



Strasbourg, 10 April 2019

CEP-CDCPP (2019) 8E

COUNCIL OF EUROPE

EUROPEAN LANDSCAPE CONVENTION

10th COUNCIL OF EUROPE CONFERENCE ON

THE EUROPEAN LANDSCAPE CONVENTION

Report

“Landscape and responsibility”

Council of Europe
Palais de l'Europe, Strasbourg
6-7 May 2019



*Document of the Secretariat General of the Council of Europe
Directorate of Democratic Participation*

Summary

The European Landscape Convention states in its Preamble:

“The member States of the Council of Europe signatory hereto,

...

*Believing that the landscape is a key element of individual and social well-being and that its protection, management and planning entail rights and **responsibilities for everyone**”.*

The [Recommendation CM/Rec\(2017\)7 of the Committee of Ministers to Member States on the contribution of the European Landscape Convention to the exercise of human rights and democracy with a view to sustainable development](#), adopted by the Committee of Ministers on 27 September 2017 recommends that the governments of States Parties to the European Landscape Convention:

- a. consider the importance that quality and diversity of landscapes has for the minds and bodies of human beings, as well as for societies, in the reflections and work devoted to human rights and democracy, with a view to sustainable development;*
- b. frame landscape policies in the long term, so that they take into account the common surroundings for present and future generations;*
- c. develop landscape policies throughout the entire territory, so that people can enjoy their surroundings in dignity and without discrimination;*
- d. ensure that landscape policies respond to the ideal of living together, especially in culturally diverse societies;*
- e. take into account the landscape issue in the actions taken to promote good governance and democratic citizenship, notably through awareness-raising, training and education;*
- f. apply the principles of human rights and democracy in landscape policies;*
- g. guarantee the right to participation by the general public, local and regional authorities, and other relevant parties including non-governmental organisations, with an interest in the definition, implementation and monitoring of landscape policies;*
- h. include the “landscape”, as defined by the Convention, in indicators of sustainable development relating to environmental, social, cultural and economic issues;*
- i. implement the principle of non-regression in order to ensure that landscape policies can only be subject to continuous improvement.”*

Cf. Publication [Council of Europe Landscape Convention: Contribution to human rights, democracy and sustainable development](#), Council of Europe Publishing, 2018.

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The Report “Landscape and responsibility”, prepared in the framework of the Work Programme of the Council of Europe for the implementation of the European Landscape Convention, by Mr Yves Luginbühl as Expert of the Council of Europe, aims to put the concepts of landscape and responsibility into perspective, in accordance with the Preamble of the Convention.

The Conference is invited to:

- take note of the Report “*Landscape and responsibility*”, prepared in the framework of the Work Programme of the Council of Europe for the implementation of the European Landscape Convention, by Mr Yves Luginbühl as Expert of the Council of Europe, which aims to put into perspective the concepts of landscape and responsibility, in accordance with the Preamble of the Convention;
- decide to continue the work, in accordance with the CDCPP decision on the establishment of a Working Group with the elaboration of a draft recommendation of the Committee of Ministers on “Landscape and responsibility” on a landscape ethics charter and landscape well-being indicators.

Note: At its 6th meeting (CDCPP (2017) 18 rev.), the CDCPP decided on the composition of the Working Group of the European Landscape Convention “Rights and *responsibilities* for everyone” (Preamble of the Convention) and designated its members: Mrs Anita Bergenstråhle-Lind (Sweden), Mrs Hanna Jedras (Poland), Mrs Sanja Ljeskovic Mitrovic (Montenegro), Mrs Liv Kirstine Just-Mortensen (Norway), the representative of the Council of Europe Conference of INGOs, and entrusted the Secretariat to designate experts.

Report

“Landscape and responsibility”

Report prepared in the framework of the Work Programme of the Council of Europe for the implementation of the European Landscape Convention, by Mr Yves LUGINBÜHL, Expert of the Council of Europe

Mr Yves Luginbühl, is Research Director Emeritus at CNRS, France, UMR LADYSS, CNRS, Universities of Paris 1, 7, 8 and 10.

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“Only one who has responsibilities can act irresponsibly. [...] The well-being, the interest, the fate of others has, by circumstance or agreement, come under my care, which means that my control over it involves at the same time my obligation for it. The exercise of the power with disregard of the obligation is, then, “irresponsible,” that is, a breach of the trust-relation of responsibility.”¹

Hans Jonas

Introduction

The concept of responsibility is nothing new – it was of particular interest to the Greek and Roman philosophers. For Plato, for example: “Each individual, because he thinks, is alone responsible for the wisdom or the folly of his life, that is to say, his destiny”. That concept was no doubt around before antiquity, without being conceptualised. Neolithic man doubtless felt responsible for providing his group with food, shelter and protection, for example, even without having a word for “responsibility”. Nevertheless, a long time would pass before the word was analysed in any depth. Plato’s reflection highlights several concepts, however: thought, wisdom, foolishness and destiny. Terms which refer to the ability of human beings to make good or bad decisions, and to think about their future. So they are related concepts and must be borne in mind when discussing responsibility.

