of rewilding, without making commercialization the central point. And the idea of reconnection captures what in Monbiot's thought was the place of ecological boredom: wild nature is inspirational and can play a crucial role in our lives – alas, it has played a crucial role in our lives, one which we need to rediscover.

Rewild, rediscover, reconnect, restore. The use of the prefix 're' can unduly distract from the radical novelty at stake. 'Re' tends to be interpreted as repetitive or reiterative, and in that sense it justifies by connecting to a past. However, it is not repetition which is fundamental for rewilding. What is actually being proposed is the creation of wilderness which, given evolutionary processes and historical contingencies, would be to some extent new[14]. And what would certainly be new is the idea of civilization side-by-side with wilderness. Rewilding is not the recapturing of a gone wilderness, the recreation of something that was, but rather a proposal, steeped in hope and a long-term vision, for the creation of spectacular wilderness on a continent of 500 million people. *That* is unprecedented, and in that sense it is not repeating anything. What is also unprecedented is the

[14] For an overview of the ways in which habitats the world over are increasingly novel, see Pearce (2015). Besides ecosystem, many animals are also themselves 'new'. The Tauros is an example of this. Though the final aim is to 'recreate' the aurochs, this is impossible in any strict sense. Even if the resulting animal would be genetically identical to the aurochs, it is still the case that it would be culturally different, as it would have no other aurochs to learn how to be an aurochs from. Furthermore, the notion of 'genetically identical' is itself a myth, as genetic variation is a mainstay of any healthy animal community. Lastly, the genetic purity of species themselves can be questioned in light of the frequent and successful 'hybridization' in nature.

expectation that those 500 million people shall find wilderness *spectacular*. For every Monbiot that loves near-death experiences in wild nature there might be 1000 Joe's that would rather load the dishwasher. Those preferences are not culturally neutral, even if the use of 're' suggests that finding wilderness awesome is neutral. RE, though extremely polished in its communication, cannot but come up against this reality. Indeed, it does come up against this reality, and it is there that the academic and activist discourses on rewilding meet the political practice of doing rewilding in a populated environment. In other words, the semiotic practice of rewilders bumps again that of the humans living in rewilding sites. I will now turn to one such example that can make clearer how the specificity of rewilding – a hopeful vision for a radically different future – interacts with local practices, specifically in the Romanian Danube Delta.

3

The Romanian Danube Delta is a famously complicated land. It is claimed as the newest European land, and known as a hodgepodge of administrative authorities. Its heyday as an important part of Europe is decidedly behind it, and the myth of those times still haunts the local imagination (Teampău et al, 2008; Van Assche, 2009). An overly bureaucratized periphery of Europe, it is home to around 15.000 people and an impressive variety of animal life (mostly birds and fish). In 1991 it became a biosphere reserve, and Rewilding Europe took up the proposal of WWF Romania to include the Delta in its pilot projects, in 2011.

The RE vision for the Delta is that of a vast wetland wilderness. It is indeed vast – 580.000 ha, amounting of 2.5% of the Romanian territory – and it has undergone some abandonment, though it is far from empty. Its human population is concentrated in one city and several rural dwellings, scattered across the navigable parts of the Delta. Though usually thought of as an unspoiled

wetland, the Delta has been extensively transformed by human intervention. It is criss-crossed with human-made canals and dikes, and the transformation has been profound enough to affect the Delta's growth, which would continue without all of these interventions. There are other repercussions, too: fish numbers have declined drastically, even if water quality has improved in the last decades (due to much industry closing after the fall of the communist regime in 1989). The city in the Delta, Sulina, is itself an anachronism, built of soviet-style apartment buildings and squeezed between a swamp and the sea (Teampău and Van Assche, 2007). This city and the village of Sf. Gheorghe, an important village in the Delta[15], receive mass domestic tourism in the summer months, due to their beautiful, wide, sandy beaches. The rest of the year, the region is severely cut off from the outside world, leaving locals with fewer options for making a living. Unemployment is close to 20%, and those employed work in, besides the tourist industry, fishing, agriculture (mostly livestock), and public administration. The differences between different dwellings in the Delta can be stark. Sf. Gheorghe is a big, quite well-to-do village. On the opposite side of the wetland, Letea is a small village where no-one has clean drinking water, and very few have basic sanitation. Caraorman, a village not far from Letea, is not much better off. Locals there claimed that the village had 72 deaths and 2 births in 2013, due to the drastically slanted demographics. Though this is anecdotal, it leaves no doubt as to how the locals of Caraorman perceive their own lot.

