

## Editorial / Prologue

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Ipsa quoque immunis rastroque intacta nec ullis  
saucia vomeribus per se dabat omnia tellus,  
contentique cibus nullo cogente creatis  
arbuteos fetus montanaque fraga legebant  
cornaque et in duris haerentia mora rubetis  
et quae deciderant patula Iovis arbore glandes.

The teeming Earth, yet guiltless of the plough,  
And unprovok'd, did fruitful stores allow:  
Content with food, which Nature freely bred,  
On wildings and on strawberries they fed;  
Cornels and bramble-berries gave the rest,  
And falling acorns furnish'd out a feast.

Ovid's *Metamorphoses*, in *Fifteen Books*, Translated by the Most Eminent Hands [Dryden, Garth, Pope et al.], ed. Sir Samuel Garth. Tonson, London, 1717, Book I (transl. J. Dryden), pp. 101-106

“Europe's landscapes have faced more habitat loss and fragmentation than any other continent. This is a major problem for biodiversity.” This concise statement introduces a précis of the threats to green infrastructure and of the efforts of the European Commission to “develop a strategy for an EU-wide Green Infrastructure as part of its post-2010 biodiversity policy” (European Commission 2010, p.1). Major concerns focussed on safeguarding three essential qualities of (European) green infrastructure understood in its broadest sense as the entirety of green space from core zones of national parks to patches of peri-urban ruderal areas, explicitly connectivity, (landscape) permeability and multi-functionality.

In March 2010 the European Council of Ministers agreed upon a new EU target for the protection of biodiversity in 2020, “The EU intends to halt the loss of biodiversity and the degradation of ecosystem services in the EU by 2020, restore them in so far as feasible, while stepping up the EU contribution to averting global biodiversity loss” (European Commission 2010, p.4).

It was and is always crucial to verify political announcements in general and in environmental and conservational issues in particular a decade or more after these statements have been published.

When taking into account that - just as an example among many others – based on numbers published by the Austrian Federal Office of Metrology and Surveying (BEV) and Statistics Austria from 1985 to 2018 a population growth of 16 % is confronted with an increase of sealed surfaces of 67 %, with an only marginal flattening of the gradient of increase in the period 2010 to 2018, it becomes evident that efforts to safeguard green infrastructure still significantly lag behind the overall pressure of environmentally-unfriendly economic development. The vulnerability of the soil-vegetation balance is underlined by the fact that the soils of the EU-27 member states store an estimated amount of between 73 and 79 billion tonnes of carbon, equivalent to about 50 times the annual greenhouse gas emissions from the EU, and that ongoing intensification of agricultural production and sealing of high-quality arable soils is inevitably leading to a continuous decline of soil organic matter (FAO and ITPS (eds.) 2015, p.340).

It is also essential to distinguish between the quantitative term “greenness” as such and the quality of the respectively related green infrastructure. Far too large is the amount of green space in urban and peri-urban areas - and increasingly in rural settlements - due to the fast-growing developing areas comprising those ugly standardised plots of monotonous “house gardens”, or “suburban lawns” in the two kinds of meanings - which are purely monocultural, dominated by all too frequently mown lawns often fenced in by uniform Thuja hedges, lacking any species-rich spots of at least some biodiversity. Also in the valuable rural cultural landscapes of Central Europe these fringes surrounding the historic hearts of the villages/towns were over centuries covered with meadow orchards and household gardens providing an exhausting biodiversity of grass species, herbs, vegetables and fruit trees and have been/are extensively destroyed by disastrous area zoning plans developed and enforced under the destructive influence of the construction industry. The same danger of misinterpretation holds true for green infrastructure related to “extensive” grazing lands in rural landscapes which are far too often degraded by additional fertilisation and sowing of fast-growing red clover and the like, thus leaving behind extremely species-poor grasslands blanketing increasingly over-fertilised soils.

It is a matter of fact that apart from the disturbing impact on open landscapes by the steady growth of transport infrastructure construction (landscape fragmentation) it is mainly urbanisation which significantly contributes to both the loss of green infrastructure and soil surfaces by a “decoupled land take”. “Since the mid-1950s, the surface area of cities in the EU has increased by 78 %, even though the population has grown by only 33 %.” (European Union (ed.) 2019, p.9).