Having said that, how are responsibility and landscape related? Throughout Europe’s history there has been a constant adjustment of social practices to the environment, which could sometimes be a threat to the survival of human groups. That adjustment meant that those societies had a clear conception of their responsibility vis-à-vis their prosperity and their future survival. Even if certain specialists have considered that the concept of time was alien to ancient societies, those societies appear in some way to have secured the continuity of their culture and their economy to guarantee the survival and prosperity of future generations. This is where the term “responsibility” takes on all its meaning in relation to the “landscape”, within the meaning of the European Landscape Convention (Council of Europe, ETS no. 176), which sees the landscape as the surroundings in which people live. Article 2, which defines the scope of the Convention, reads: “Subject to the provisions contained in Article 15, this Convention applies to the entire territory of the Parties and covers natural, rural, urban and peri-urban areas. It includes land, inland water and marine areas. It concerns landscapes that might be considered outstanding as well as everyday or degraded landscapes.”

By “everyday landscapes” the European Landscape Convention means the landscapes in which people live on a daily basis, their everyday surroundings. People therefore have a responsibility towards those landscapes, which they help to build, to transform, and which they face every day as they go about their multiple activities. The concept of responsibility, and its corollaries, ethics and knowledge, must be analysed in order to relate landscape to individual and/or collective responsibility. What does it mean to govern landscape? And how is landscape an object of responsibility? Things we share in common, such as landscape, give rise to shared responsibility, to responsibilities in common; this means giving thought to how those responsibilities should be shared, and by whom: sharing, yes, but who are the players? The inhabitants of the place are certainly involved, but so are the politicians, the

1. JONAS Hans, *The imperative of responsibility. In search of an Ethics for the Technological Age*, University of Chicago Press, 1984, 3. What ‘to act irresponsibly’ means. CAMUS Albert, 1950, Noces, NRF, Gallimard, Paris, 110 pages.

officials responsible for spatial planning and the various associations that help to shape the future of landscapes, for example by protecting sites, nature or the environment. The formulation and development of economic policies on urban planning, agriculture, infrastructures, culture and tourism also have an impact on landscapes.

It is also necessary to examine the relations or interrelations between responsibility, landscape and well-being (or the lack of it), and how responsibility contributes to people's well-being and that of other living organisms. It is useful here to refer to what we know about the relationship between well-being and landscape, for since the report on the subject prepared in 2004² several studies have contributed to progress in this area. Finally, indicators of well-being should be developed and their role in individual and collective responsibility determined.

1. The concept of responsibility

Considerable thought has been given to this concept, in particular in a renowned work by Hans Jonas, "*The imperative of responsibility*", published in 1990.³ The book drew numerous comments from researchers and is considered the first and principal set of reflections on the subject. It raised new issues, frequently related to the concept of ethics, which the author often addressed. This report will not enter into lengthy explanations of the concept of responsibility, but instead will endeavour to put it into context. This means considering what the concept of ethics means in this context, and where it leads us. It means considering the scales of time and space over which the principle of responsibility can be exercised – individual and collective responsibility – and the governance of nature and territories.

The realm of people's responsibility for nature and for themselves is a sort of "city" where human groups act in order to perpetuate the species. Before the modern era, it was not a matter of preserving nature but of exploiting it for the essential needs of the human race. Hans tells us that nature was not an object of human responsibility:

"Still, this citadel of his own making, clearly set off from the rest of things and entrusted to him, was the whole and sole domain of man's responsible action. Nature was not an object of human responsibility – she took care of herself and, with some coaxing and worrying, also of man: not ethics, only cleverness applied to her. But in the city, the social work of art, where men deal with men, cleverness must be wedded to morality, for this is the soul of its being. It is in this intra-human frame, then, that all traditional ethics dwells, and it matches the size of action delimited by this frame."⁴

So it was not a question of ethics; human beings trusted in their intelligence and their ingenuity. The human world was a social artefact, distinct from nature which, as Hans Jonas said, took care of man. There was nature on the one hand, taking care of itself, and the city, the realm of men, on the other hand, enjoying the benefits and resources of nature. The development of technical skills and technology would change all that. It is no coincidence that the change took place at the turn of the 18th

2. LUGINBÜHL Yves, "Landscape and individual and social well-being", in: [Landscape and sustainable development: Challenges of the European Landscape Convention](https://rm.coe.int/16804895e6), Council of Europe Publishing, 2006. <https://rm.coe.int/16804895e6>

3. JONAS Hans, *The imperative of responsibility*. *op.cit.*

4. JONAS Hans, *op.cit.*

and 19th centuries, when British society first and then French and European societies, entered the era of industrial development. Scientific progress brought the invention of the steam engine, the railway, the steam hammer, the use of metal in industry and mechanical engineering, allowing human beings to believe they had fulfilled their Promethean dream and become mightier than nature.

Technical and technological development have gained speed over the last two centuries and especially since the Second World War, with the arrival of data processing, the Internet and increasingly high-powered means of communication. The threats to the survival of animal and plant species have increased exponentially with the use of toxic substances in agriculture, household products, cosmetics and pharmaceutical products. Many species of fish, for example, have become sterile because of particles of contraceptive substances that find their way into our waterways, and pesticides prevent pollinisers from reproducing. There are countless unfortunate examples of the use of products dangerous to human health and that of other living creatures. The media have given it extensive coverage and there have been numerous controversies in the news over the last few decades. Glyphosate, a herbicide considered probably carcinogenic by the International Agency for Research on Cancer, created a stir when the European Commission extended its authorisation for three years. These technical and technological developments have considerably altered the context in which the question of responsibility is addressed, or not, by the people active in public life, be they ordinary citizens, politicians, associations or public officials who implement the various policies that impact the territories and the landscapes. Let us examine the particular context of the 21st century and the principles that accompany that responsibility.