These differences in well-being within the Delta give some inkling of the latent tensions and the political complications on the ground. During a meeting with the mayor of Letea, it became clear just how frustrated she was with pretty much everyone that had a say in how to run the village: the Biosphere Reserve Authority (ARDBB), which no-one has kind words for; the authorities in Tulcea, the closest big city to the Delta and the seat of the region's administration; politicians in Bucharest who only show up at election time and promise things like drinking water, without

[15] Sf. Gheorghe is an important village in the Delta mainly due to its location: it sits at the confluence of the Sf. Gheorghe branch of the Danube and the black sea, thus enjoying great wide sand beaches, optimal fishing, and easy navigation.

delivering on their promise post-elections. What the mayor wanted was pretty basic: water, sanitation, an ambulance and a proper medical clinic (the nearest hospital is in Sulina), as well as a road. I couldn't help but wonder how these basic and entirely legitimate wishes square with the rewilding vision. Drinking water shouldn't be a problem, but a paved road is not exactly what rewilders campaign for. Yet it is undeniable that for the lives of people in Letea, having a road would be of great help.

This latent tension is present throughout the Delta. In Sf. Gheorghe, Jenica and Dumitru improved their bed and breakfast with help from Rewilding Europe Capital. The idea is to help them create a small business that caters to higher-end tourists that are interested in wildlife, though so far they mostly get tourists interested in eating lots of fish. Dumitru used to be the mayor of Sf. Gheorghe and now works at the local *cherhana*, a small fish-processing plant on one of the main branches of the Danube. As a former mayor and current employee of a central activity in the village, he knows a lot of people. In conversation with him, it was apparent that he likes where he lives. He finds the Delta beautiful and rich, and told me that he wouldn't want to live elsewhere, having had the chance to do so in the past. However, his only child studies in Tulcea, because the schools are better and he can be part of a football club. And more significantly, he perceives the majority of his fellow villagers to be dissatisfied with their place of dwelling. He believes that most people in Sf. Gheorghe live by urban values, and would rather have a nice car than be able to fish in the river. Dumitru's perception brings into focus two aspects that we touched upon in our theoretical discussion: abandonment, and the variety of positions towards nature, or what I earlier called semiotic practice. Abandonment is driven by real necessities: schools for children, the availability of health care (Dumitru himself told me that this is his biggest worry living in the Delta), and not least the possibility of building the life you imagine you want. A significant number of people living in the Delta are strongly connected to urban TV stations and much less so to the biodiversity

that surrounds them. The concept of biodiversity itself is foreign and, partly because of it, many in the Delta do not perceive their home in the same way that rewilders do. In other words, the perception of nature (see also Van Assche, Bell, and Teampau, 2012) among locals is not unproblematically contiguous with the rewilding vision of spectacular wilderness.

Deli Saavedra, a regional manager for Rewilding Europe, speaks of the importance of 'early adopters'. These are people in the community that take on the rewilding vision early on, and henceforth set an example for the rest of the people. The expression – early adopters – is worth pausing on. What it implies is that within any community, there will always be just several people that are ready to collaborate on rewilding projects. *Why* this is the case is left open to interpretation, but if rewilding is understood as primarily a strong future-oriented vision, the temptation to view the non-adopters as somehow lacking some fundamental insight is great. Dumitru counts as an early adopter, but he is also a special character – he was a mayor, something not everyone achieves. In a sense, the fact that most people are unresponsive to the rewilding vision should not be seen as their lacking something, but rather as a sign of just how differently you have to think in order to adopt the rewilding vision. The outsiders are the rewilders and the early adopters; everyone else just wants a road.