However, positive steps have also been set. It can be argued that by all means important steps towards implementing green infrastructure in European policies have been made, efforts to stimulate programmes and projects which lead the way to a more efficient implementation into planning and management both at regional and national levels have been set, awareness for the values of unspoiled connected and permeable landscapes, of High Nature Value (HNV) areas in rural landscapes, of patchworks of local and sub-regional initiatives to provide multi-functionality in heterogeneous (agricultural and peri-urban) landscapes has been raised. In that light MaGICLandscapes plays a focal role

as its (Central) European approach is exactly covering the aforementioned portfolio of issues.

“The main objective of MaGICLandscapes is to increase the capacities of institutions to improve the management of the green infrastructure (GI) resource and promote sustainable land-use, both in areas of high biodiversity and surrounding intensively used areas, in order to maximise its multiple socio-economic/environmental benefits and value for communities such as quality of life and environmental services and for the natural world such as ecological viability.”

MaGICLandscapes (application document). TUD, Dresden, 2016, p.35

It is the enhancement of “the role of (semi)natural landscapes as core areas of Green and Blue Infrastructure in Central Europe” on the one hand and the investigation of the “potential of modified landscapes to support the GI functions of core areas through enhancement of those landscapes” on the other hand which both lay the foundation for significantly increasing “the capacity of institutions to improve the functionality of GI through the provision of tools, training and information and evidence-based actions”. It is obvious that besides documentation and spatial as well as thematic analysis of ecological network structures as such and green infrastructure in the overall context the subsequent valorisation of knowledge towards in-situ implementation and - consequently - towards stimulation of a new quality of understanding and appreciation of the values of green infrastructure - from the solitary tree in front of the window to the wilderness of pristine areas – represent a crucial momentum of establishing firmly rooted identification and care of/for nature in its manifold representations. It is also obvious that such holistic initiatives are still underrepresented and their impact beyond the runtime of similar projects in the real-world context is poor.

Mankind is corruptible if it comes to deciding between living in non-reflective irresponsibility (shaped by the misunderstanding of freedom as the “right of unlimited individual consumption”) and standing against ecologically/environmentally harmful behaviours both at the level of the local/regional environment as well as of the sphere of the individual living space, thus taking self-responsibility in protecting nature in general and green infrastructure particularly.

Howsoever, a spontaneous selection of reflections of three most-famous poets and one of the most eminent environmental activists of the 20<sup>th</sup> century upon human-induced destructive impact on nature during the last two millennia proves that such (often devastating) conflicts were/are always immanent due to the intrinsic ethical and moral weakness of the human being as such. It is just the fatal misuse of tools of contemporary technologies which make the consequences at all levels much more if not deadly dangerous.

In order not to interrupt and thus disturb the connectedness of both chronological as well as contextual interrelations which span a period from the beginning of the first millennium

CE to the end of the second millennium CE the respective text excerpts are arranged consecutively:

1. Publius Ovidius Naso (43 BC - 17/18 AD), Roman Poet

Metamorphoses (3-8 AD)

[...]

communemque prius ceu lumina solis et auras  
cautus humum longo signavit limite mensor.  
nec tantum segetes alimentaue debita dives  
poscebatur humus, sed itum est in viscera terrae,  
quasque recondiderat Stygiisque admoverat umbris,  
effodiuntur opes, inritamenta malorum.  
iamque nocens ferrum ferroque nocentius aurum  
prodierat, prodit bellum, quod pugnat utroque,  
[...]

[...]

Then Land-marks limited to each his Right;  
For all before was common, as the Light.  
Nor was the Ground alone required to bear  
Her annual Income to the crooked Share,  
But greedy Mortals, rummaging her Store,  
Digg'd from her Entrails first the precious Oar;  
Which next to Hell, the prudent God had laid;  
And that alluring Ill, to fight display'd.  
Thus cursed Steel, and more accursed Gold  
Gave mischief Birth, and made that mischief bold;  
[...]

Ovid's Metamorphoses, in Fifteen Books, Translated by the Most Eminent Hands [Dryden, Garth, Pope et al.], ed. Sir Samuel Garth. Tonson, London, 1717, Book I (transl. J. Dryden), pp. 135-142

2. Pierre de Ronsard (1524 - 1585), French Poet

Contre les Bûcherons de la Forêt de Gâtine (1565)

[...]