1.1 Context and principles of responsibility

Societies experiencing technological development generate communication flows on a global scale. They are witnessing the rapid growth of means of acting on nature and on the living conditions of all living things, human, animal or vegetable, and even on inert matter and natural resources such as inland water and the oceans. This raises the question whether societies are capable of mastering these technologies, and more specifically the chain of consequences they can unleash on the living world. That being so, how can we fail to consider the moral questions raised by political action in the environmental field? Although it is not the purpose of this report to pursue this line of thought on such a complex issue, it will address some relevant factors.

Morality is a branch of philosophy which is difficult to define. It helps, however, to look at it in connection with the concept of responsibility. A distinction can be made between legal or social responsibility and moral responsibility. Legal or social responsibility is when each individual is responsible before a court for any offence he or she may commit. Individuals are morally responsible for their actions, however, before their own conscience and that of their fellow men. Moral responsibility is a human attribute: people who consider themselves free and able to choose between good and evil must feel bound by their own duty, as responsible human beings, to give prominence to good over evil.⁵ Moral responsibility depends on several conditions, first and foremost among which is the freedom Hans Jonas refers to in his book. As individuals we are responsible only for what we do of our own free will, at our own initiative and with our own consent.

5. www.cosmovisions.com/responsabilite-sanction.htm#1H2XL42gELbAPeXk.99.

Having said that, the choice between good and evil is highly ambiguous; while doing someone harm is clearly evil, and helping someone is considered a good deed, the distinction is not so clear in the political sphere: politicians may claim to be doing the right thing when they take a decision, but there is no guarantee that everyone will benefit from that decision. Some might challenge it, considering it detrimental to their interest or their well-being. Freedom being a condition of moral responsibility, objects and animals, which have no moral freedom, are irresponsible; just as a child is not responsible for things its parents make it do, as Hans Jonas points out. Freedom is a condition of responsibility when it is also a condition of volition; a person who is physically forced to do things he or she would prefer not to do is not responsible. A French proverb says “No one is obliged to do the impossible”.

The distinction between legal responsibility and moral responsibility is therefore a matter of volition and not just consequences. From the legal point of view the will alone is not enough, action must have been taken; from the moral point of view the intention has the same value as the deed itself. We are already morally responsible when we start to think about taking action. To delve deeper into moral responsibility we must consider two concepts analysed by philosopher and psychologist Pierre Janet, which relate to merit and demerit. Responsibility for good leads to merit and responsibility for evil leads to demerit. The dictionary, *Trésor de la langue Française*, defines merit as: “A moral value that comes from the effort of someone who surmounts difficulties through a sense of duty and by aspiring to do good.”⁶ According to the same author, merit and demerit can be either *per se*, or in their effects, i.e. in relation to recompense or punishment.⁷ Individuals have merit when they intentionally increase their moral value and, conversely, demerit when they decrease it.

One can also evoke human dignity, which comes from our free and reasonable nature. All individuals otherwise being equal, they owe each other mutual respect. They are not all equal, however, insofar as they achieve the ideal of good to a greater or lesser degree. In fulfilling the conditions that enable them to do good, human beings guarantee their dignity, their right to greater respect, to esteem, to praise, to a reward: and that is merit. But merit requires individuals to be aware of their own worth, and to have self-esteem and prove themselves. On this subject Pierre Janet tells a story borrowed from Dostoevsky’s *The Brothers Karamazov*: “Alyosha, he says, is scorned everywhere, in every world he passes through. It has been so since he was a child. The man never thought to assert himself, to show any esteem for himself. As a result his comrades never saw themselves as his rivals. It was not through pride on his part; it was this naïve and charming thing: he did not understand, did not feel his own merit.”⁸ So responsibility that relates to merit – or demerit – requires a particular attitude of the individual, who must not underestimate himself and must show self-confidence to have the worth of

6. See also LE DANTEC F., *Savoir*, 1920, p. 81: “Un juste mérite; honorer, récompenser, vanter la mérite; mérite et récompense, mérite et vertu. La notion de mérite et celle de responsabilité sont des erreurs certaines, liées à la croyance erronée à une liberté absolue que nie le déterminisme universel” (Just merit; to honour, reward, sing the praises of merit; merit and reward, merit and virtue. The concepts of merit and responsibility are clearly errors, linked to the erroneous belief in an absolute freedom that universal determinism denies).

7. Merit, envisaged in its consequences, is the relationship of the moral agent with the reward, the quality that makes one worthy of being rewarded. Demerit, by contrast, is the relationship of the moral agent with the punishment: it is, as Plato called it, the right to punishment.

8. JANET Pierre, 1929, *L'évolution psychologique de la personnalité* (The Psychological Evolution of the Personality), ed. Chahine, Paris. Quotation from the full report of the lectures at the Collège de France, from stenographic notes revised by Miron Esptein, digital document disseminated by Jean-Marie Tremblay, professor of sociology at the Cégep de Chicoutimi, p. 131. In the collection “*Les classiques des sciences sociales*” (Social Science Classics).

http://classiques.uqac.ca/classiques/janet_pierre/evolution_psy_personnalite/evolution_psy.html

his actions acknowledged.⁹ In the professional context the work of people responsible for landscape projects is sometimes under-appreciated by elected representatives compared with that of architects or engineers.