Within the complicated context of the Delta, Rewilding Europe wants to do several things. Ideally, it would restore the Delta environment itself, by removing dykes and naturalizing canals. There are currently no overarching projects in this direction, though the municipality of Sf. Gheorghe has signaled its willingness to restore part of its communal land[16]. In order to make its way toward a bigger vision of a restored Delta, RE has started building local partnership – looking for those early

[16] The communal land of the village of Sf. Gheorghe is under the jurisdiction of the village itself, and therefore a restoration project only needs the approval of the mayor and the local community, and not that of the Reserve Authority. This offers an opportunity for speedier restoration, and at the time of writing discussions between RE and the Sf. Gheorghe authorities are ongoing for the restoration of communal lands adjacent to the village itself. An initial feasibility study conducted in October 2015 concluded that the land can be restored, and discussions are currently ongoing about what kinds of land-use would be accommodated within the restoration area.

adopters – in order to influence policy from the ground up. The local administration, particularly the ARBDD, often treats locals like criminals, and RE has spotted an opportunity to empower local communities. However, they run against a very basic problem: most people are not the searched-for early adopters. What the Delta means for them is not what it means for RE. And though the idea of participation seems to be fundamental for the success of rewilding projects, it also rests on the assumption that meanings can align. In a marginalized region where people are accustomed to being treated badly and being told what to do by successive administrations, trust is a further problem[17].

Beside the creation of wildlife tourism (which implies also floating hides, trained guides, and a system of hiking trails), RE is looking for other opportunities to connect with the local population and perhaps lure more early adopters. The meeting with Letea's mayor was part of this effort. Letea the village is close to Letea forest, a series of sand dunes with forest and open grassland that is indeed spectacular, complete with hundreds of horses that, over the last several hundred years, have rewilded themselves. The region is beautiful, and part of a strictly protected core area of the Biosphere Reserve. What this means in practice is that the reserve authority has built a fence around the perimeter of the forest (to the tune of almost two million euros) in order to preserve the supposedly fragile ecosystem (DDBRA, 2015). This of course also keep locals out, or rather allows in only those that have a certain relation with the guards. RE would like the management of this area to be a lot more hands-off, but so far there has been no opening in the governance system that they could exploit to this effect. The mayor of Letea resents the fence, not least because of the extravagant cost.

RE has focused most of its attention in the Delta on the possibility of reintroducing keystone species. This has so far meant three things. The first reintroduction proposal was for the beaver. The

[17] For more on the history of participatory policy making and the foundations of mistrust in the Delta, see Van Assche et al (2011a, b).

permit to carry it out was not granted, though the beaver is slowly reintroducing itself. Then, RE was in dialogue with a cattle owner from Sf. Gheorghe to gradually replace his cattle with Tauros. The Tauros is a recreated aurochs, on which RE has been working together with the TaurOs Foundation. Heck cattle, the other 'recreated' aurochs, are considered to not be close enough to the extinct species, so the organization is trying to build a proper wild cow. These Tauros would have then populated parts of the grazing grounds in the Delta, which are given in concessions to individual owners. The owner of the largest such concession in Sf. Gheorghe had initially agreed to introduce the Tauros, but then unexpectedly backed out. For this project, RE did not need a permit, because in the eyes of the law they weren't introducing a wild species. Tauros is a cow under the law, so domestic, and therefore can be moved around freely. In the latest push for the introduction of Tauros, RE is working together with three smaller-scale farmers to introduce animals on their land. In October 2015, the first transport of Tauros arrived, comprising 12 animals. The animals are currently roaming the communal lands of the village, mixing with the local population of cattle. Indeed, the mixing was part of the point for both RE and the farmers: RE gets access to a new gene-pool[18] while introducing species, and the farmers get new genes into their own herds. In this case, the semiotic practices surrounding cattle, though otherwise profoundly different, temporarily work together. However, it is not at all clear that the longterm goal of RE is at all intelligible to the farmers. For them, the idea is not to have herds of aurochs replace domestic animals, but rather to have some pretty impressive looking cows mate with their domestic ones. It is in this sense that the Tauros have begun to build a reputation in the Delta, and RE is now being contacted by other farmers that also want to introduce the new arrivals. It remains to be seen whether this temporarily successful alignment lasts, given that the meaning of the Tauros is already markedly different for farmers and for rewilders.