Escoute, Bûcheron (arreste un peu le bras)  
Ce ne sont pas des bois que tu jettes à bas,  
Ne vois-tu pas le sang lequel degoute à force  
Des Nymphes qui vivoyent dessous la dure escorce?  
Sacrilege meurdrier, si on pend un voleur  
Pour piller un butin de bien peu de valeur,  
Combien de feux, de fers, de morts, et de destresses  
Merites-tu, meschant, pour tuer des Déesses?

[...]

To the Woodsman of Gastine

[...]

Stay, woodsman, stay thy hand awhile, and hark,  
It is not trees that thou art laying low!  
Dost thou not see the dripping life-blood flow  
From Nymphs that lived beneath the rigid bark?  
Unholy murderer of our Goddesses,  
If for some petty theft a varlet hangs,  
What deaths hast thou deserved, what bitter pangs,  
What brandings, burnings, tortures, dire distress!

[...]

Songs and Sonnets of Pierre de Ronsard, ed./transl. Curtis Hidden Page. Houghton Mifflin and Company, Boston, 1903, pp. 97-99 (Elegies, Mascarades et Bergerie, par P. De Ronsard Gentilhomme Vandomois. Gabriel Buon, Paris, 1565, Elegie XIV)

3. Robert Burns (1759 – 1796), Scottish Poet and Lyricist

Verses On The Destruction Of The Woods Near Drumlanrig (1791)

[...]

"Alas!" quoth I, "what ruefu' chance  
Has twin'd ye o' your stately trees?  
Has laid your rocky bosom bare-

Has stripped the cleeding o' your braes?  
Was it the bitter eastern blast,  
That scatters blight in early spring?  
Or was't the wil'fire scorch'd their boughs,  
Or canker-worm wi' secret sting?"

"Nae eastlin blast," the sprite replied;  
"It blows na here sae fierce and fell,  
And on my dry and halesome banks  
Nae canker-worms get leave to dwell:  
Man! cruel man!" the genius sighed-  
As through the cliffs he sank him down-  
"The worm that gnaw'd my bonie trees,  
That reptile wears a ducal crown<sup>1</sup>."  
(<sup>1</sup> The Duke of Queensbury)

William Ernest Henley, Thomas Finleyson Henderson (eds.), *The Poetry of Robert Burns*, Centenary Edition. Caxton, London, 1897, vol.4, p.53

4. José Lutzenberger (1926 – 2002), Brazilian agronomist and environmentalist

Acceptance Speech, Right Livelihood Award (1988)

Today, parks are often the only way of saving certain species or ecosystems. But to me the idea that we have to save parts of Nature against our own destructiveness seems obscene. It is an avowal that something is profoundly wrong with our civilisation. Shouldn't we also try to find out what is wrong with our present culture and how we can re-educate ourselves before it is too late? A healthy, sustainable civilisation can only be one that harmonises with and integrates into the totality of Life, enhancing it not demolishing it.

Modern industrial society has embarked on a course that, if allowed to continue much longer, will, in the end, destroy all higher forms of life on earth. One of the main aspects of how we wrongly deal with the world is reductionism, that is, facing only one issue at a time and thinking in straight lines. Looking for the minimum size of a certain ecosystem and then aiming at preserving only that minimum is a typical example. It completely leaves out the overall view of how those little green spots interact as parts of the whole, the biome and the ecosphere, and what will happen once they are left alone in an ocean of devastation.

José Lutzenberger, Acceptance Speech, Right Livelihood Award, 31 December 1988, Stockholm

Obviously nature as such and green infrastructure as one of its apparent manifestations were and are at the stake all through the history of mankind. But as José Lutzenberger puts it, it is the “industrial society” and the “reductionism” inherent in all kinds of purely profit-oriented and thus profit-maximising socio-economic systems which - sad to say - are rearing their ugly heads again. It is a matter of fact that celebrating the implementation of another patch of protected area under whatever status of protection and forgetting the entirety of our “biomes” and “ecospheres” is a fatal way finally leading into the “ocean of devastation”, as Lutzenberger calls it. Bearing in mind that Lutzenberger stressed these facts more than 30 years ago, and being aware that he was then the most eminent leading figure fighting for the protection of the Amazon rainforests and that he was - at least cautiously - optimistic that though “the devastation, for whatever reason, of the world’s tropical rain forests is totally irreversible we will not be able to remedy the unpleasant consequences, but we might still be able to prevent the continuation of the devastation.”