Another author, Paul Janet, defines merit as follows: “What I call merit is striving to increase our inner excellence; and demerit is intentionally diminishing that excellence. [...]. He who does good increases in value; he has merit, he is meritorious. He who does evil loses merit, his action diminishes it.”¹⁰

Merit and demerit thus bring us to virtue. The theory of virtue is the natural corollary of the theory of merit. Virtue is lasting, habitual merit acquired by doing numerous deeds out of a sense of duty. The theory of virtue occupied an important place in ancient philosophy, in particular that of Plato, Aristotle and Socrates: virtue alone all but summarised morality. For Plato virtue meant harmony: that of the soul, of the individual with society and with the universe. The term “harmony” is a controversial one, yet it is widely used in connection with landscape: a harmonious landscape is a fine landscape that can contribute to the well-being of individuals and society. At the same time, it is this harmony that reigns between men themselves. It is about a certain order, which does not exclude the social order found in a society with no clashes and no conflicts. A society with no dissent, no marginal groups, as Hans Jonas wrote, could be one of despotic power. But is that the path to virtue and responsibility? Certainly not. Plato also thought that virtue was “a resemblance, an assimilation to God; God is the ideal become real, the unity in which all the perfections of nature come together and are reconciled”. Hans Jonas, who refers to Plato, no doubt borrowed this concept of virtue from him in the conclusion of his book, where he writes:

“Respect alone, inasmuch as it shows us an aspect of “the sacred”, that is, something that must never be attained under any circumstances (and which can be perceived even in the absence of positive religion), will protect us from the temptation to violate the present for the benefit of the future or from wanting to buy the former to the detriment of the latter. Fear should not, any more than hope, make us postpone the achievement of our true purpose – prosperity with no diminution of humanity – and, in the interim, destroy that very aim by the means. That is what the means do when they do not respect the men of their day. A degraded heritage degrades those who inherit it. Preserving the heritage in its “image and likeness” – in other words protecting it from degradation – is the work of every moment: unfaltering perseverance is the best guarantee of durability; if not a guarantee, it is at least a precondition of the future integrity of “the image and likeness”. And that integrity is nothing other than openness to the ever expanding call for humility addressed to its increasingly deficient representative. Keeping it intact through the vicissitudes of time, and even preserving it from man himself, is not a utopian aim but rather a somewhat ambitious goal of responsibility for the future of humankind.”¹¹

That last sentence is an excellent maxim which supporters of sustainable development would no doubt not deny. Note also that Aristotle defines virtue as a habit. He believes that being virtuous does not simply imply knowing the definition of virtue by heart: one must make an effort to be enterprising in one’s acts of virtue, ensure continuity in one’s efforts: “One virtuous action does not virtue make, just

9. JANET Pierre, *La médecine psychologique* (Psychological Medicine), 1923. Quotation from a collection compiled in collaboration with the Paul-Emile-Boulet Library of the University of Quebec in Chicoutimi.

10. JANET Paul, *La Morale* (4th ed.), Librairie Charles Delagrave, Paris, 1894, 628 p., p. 567.

11. JONAS Hans, *op. cit.*, page 302.

as one swallow does not a summer make.” That habit consists in being “measured”, like Molière’s Misanthrope: “perfect reason flees all extremity and tempers wisdom with sobriety.” In a certain way this measure means temperance, a term we find laid out in gold letters in Ambrogio Lorenzetti’s famous fresco *The allegory of good and bad government*, painted in 1338 on one of the walls of the Peace Room in the Palazzo Pubblico in Siena, where power reigns over an assembly judging the looters who plundered the town and countryside of Siena. He wrote the word “temperance” on the fresco alongside the figure representing power, next to those representing Peace, Justice, Wisdom and Concord: a fine programme for responsible government.¹²

All virtues cannot be confused with temperance, which is a virtue proper to sensitivity: “The law of desires and passions is indeed measure”.¹³ It is the golden mean, measure, and not immoderation, which we see in the excesses of technical and technological progress. Another philosopher, Paul Janet – whose concepts of morality and virtue differ considerably from those of Pierre Janet, cited earlier – defines virtue thus: “Virtue is not the end, it is merely the means: it is the means by which man can elevate himself to all his purity, all his excellence, all his dignity. In this state of purity and excellence the soul would no longer need to make an effort to do good, it will have become good.