[18] The theory that informs the back-breeding effort says that aurochs-like genes have survived most in Southern European cattle, because of the domestication pattern of the original aurochs. So the breeds that are used in the TaurOs Programme are from Spain, Italy, Portugal, the Balkans, and now Romania. The idea is that the hardy breeds of the Danube Delta might hold a piece of the genetic puzzle the back-breeders are after. So the introduction of Tauros to the Delta helps the Programme access a gene-pool it thinks it needs.

Finally, RE applied for a permit to introduce red deer to the sand dunes of Caraorman. Similar to Letea forest, Caraorman is a region of long dunes with a variety of vegetation, from shrubs and grass to forest. And as Letea, it is part of a 'strictly protected' core of the biosphere reserve. RE commissioned a feasibility study which was presented to the reserve authority. The study itself had found that, in all likelihood, red deer had at some point existed in the region, and that currently 15.6% (Pașca et. al., 2014) of the Caraorman habitat was suitable for these animals[19]. Rewilding Europe's proposal was summarily dismissed, on several grounds: the ARDBB did not accept the argument that deer had existed there in the past[20] and, more importantly, it did not share the view of Caraorman as a place where deer have to exist. In other words, they did not have the vision. The director of ARDBB, Mr. Munteanu, said as much, claiming that the rewilding vision is "playing with nature" and calling it a Dutch idea. His organization's viewpoint was instead that of conservation with a fence. The representative of Romsilva, the forest authority, claimed that the only way that they know to protect habitats is to fence them off. And the representatives of the Delta's research institute could not imagine why a permit would be given for the (re)introduction of a species in a strictly protected area. So the conflict was really about the definition of strictly protected. From the point of view of the rewilding vision, it makes no sense to fence something off. That amounts to allowing it to slowly die, by cutting it off from natural processes. From the point of view of the authorities, it makes no sense to introduce deer on sand dunes, because they would eat the vegetation that they are trying to fence off. The theory of the importance of natural grazing for the maintenance of habitats, a core of RE philosophy, was simply not accepted. It seemed to me that the conflict was overwhelmingly a semiotic one: there were simply two opposing visions of what Caraorman *should* look like[21], anchored in what Caraorman currently means to the participants.

[19] The 'suitable' category was composed of three sub-categories, namely highly suitable, moderately suitable, and somewhat suitable. Only 3.1% of the Caraorman territory was deemed 'highly suitable'.

[20] This cannot really be settled either way. The soil in the region is sandy, and therefore unlikely to have preserved animal remains very well. And in any case the ARDBB itself would not give archeological excavation permits in a strictly protected area.

[21] During the meeting, Deli Saavedra, RE's regional manager, asked why it is that red deer can live in wetlands

Spectacular nature was one thing for RE, and another for the authorities.