Let us have an eye-opening and thus shocking look at the actual situation with regards to large-scale forest depletion in two extremely endangered large ecosystems, the Amazon rainforest - the largest continuous rainforest ecosystem in the world - and the eastern Carpathians, including the largest primeval beech forest ecosystem in Europe.

In the Amazon basin both green and blue infrastructure are at risk. Rainfall has declined in about 70 % of the forest regions. It is estimated that in 2030 nearly 30 % of the Amazon biome will be treeless if the rate of deforestation does/will not change which - in contrary - obviously happens, though unfortunately in the wrong direction. Researchers claim that the tipping point regarding significant and irreversible change in the forest ecosystems of the Amazon lies at 20-25 % deforestation, and we have already reached 20%! A process of “savannah-isation” is activated which will turn rainforest into tropical grasslands, thus leading to a break-down of the climate-regulative function of the vast areas of rainforest, and will devastate ecosystem services related to food, water and energy supply both regionally as well as globally.

Since the outbreak of the COVID-19 virus pandemic and its spread into the Amazon rainforest it is to be feared that the impact on the vulnerable indigenous tribes will be the worst. However, at the same time the protection of reserves in Brazil is weakened and environmentalists and indigenous leaders expect that the pandemic is being used as a pretence for a tremendous increase of illegal logging and mining. Recent numbers refer to more than 6,800 wildfires in the Brazilian Amazon region detected in August 2020 which is the highest number for 13 years. The amount of burnt area has increased for about 50 % compared to the same month last year. To make things even worse dubious interest groups go so far to assassinate indigenous activists opposing their illegal intentions. It is reported that from November 2019 to March 2020 five leaders from the Araribóia Indigenous Territory in Brazil's Amazonian state of Maranhão were purposely killed, all of them somehow involved in the defence of the Araribóia territory against illegal logging (Amazon Watch 2020).

It is disturbing and embarrassing that similar events happen right on our doorstep, explicitly in the remote parts of the last large areas of primeval beech forests in Central Europe, in the easternmost parts of the Carpathians. In 2013 an official investigation in Romania revealed that during the previous ten years about 80 million cubic metres of wood were illegally logged, corresponding to a worth of about 5 billion euros. In 2018, after Romania's second National Forest Inventory had been published, the Romanian NGO Agent Green referred to unpublished information which states that logging per year in the period from 2013 to 2018 amounted to more than double of the legally allowed logging. Based on the forest management plans, the maximum volume of logging in Romania is 18 million cubic metres per year, but the true amount of logging was 38 million cubic metres per year. It is thus obvious that illegal logging in Romania was exploding during the second decade of the 21st century (EuroNature and Agent Green (eds.) 2019, p.22)

These developments are also - like in the Brazil Amazon rainforests - closely correlated with a significant increase of violence, in this case against forest rangers. In September/October 2019 two forest rangers were killed by lumber thieves in Northern Romania (Romanian Insider 2019).

Indeed, green infrastructure encompasses wilderness areas, semi-natural and cultural landscapes, High Nature Value (HNV) areas in rural landscapes as well as meadow orchards around villages, peri-urban and urban green space from parks to single trees in intra-urban backyards.

“Rewilding is the passive management of ecological succession with the goal of restoring natural ecosystem processes and reducing the human control of landscapes. The opportunity for large-scale rewilding in Europe has been developing over the last few decades through the process of land abandonment, particularly of farmland. Some projections estimate that between 2000 and 2030 as much as 20 million hectares may be released from agricultural use in Europe, an area twice as large as Portugal.”

Pereira H.M. and Navarro LM (2015) Rewilding European Landscapes. Springer, Berlin Heidelberg, pp.V-VI.

It seems to be obvious that besides traditional conservation schemes thinking in terms of rewilding European landscapes is a concept worthwhile to be given a serious consideration. However, the concept of ecological rewilding has to take into account that especially in Europe there are complex socio-ecological systems with a continuously increasing impact of human interaction which have to be managed. The focus therefore lies upon ecosystems where it is possible to reduce human impact on ecological processes as much as possible and where non-extractive ecosystem services, e.g. carbon sequestration and recreation potential, the latter providing additional sources of



income for the local people, can be provided. This can - at least in the medium term - only be secured under the assumption that the issue is à la longue understood and advocated by the local people themselves!