As long as the will struggles with evil, it is not yet good, it is aspiring to goodness: if it struggles, it means there is temptation; and temptation evidently has no place in the perfect will.”¹⁴ Paul Janet comments at length on Kant’s concept of morality, acknowledging its worth but also criticising it, considering that “there is a sort of unpleasant Jansenism in the morality of Kant, in that he would sacrifice freedom to grace, but in that he would strip virtue of its graces and its beauty, that he sees in it only constraint and discipline instead of seeing joy, happiness and attraction. It is a monastic form of virtue, where rules are everything. It is not the virtue of the Greeks, of a Plato, a Socrates or a Fenelon (a Modern Greek), a sweet, accessible virtue, a kind and noble virtue, a virtue interwoven with rhythm and poetry; the philosopher is a musician (*φιλόσοφος μουσικός*). It is not Christian virtue, tender and heartfelt, the virtue of devotion and brotherhood: “Love one another”. Kant was right not to admit anything superfluous above virtue; he was wrong not to admit the superfluous in virtue itself. That superfluous, so necessary, is the love of virtue.”¹⁵ This means that there is no virtue without a certain pleasure in proposing actions for the good of others; virtue cannot be reduced to duty. Aristotle says so, for example: “The virtuous man [...] takes pleasure in performing virtuous deeds.” It also means that virtue is not far removed from love. In brief, therefore, knowledge, love, will and habit, these are the conditions of virtue, which we can define with Paul Janet as “the habit of obeying freely, with light and love, the law of duty”. Love, thus meaning the love of the good the virtuous man is supposed to do to others.

After that reflection on the attributes of responsibility and its corollaries, morality, virtue and merit and/or demerit, we must now look at the no less complex question of ethics. This has been the subject of much comment on the part of contemporary or 20th-century philosophers, as well as environmental specialists, for the current ecological crisis raises numerous problems of positioning with regard to the acute issues of degradation of natural resources and of the landscape.

12. BOUCHERON Patrick, *Conjurer la peur. Sienna, 1338*, Essay on the political power of images, Seuil, collection histoire, Paris, 2013, 290 pages.

13. LENOIR Frédéric, *Le miracle Spinoza*, Fayard, Paris, 2017, 234 pages.

14. JANET Paul, *op. cit.*, p. 452.

15. JANET Paul, *op. cit.*, p. 455.

1.2. Ethics

One of the first philosophers to take an interest in the question of ethics was Baruch Spinoza. His work *Ethics*, published in 1677, draws inspiration from – and at the same time distances itself from – the principles of Descartes.¹⁶ Spinoza analyses the composition of the human being, his aim being to show how the human being is part of nature and to challenge those who think of man as an emperor in an empire. That postulate has major consequences for ethics. First of all, it means that the human being does not have freedom, because the human mind and the events in the minds of men are ideas that pre-exist in the causal series of ideas which flow from God. Human actions and desires are necessarily determined, like other natural events: “the mind is determined to this or that volition by a cause, which is likewise determined by another cause, and this again by another, and so on, ad infinitum.” According to Spinoza, nature is always the same, and its power to act is the same everywhere. Human emotions, love, anger, hate, desires, pride, are ruled by the same need. The emotions are divided into actions and passions. When the cause of an event resides in human nature, more specifically the adequate knowledge or ideas, it is an action; but when something happens where the cause is inadequate – that is, outside human nature – the human being is passive. Freedom, according to Spinoza, thus consists in rejecting bad passions, those which make human beings passive, in favour of joyful passions, which make human beings active and therefore independent. Good passions are linked to knowledge, the sum of the adequate ideas stored by man. This means one has to free oneself of dependence on the senses and the imagination, on what affects the human being, and rely as much as possible on one’s rational faculties. Joy increases the human power to act. All human emotions, insofar as they are passions, are directed outwards. Human beings seek or flee the external things they consider to be at the origin of joy or sadness. According to Spinoza the subject is open to the world, affected by outside objects and events, far from the wise Stoic locked up in his ivory tower.

There appears to be a contradiction between saying that man must free himself of his dependence on the senses and the imagination, and saying that joy increases man’s power to act. We must place these ideas in the context of the 17th century, however, and consider the major changes social perceptions of the landscapes have undergone in recent decades.

Based on a work devoted to Spinoza, Frederic Lenoir formulates the following idea:

“[...] Spinoza teaches us that no political regime, not even a democratic one, will work well while human beings are moved more by their passions than by their reason. As long as we abide by the laws of the city only out of fear of punishment rather than out of personal conviction, our societies will be fragile. When natural disasters occur we see this in the looting that follows. As soon as there are no police around, certain individuals give free reign to their unbridled desires, with no compunction. In order for human beings to be more useful to one another it is not enough for them to subscribe to the same external law; they must also learn to control their feelings through reason, in order to become free and responsible.”¹⁷

So ethics is closely linked to the feelings of the individual, who can feel free and responsible only if he is guided by reason rather than by his passions. In a way, responsibility is linked to virtue: “to act in

16. <http://spinozaetnous.org/ethiq/expl.htm> (in French).

17. LENOIR Frédéric, *op. cit.*, pp. 178 and 179.

obedience to virtue is in us nothing else but to act, to live, or to keep our being under the guidance of reason, based on the principle that we must seek what is useful to us personally.”¹⁸

From morality and responsibility to ethics there is just one step. The concept of ethics is analysed in greater depth by Hans Jonas; his thoughts on the subject have led the scientific community and philosophy to take an active interest. A symposium entitled “Ethics and environment” was held at the Sorbonne on 13 December 1996, presented by the French Minister of the Environment, in the course of which many researchers and philosophers took the floor. George Steiner pronounced the inaugural address, entitled “Man, a guest of life”,¹⁹ a revealing title when it comes to the questions human beings can ask themselves about their action on Earth and their responsibility as stakeholders in their own future. Another issue addressed at the symposium was the problem of the proliferation of knowledge, what mankind should retain of it and with what aims in mind.