The insistence on reintroducing species betrays a tension between the ecological argument for rewilding, the activist vision that tries to translate such arguments into a shared practice, and local realities. As I suggested before, the rewilding idea cannot be understood as primarily ecological. If it were a matter of ecological argument, then the issue would be simple. Let us assume that it could be proven beyond reasonable doubt that having Tauros in the Delta is crucial for the local ecology. That ecological fact, however, would be impotent without the Delta having that *meaning* in people's imagination[22]. And importantly, without that meaning contributing to people's ability to make a living. It is commonplace in the Delta to hear locals say that outsiders care more abut the birds than about them. This perception, though perhaps not fully accurate, is also not wrong in important respects. What the rewilding vision presupposes is a closeness of culture and wilderness that is difficult to imagine with 15.000 people living comfortable lives. Difficult is not impossible, to be sure, but the insistence on species and ecological fact fuels the suspicion that, really, outsiders wish the locals would just get out of the way.

Though rewilding is not synonymous with species reintroductions in the service of habitat restoration, it is nonetheless telling that, in the case of the Delta, reintroductions were the first line of action. So even though the connection with restoration is fundamental, it is increasingly clear that in practice this has real limitations, and therefore the rewilding concept will need to transform what its relation to restoration is. The vision that defines the rewilding ethos, if it is to be successful, needs to treat species reintroduction as one tool among many. The other tools have to do with social cohesion, changing minds, allowing locals to form a relationship to wilderness that they have

elsewhere in Europe, from the far North to the South-West, but not in the Delta. The question was not answered.

[22] Here, Brady's (2003) idea of "ampliative imagination" is very appropriate. The idea is that the imagination, based on past experiences and current aesthetic values, projects future spaces that are perceived as desirable or not. This is to be understood in connection with Prior and Brady's (forthcoming) insistence on rewilding ampliative imagination as essentially future-oriented.

probably never had. Alexandra Panait, the Delta project team leader, is indeed trying to built support for the rewilding vision through the creation of local partnerships, as described earlier. And it must be accepted that some of these partnerships might involve helping the people of Letea build a road. Though it seems paradoxical to rewild by building roads, it might just be that it is through such initiatives that rewilding can start building the future it wants. Looking at the road narrowly – we should not pave! - is failing to see the forest for the trees.

Panait points out that early adopters are by definition few, and that time is the most important variable in the work of the organization. In other words, it is no wonder that the rewilding vision has not been adopted wholesale by the local inhabitants. However, the fact that rewilding is a vision requiring novel meanings for nature suggests that the problem of early adopters is not just one of numbers. Instead, the fundamental conundrum of rewilding is how to bridge what rewilders perceive as ecological imperatives (species reintroductions, natural numbers, natural grazing, and so on) with the reality of the meaning of those practices in actual human lives. Put differently, the ecological implications are secondary to the displacement of meaning for locals; if villagers become game wardens, then they are no longer hunters, or farmers. The idea of natural autonomy that we have seen to be central to rewilding often sits uneasily with people's view of themselves as managers of nature. A future with zero-management of large tracts of nature also necessarily means a future where the majority of people understand their relationship with nature in non—management terms. In rural settings, this is exceedingly difficult. Managing this transition is therefore the most important point for rewilding. Panait, alert to this, has been redesigning the Danube Delta project such that it would focus first and foremost on “capacity building, a more trustful relationship [with the local community] and developing social capital”. What this means in practice remains to be seen, but the project is decidedly moving in the direction of the social and political dimensions of the rewilding vision, with the understanding that without such preparatory

groundwork, the ecological side of rewilding stands little chance on its own.