But is wilderness - in spite of all these constraints - a focal concept which will significantly support the protection and conservation of green infrastructure both globally as well as regionally in the long run? Or does the key for a long-term safeguarding of green infrastructure lie rather in series of small steps towards maintaining and additionally creating patches of green infrastructure in (peri-) urban and rural environments? Evidently both approaches and many more in between these two extrema are needed to ensure for the protection, creation and management of sufficient valuable green infrastructure at all levels of scale.

Taking into account that our societies are facing something like an “environmental generational amnesia” i.e. that each generation - and within it also each specific *Kulturkreis* - has a different understanding and perception of the term “nature”, also depending on the environment shaping the specific living space, however degraded or polluted it may be. It seems to be vital that in the light of a degrading perception of qualitative standards of a healthy environment the people concerned should not only be motivated to get involved in supporting protection, conservation and/or sustainable management of their landscapes but should also be actively engaged in interacting in and within nature. Urban and peri-urban spaces grow and open spaces shrink and despite that evidence it is “environmental generational amnesia” which allows for an overall unchecked destructive socio-economic development. The increasingly degraded standards of what “nature is” are shaped by the milieu and the age-set of the people concerned. Suggesting the development of a “nature language” which enables the establishment of a relationship with the environment at local to global scales based upon sensitiveness, empathy and appreciation might support a reversal of that “environmental generational amnesia” towards an urgently needed new interpretation of the implications and values of promoting individual self-determination and proactive involvement in safeguarding green infrastructure, from patches of ruderal “weeds” in intra-urban backyards to pristine forests in the last remaining outbacks of wilderness in Europe and worldwide (Kahn and Weiss 2017, pp. 7-24).

Actually perception of and interaction with “nature” in our societies fluctuate between ignorance and deep involvement. There is on the one hand an alarming indifference manifested by an ever-growing misunderstanding of what “nature is” - in suburban and rural settlements people compete for the most monotonous front lawn of their equally looking “little boxes on the hillside” (Seeger 1963) by high-frequency mowing of their putting-green-like treeless Thuja-framed garden plots, thus carefully preventing any possible emergence of spots of potential biodiversity. On the other hand an increasing process of awareness-building and re-interpretation of living in and with nature, mainly carried by urban out-migration but also by local people, takes place - people get involved in organic farming, restoring extensive grazing of semi-natural grasslands and are ready to stand for a proactive involvement in protecting and developing green infrastructure on

their doorsteps. Indeed, some of the new settlers in the “lost landscapes” of Central Europe and beyond are even crossing the line and try to resettle under Thoreau-like wilderness conditions (Csaplovics 2012).

MaGICLandscapes has successfully involved the whole potential of people living and working in favour and supportive of maintaining, extending and re-creating green infrastructure in Central European environments. May their impetus and inspiring example steadily grow and embrace an ever-increasing number of people ready to support strategies and action plans for the establishment of green infrastructure as a key indicator in planning guides in order to counteract immanent and even rekindling political and socio-economic interests favouring unrestrained exploitation of resources by purely economically-driven infrastructure.

“Deprived of their usual car-washing and lawn-mowing pursuits, the inhabitants of Privet Drive had retreated into the shade of their cool houses. [...]”

JK Rowling, *Harry Potter and the Order of the Phoenix*. Bloomsbury, London, 2003, p.7

“I would say that landscape and democracy are very strongly related. Because who can resist the logic of capitalist development for the sake of the landscape? Only the people living in the landscape can defend it.”

Gianni Vattimo, in: *In armonia con la natura interiore e esteriore/In harmony with the inner and outer nature*, a documentary by Lenka Ovcackova. MaGICLandscapes 2020, 5:20-5:25

“There are those who cling to the world and never break free;  
there are those who enter the wilds and never come back.”

Xi Kang (223-262AD), Letter to Shan Tao, cp. Hightower, James Robert (transl.) "Hsi K'ang's Letter to Shan T'ao.", in: Cyril Birch, Donald Keene (eds), *Anthology of Chinese Literature*, Vol.1: From Early Times to the Fourteenth Century. Grove Press, New York, 1965, pp.162-166 (UNESCO collection of representative works: Chinese series)

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