But how does one define ethics? The dictionary *Trésor de la langue française* gives the following definition: “*Science qui traite des principes régulateurs de l’action et de la conduite morale*” (Science which deals with the principles that regulate action and moral conduct). There is no need to return to the subject of morality, but progress needs to be made on this question of ethics which has completely transformed society’s relationship with nature since mankind and the scientific community became aware of the finite nature of the planet and the impact of economic activities on nature. The turning point came in the 1970s and a little later with the first oil crisis. This is how Martine Rémond-Gouilloud expressed the change of attitude towards the environment:

“When the environment came to the fore in 1970, nobody knew that this unease was the sign of a general expectation: a society intoxicated with its technical prowess was in need of a new wisdom; a society weighed down by interdicts was in need of new impetus; a society confined to the present moment and the ego needed wider horizons. The environment, the instruction manual of the technological world, would give birth to this conception of ethics, jostling the law. [...] Imagine the law of responsibility in the grip of doubt, obliged to control the unpredictable. The obligation to get results, characteristic of a deterministic world, coupled with an institutionalised obligation to proceed with caution. It is up to everyone, in their own circle, to imagine, to inform, to seek information. The risks are uncontrollable, so they are everybody’s concern. And the public, knowing that they are the ones who will suffer the consequences, want to know what the risks are and to have a say in the choices that will shape their future.”²⁰

In that speech she puts forward a number of ideas about responsibility and ethics. Among them the question of the need to change the law – in particular the emerging law on the environment – and the question of risks, of preparing the future, of prudence (or in other words precaution, which will become a principle), of public participation, of the obligations of each citizen and participant in public life. According to the specialists, ethics implies a sanction:

“Any reflection on responsibility stumbles on the difficult question of the sanction. Democratic interest is drawn – now more than ever – towards a certain naïve optimism which permeates the finest theoretical constructs and obliges us to address this question of the

18. “*L’Éthique, IV, 24, démonstration*”, p. 509, in LENOIR, op. cit., p. 179 and 180.

19. Extract from “*Réelles Présences*”, ed. Gallimard, Folio essays, 1991, p. 123-124.

20. RÉMOND-GOUILLOUD Martine, Presentation in the colloquium “Ethics and environment”, Sorbonne University, 13 December 1996.

sanction in keeping with the new terms in which it is posed. This modern approach stems first of all from four new factors of which the environment offers some good examples: the appearance of new victims of the sanctions – the powerful –, the tragic experience of the disproportion between an act and its consequences, an unprecedented moral expectation expressed through the pained grimaces of the victims, and the urgent political need to restore confidence in institutions which are becoming increasingly fragile. We have to be imaginative and devise modern sanctions in the fields of economics or the environment, where imprisonment is obviously an inappropriate remedy. Between natural disaster and criminal intent, both equally powerless to grasp the modern-day challenges of sanctions, perhaps we should rehabilitate professional responsibility? In any event we have an obligation to invent some intelligent sanctions, sanctions which are effective, visible and constructive. Only in this way will we avoid the worst-case scenario, that is, a return to the old sacrificial devices.”²¹

The sanction therefore appears inseparable from the ethics; but the term “sanction” does not only mean punishment. The sanction attached to a law, for example, includes all the rewards and penalties associated with compliance with or breach of that law. In the context of the crisis currently affecting the environment, the economy and democracy, an ethical approach is a natural requirement. The start of this crisis can be said to date back to the 1970s. The symposium on “Ethics and environment” in 1996 raised the question of prudence. Prudence, in the context of ethics, leads to the precautionary principle, adopted to differing degrees at international level, which would become one of the principles of environmental policies. The precautionary principle means putting off a political decision on an environmental issue until the scientific community is fully aware of exactly what is at stake. France, for example, decided, based on the precautionary principle, not to use genetically modified organisms (except for scientific experiments) until science is fully capable of controlling their use. This is not the case in other European states, which obviously causes major problems in the European Union.

What is the precise relationship between ethics and responsibility? Ethics is a reference to a sense of measure, which applies to landscape issues insofar as no deliberate action should be taken without due consideration, but rather with care. Responsibility can be individual or collective. This is an essential question which relates to individual or collective ethics. In France, Julia Barrault, a researcher at the IRSTEA agricultural and environmental research centre, studied the question of responsibility in the use of pesticides by gardeners. She found that pesticides were widely used and that this caused health problems. She also noted that gardeners were ill-informed about the toxicity of the products they used, the correct doses and the risks to their health and that of those around them:

“Almost 10,000 tonnes of pesticides (or 8 % of the national total) are used on private gardens in France. While many research projects have studied (and continue to study) the agricultural use of pesticides and its impact on health and the environment, it is important to look into their domestic use too, particularly by amateur gardeners, for several reasons: the small area on which they are applied, the types of surface treated and how and in what conditions they are used generate risks of pollution and health in the same way as their use in farming. In addition, the use of pesticides in gardening is of particular interest in a context marked by strong stigmatisation of these substances and increasing awareness of the problems they cause. But whose responsibility is it to prevent such risks in the private sphere? The public authorities, who

21. GARAPON Antoine, contribution to the symposium on “Ethics and environment” (1996), cited above.

should pass laws to limit the sale and the use of such products? The manufacturers, who should market “gentler” products? The distributors, who should give better advice or lock away the most dangerous substances? The gardeners themselves, who should make more rational use of them and give thought to the consequences?”²²