4

Based on the theoretical overview presented in section 1, the activist discourse elaborated in section 2, and the practice of rewilding in the Danube Delta presented in section 3, I want to propose a provisional definition of rewilding that captures the conceptual terrain delineated so far. To underline the idea that rewilding can be understood in two different ways, I want to split this definition in two. The first part focuses on the ecological side of rewilding, while the second on its overarching vision. Rewilding, then, can be understood as "the practice of restoring functional habitats through the use of keystone species in order to (re)create self-sustaining nature", as well as "the future-oriented vision of spectacular, zero-management, nature side-by-side with advanced civilization". Rewilding is first and foremost a practice; its point is to change the world in fundamental ways. It proposes the creation of functioning ecosystems where they no longer exist, and functioning is defined as self-sustaining. This understanding of what a functioning ecosystem is allows rewilding to not depend on strict baselines[23]. In other words, rewilding is the restoration of habitats in terms of function, or the creation of entirely new habitats that are deemed functional in terms of their capacity to endure, change, and thrive on their own. In order to achieve this, rewilders propose to use the abilities of keystone species to craft their own environment. But the (re)creation of ecological integrity cannot be the only driver behind rewilding. If it were, then rewilding would simply advocate stepping back from active management, and letting nature do the rest. As it stands though, rewilding projects advocate the introduction of specific species for specific reasons, in order to achieve its goal of ecological integrity in a way that also aligns with the wider vision of what that integrity looks like. In other words, rewilding is also a political project that wants to help in the creation of a nature abundant in megafauna. And what the implementation of rewilding

[23] Oostvaardersplassen is the most famous example of non-baseline restoration. See Lorimer and Driessen (2014).

projects so far shows is that this political vision needs to very carefully navigate the semiotic terrain that sustains people's lives.

The idea of autonomous, self-willed land fits within the future oriented mentality of rewilding, inasmuch as natural processes function dynamically and species manage their own habitats. This also makes it possible to accept new natural developments, including those instigated by climate change. For example, Central and Eastern Europe is receiving golden jackal populations that have not historically exited there. This is because of climate change; the jackals are adapting by extending their range north. They are now present in the Danube Delta as well, where they are feared and hated by locals. From a restoration perspective, they should be eradicated. From a rewilding perspective, they are welcome. And, as signaled throughout the argument of this paper, the rewilding desire to protect and welcome the jackals can only be meaningfully implemented inasmuch as the local hatred of the jackals is well understood.

Confronted with the realities of implementing rewilding projects, what I have called the rewilding vision takes precedence over the ecological version of the concept. This is so because, no matter the ecological arguments presented, rewilding needs to become meaningful to a larger group of people than the rewilders themselves. In Sfântu Gheorghe, RE has been discussing the possibility of restoring the wetland habitat to the north of the village itself, which has been slowly turned into a wasteland because of the construction of a dyke that cuts it from the hydrological cycle of the swamp. A narrow understanding of rewilding would see this restoration of the area as driven by the need to recreate the functional ecology of this particular place. A wider and, I think, more accurate understanding of rewilding sees this initiative as a political project to both create a functional ecology and a meaningful place for the inhabitants. Indeed, without this area becoming meaningful in local practice, it stands little chance of being sustainably functional. Because of the reality of this

requirement of meaningfulness, the latest discussions with the mayor of Sfântu Gheorghe made room for the mayor himself to propose ways in which the restored habitat could become useful to the community. One way would be for it to contain reed beds that can be harvested. This would be of great help to the community, given that the place under discussion is immediately outside the village. The mayor also wanted a new walkway, to connect the wetland with the beach, and discussions focused on how this walkway could be achieved with minimal environmental impact. And lastly, the mayor wanted a row of tall trees at the edge of the wetland, to protect the village from the prevailing northern winds. There is no immediate ecological need for a row of trees. But their potential in integrating the restored habitat into people's semiotic practices should recommend them to rewilders highly.

For the rewilding vision to take root in many different places, local inhabitants need to *find themselves* in a wilder landscape. This will also mean involving local participants and listening to how they imagine the future of their home. In all likelihood the local imagination will not follow ecological reasoning. The potential of rewilding rests precisely in its capacity to absorb non-ecological thinking into its projects. The future of rewilding therefore rests with its developing an inclusive social approach to rewilding projects. Far from the plasticity of rewilding (Jørgensen, 2015) threatening its coherence, it instead holds the potential for a new kind of territorial policy, based in equal measure on social and natural science. Rewilding in practice has to navigate between the ecological facts that abound in the scientific literature, and the ways in which these can become meaningful in actual human lives.

References

Barnes, J. I., Macgregor, J., & Weaver, L. C. (2002). Economic efficiency and incentives for change within Namibia's community wildlife use initiatives. *World development*, *30*(4), 667-681.

Boudreaux, K., & Nelson, F. (2011). Community conservation in Namibia: Empowering the poor with property rights. *Economic Affairs*, *31*(2), 17-24.

Brady, E. (2003). *Aesthetics of the Natural Environment*. Edinburgh: Edinburgh University Press.

Brown, C., Mcmorran, R., & Price, M. F. (2011). Rewilding–a new paradigm for nature conservation in Scotland?. *Scottish Geographical Journal*, *127*(4), 288-314.

Callicott, J.B. (1994a). 'The Land Aesthetic'. In C.K. Chapple, C.K. (ed.), Ecological Prospects: Scientific, Religious, and Aesthetic Perspectives, pp. 169-170. Albany: State University of New York Press.

Callicott, J. B. (1994b). The wilderness idea revisited. Ecological Prospects: Scientific, Religious, and Aesthetic Perspectives, 37.

DDBRA. (2015). *Conservarea Padurii Letea*. Available at: http://www.ddbra.ro/media/Proiect_Conservarea%20Padurii%20Letea(1).pdf <Accessed August 26th 2015>

Drenthen, M. (2011). Reading Ourselves through the Land: Landscape Hermeneutics and Ethics of

Place. Placing nature on the borders of religion, philosophy and ethics, 123.

Elliot, R. (1982). Faking nature. *Inquiry*, *25*(1), 81-93.

Hettinger, N. 2010. 'Animal beauty, ethics, and environmental preservation'. Environmental Ethics 32(2): 115-134.

Hoole, A., & Berkes, F. (2010). Breaking down fences: Recoupling social–ecological systems for biodiversity conservation in Namibia. *Geoforum*, *41*(2), 304-317.

Jørgensen, D., 2015. Rethinking rewilding. *Geoforum*, *65*, pp.482-488.

Junker, B. and M. Buchecker, (2008) 'Aesthetic preferences versus ecological objectives in river restorations'. Landscape and Urban Planning 85: 141-154.

Kahler, J. S., Roloff, G. J., & Gore, M. L. (2013). Poaching Risks in Community- Based Natural Resource Management. *Conservation Biology*, *27*(1), 177-186.

Katz, E. (1996). The problem of ecological restoration. *Environmental Ethics*, *18*(2), 222-224.

Katz, E. (2012). Further adventures in the case against restoration. *Environmental Ethics*, *34*(1), 67-97.

Keenleyside, C., Tucker, G., & McConville, A. (2010). Farmland Abandonment in the EU: an Assessment of Trends and Prospects. *Institute for European Environmental Policy, London*.

Korsmeyer, C. (2005). ‘Terrible beauties’. In M. Kieran (ed.), Contemporary Debates in Aesthetics and the Philosophy of Art, pp.51-63. Malden, MA: Blackwell.

Light, A. (2009). Ecological restoration and the culture of nature: A pragmatic perspective. *Readings in the Philosophy of Technology*, 452.

Lorimer, J. and C. Driessen. (2014). ‘Wild experiments at the Oostvaardersplassen: Rethinking environmentalism in the Anthropocene’. Transactions of the Institute of British Geographers 39: 169–181.

Marris, E. (2013). *Rambunctious garden: saving nature in a post-wild world*. Bloomsbury Publishing USA.

Monbiot, G. (2013). *Feral: searching for enchantment on the frontiers of rewilding*. Penguin UK.

Mitchell, F. J. G. (2005), How open were European primeval forests? Hypothesis testing using paleoecological data. Journal of Ecology, 93: 168–177.