It is indeed a question of individual and collective responsibility, therefore, which involves an environmental ethical approach on the part of the authorities, the firms which produce the chemical products and the gardeners. It is a matter of examining the behaviour of gardeners and their responsibility in the face of this unsupervised use of unfamiliar chemical substances. Gardeners actually appear to be particularly dependent on the attitude of sales staff in specialised shops, whose aim is above all to sell their wares, without always being aware of the possible risks to their clients. The shops are encouraged to sell these products by the firms that produce them. According to Julia Barrault, “encouraging individual responsibility in the amateur use of pesticides seems to run into uncertainties as to the ability of the individuals concerned to change their daily habits in the context of the scrambled, contradictory messages they receive from the media, associations, scientists and above all the market.”²³ Individual responsibility is not necessarily relevant, though, where these pesticides are used in a climate of uncertainty and controversy between political, scientific and industrial stakeholders. For the authorities to place the individual and collective responsibility on gardeners seems quite inappropriate.

The question of knowledge then comes into play, raising the problem of getting the knowledge out into society, making it accessible, and how well the producers of knowledge, particularly scientific knowledge, can get the message across to civil society. People are not necessarily equipped to assimilate this sometimes complex information often presented in impenetrable terms that are difficult for a lay person to understand. But what knowledge are we talking about? There is a vast amount of knowledge in various disciplines and in a wide variety of fields. The information needs to be sifted, even if it is presumptuous to try to sort what might be useful knowledge from the less useful variety. Nevertheless, this is a question worth addressing.

1.3. Knowledge

Knowledge linked to questions of responsibility and ethics is found in disciplines from the social sciences, such as philosophy, anthropology or sociology, and also to a certain degree in geography, history and ethnology, insofar as these can inform policy choices in spatial planning, on different scales in time and space. These questions of scale are essential, as responsibility can be exercised at the level of a state, a municipality or a plot of land. Just as responsibility can be exercised over a long period of time, such as when enclosures transformed English farming from the 13th to the 19th centuries, or over a very short period, as when financial transactions on the stock market are processed in nanoseconds.

The social sciences are not the only disciplines, however, where knowledge is connected to responsibility. Physics, chemistry, mathematics, biology and ecology are also concerned. Physics, in developing the theories of fission which led to the making of the atom bomb, took on a vast responsibility. Albert Einstein, who devised the theory of relativity and invented the famous formula

22. BARRAULT Julia, “Responsibility and environment: questioning the amateur use of pesticides”, *Vertigo*, The electronic environmental science magazine, special edition, 2009, p. 1.

23. *Ibid.*, p. 8.

$E = mc^2$, felt very bitter about it when he heard about the bombs dropped on Nagasaki and Hiroshima.²⁴ The invention of synthetic fertiliser and pesticide molecules also generates heavy responsibilities for the preservation of animal and plant species. One such application led to the manufacture of the defoliants used by the American army to combat the Viet Cong in Vietnam. The spraying of these substances had serious health consequences for the civilian population, particularly children, who were affected by malformations, cancer or leukaemia. And mathematics produced the algorithms used by banks and major industrial groups for financial speculation.

Biology gives similar cause for concern when genetics produces genetically modified organisms. The position of ecology, and in particular landscape ecology, is more ambiguous: the ecological approach initially consisted in denying the role of the human species in the evolution of ecosystems and nature. Landscape ecology was at odds in this respect with the social sciences, which considered on the contrary that social activities played an essential role in the management of natural spaces and biodiversity. Decades passed before there was any agreement between these disciplines on the reciprocal nature of the roles of human societies and natural ecosystems. We now know, for example, that livestock grazing plays an essential role in maintaining the quality of pasture land and biodiversity. Some ecologists, however, want to put a stop to grazing on mountain slopes and leave the open spaces to the wolves. The sciences of biology and ecology have of course brought considerable progress in terms of human health, the environment and landscape.

There can be two sides to knowledge: it can bring innovations and improvements beneficial to the human condition, but it can also be responsible for inventions or discoveries that do not bode well for the future of the planet. Long years are necessary, however, to measure the effect of certain inventions: the discovery of antibiotics,²⁵ for example, was miraculous initially when the first antibiotics were used during the Second World War to combat infections in wounded soldiers. Many more antibiotics were subsequently developed, but in recent years doctors have seen bacteria grow increasingly resistant to antibiotics. Now their use is recommended only to fight serious bacterial infections (they used also to be prescribed for viral infections, against which they are actually ineffective). The resistance of bacteria to antibiotics poses a serious threat to human health in the long term, especially considering how easily bacteria can mutate.