Naem, S. (2013). Ecology: Into the (re) wild. *Nature*, *497*(7450), 436-437.

O'Connell-Rodwell, C. E., Rodwell, T., Rice, M., & Hart, L. A. (2000). Living with the modern conservation paradigm: can agricultural communities co-exist with elephants? A five-year case study in East Caprivi, Namibia. *Biological conservation*, *93*(3), 381-391.

Pearce, F., 2015. *The New Wild: Why invasive species will be nature's salvation*. Icon Books Ltd.

Prior, J., & Brady, E. (forthcoming). Environmental Aesthetics and Rewilding. *Environmental Values*.

Prior, J. and Ward, K.J., 2016. Rethinking rewilding: A response to Jørgensen. *Geoforum*, *69*, pp.132-135.

Pașca et al 2014. Studiu de fezabilitate privind repopularea cu cerb comun (*Cervus elaphus* L. 1758) in zona grindului Caraorman. Institutul de Cercetări si Amenajări Silvice (ICAS), Brașov

Sandom, C. J., Hughes, J., & Macdonald, D. W. (2013). Rewilding the scottish highlands: Do wild boar, sus scrofa, use a suitable foraging strategy to be effective ecosystem engineers?. *Restoration Ecology*, *21*(3), 336-343.

Schepers et al (2015). *Rewilding Europe Annual Review 2014*, Nijmegen, The Netherlands

Stokstad, E., 2015. Bringing back the aurochs. *Science*, *350*(6265), pp.1144-1147.

Suich, H. (2013). The effectiveness of economic incentives for sustaining community based natural resource management. *Land Use Policy*, *31*, 441-449.

Teampău, P., & Van Assche, K. (2007). Sulina–the Dying City in a Vital Region. Social Memory and the Nostalgia for the European Future. *Ethnologia Balkanica*, (11), 257-278.

Teampău, P., Devlieger, P., Suciu, C., & van Assche, K. (2008). Liquid boundaries in marginal

marshes. Reconstructions of identity in the Romanian Danube Delta. *Studia Universitatis Babes-Bolyai-Sociologia*, (1), 115-138.

Tercek, M., & Adams, J. (2013). *Nature's fortune: how business and society thrive by investing in nature*. Basic Books.

Van Assche, K., Bell, S., & Teampau, P. (2012). Traumatic natures of the swamp: concepts of nature in the Romanian Danube Delta. *Environmental Values*, *21*(2), 163-183.

Van Assche, K., Devlieger, P., Teampau, P., & Verschraegen, G. (2009). Forgetting and remembering in the margins: constructing past and future in the Romanian Danube Delta. Memory studies, 2(2), 211-234.

Van Assche, K., Duineveld, M., Beunen, R., & Teampau, P. (2011a). Delineating locals: Transformations of knowledge/power and the governance of the Danube Delta. *Journal of environmental policy & planning*, *13*(1), 1-21.

Van Assche, K., Beunen, R., Jacobs, J., & Teampau, P. (2011b). Crossing trails in the marshes: rigidity and flexibility in the governance of the Danube Delta. *Journal of environmental planning and management*, *54*(8), 997-1018.

Vera, F.W.M. 2009. 'Large-scale nature development – the Oostvaardersplassen'. British Wildlife 20(5): 28-36.

Wedeen, L. (2002). Conceptualizing culture: Possibilities for political science. *American Political*

Science Review, *96*(04), 713-728.

Wilder, B. T., Betancourt, J. L., Epps, C. W., Crowhurst, R. S., Mead, J. I., & Ezcurra, E. (2014). Local extinction and unintentional rewilding of bighorn sheep (Ovis canadensis) on a desert island. *PloS one*, *9*(3), e91358.

Zimov, S. A., Zimov, N. S., & Chapin III, F. S. (2012). The past and future of the mammoth steppe ecosystem. In *Paleontology in Ecology and Conservation* (pp. 193-225). Springer Berlin Heidelberg.