So no knowledge is “neutral”, i.e. “innocent”, and it is up to those who produce and use knowledge to think about their responsibility and forge an ethics of knowledge. Ethics committees have been set up in several states, for example, to do just that. The question of knowledge was often addressed by Hans Jonas, who made it a condition of ethics:

“[...] knowledge, under these circumstances, becomes a prime duty beyond anything claimed for it heretofore, and the knowledge must be commensurate with the causal scale of our action. The fact that it cannot really be thus commensurate, i.e. that the predictive knowledge falls

24. After the war, Einstein campaigned until his death in 1955 for world atomic disarmament.

25. While Ernest Duchesne, as early as the end of the 19th century, discovered the curative properties of *Penicillium glaucum*, Sir Alexander Fleming is credited with discovering penicillin in 1928, after observing that some of his bacterial cultures, left in crucibles, had been contaminated by the experiments of his neighbour who was studying the fungus *Penicillium notatum*, and that this was preventing them from reproducing. However, the importance of that discovery, its implications and its medical uses were not understood and developed until it was rediscovered between the wars, in particular after the work of Sir Howard Walter Florey, Ernst Chain and Norman Heatley in 1939.

behind the technical knowledge which nourishes our power to act, itself assumes ethical importance. Recognition of ignorance becomes the obverse of the duty to know and thus part of the ethics which must govern the ever-more necessary self-policing of our out-sized might. [...] I will not say any more here about this speculative subject, except that we must remain open to the idea that the natural sciences do not tell us the whole truth about nature.”²⁶

This author considers that the “natural” sciences do not deliver all the information on how nature works with absolute accuracy, and that knowledge should have a prospective dimension. That is the challenge of responsibility for knowledge: being able to see what the future will bring. Yet nothing is more difficult than prospective science, which uses methods and scenarios to try to understand what will happen tomorrow. Most of the time the future is unknown, the scenarios used to predict it only imagine hypotheses which we are not sure will materialise; hence the fear of the unknown, but which can be a form of knowledge: “As long as the peril is unknown, we do not know what must be protected and why: contrary to all logic and all method, knowledge here comes from that from which we must protect ourselves.”²⁷

Knowledge is a part of moral responsibility: knowing good and evil. People are supposed to know the law: “ignorance of the law is no excuse”. But if it is invincible and involuntary, ignorance must be considered irresponsible. However, the more a person knows, the greater his or her responsibility. Responsibility can be said to increase with social progress.²⁸

After all, knowledge is not always scientific and there are other types of knowledge than that of the scientists, especially in the realm of landscape and nature: even if it is only popular knowledge which has not been corroborated by strict verification protocols but which can open up undeniable avenues of knowledge of the ways in which our living environment is evolving.

1.4. The efficiency of scientific knowledge

What point is there in knowing about the biophysical and social processes that contribute to what some people call progress if some of them, when applied, produce consequences detrimental to people’s quality of life? The concept of progress is sometimes a matter of opinion, but it continues to be used in political and scientific contexts, for example. Yet it is an eloquent term, often associated with advances and innovation. The dictionary defines progress as moving forward. It is a process of evolving towards an ideal goal. Its synonyms include improvement, advancement, development, perfection. *On the leading edge of progress; making good progress; the indefinite progress of man; moral and spiritual progress; progress of letters, the Age of Enlightenment (Esquisse d’un tableau historique du progrès de l’esprit humain (Sketch for a Historical Picture of the Progress of the Human Mind), the title of an essay by Condorcet, 1794).* So progress is indissociable from utopia (an ideal goal).

Technical progress has no doubt helped to improve people’s quality of life and well-being, in every age and in every place. But technical progress has its drawbacks: while the invention of the steam engine was considered as a major advance in the 18th century, because it replaced human strength and

26. JONAS Hans, *op. cit.*, page 26.

27. *Ibid.*: “The contribution of that knowledge to the knowledge of principles: the heuristic of fear”

28. “Thoughts on morality, responsibility and sanction”,

www.cosmovisions.com/responsabilite-sanction.htm (in French only), consulted on 15 January 2017.

that of animals and could produce much greater power and speed, it accelerated social time and the time of nature, thanks to Joule's law, and perverted human action. It has led to just-in-time production, a faster pace of work and faster plant growth. You see it in the gigantic scale of urban developments (shopping malls where everything is designed to facilitate consumption). In agriculture it has brought the use of fertilisers and pesticides which are bad for both human health and wildlife.

Now that we know that scientific knowledge is not always without risk to the future of mankind and nature, we must ask ourselves how efficient it is. One of the problems when assessing the efficiency of scientific knowledge is the fragmentation of knowledge and the separation between the disciplines. Since the 1970s, whenever environmental issues have arisen the scientific community has tried to develop a multidisciplinary, then an interdisciplinary approach, and then a transdisciplinary approach, which endeavoured to make the transition from learning to action. The development of the interdisciplinary approach suffered for a long time, and continues to suffer, from the barriers which can exist between groups of researchers or managers. Interdisciplinary experiments have proved effective, however, and participatory projects in regional and/or landscape development have been undertaken.²⁹

Beyond the question of the relevance of the methods used to gather knowledge and their usefulness in developing lines of action, it would appear that a number of obstacles complicate the implementation of the principles involved. First of all there is the question of civil society's receptiveness to those principles: there is no guarantee that society at every level – local, regional, national, international – will accept the validation of these principles and their application in people's everyday lives. For example, if what scientists know about the development of a rural landscape leads in certain countries to policies aimed at dividing land into smaller surfaces and replanting hedgerows to create woodlands and foster biodiversity, there is no guarantee that the farmers concerned will willingly co-operate. And what about the manufacturers of ever-more powerful agricultural machinery? Are they likely to be happy? Other stakeholders, convinced that they were acting responsibly and in good faith, might also object.

This brings us back to the social and economic, and even the political context; a context which does not always place all citizens on an equal footing in the face of economic globalisation and the sometimes disastrous effects it can have on populations. Laurent Carroué, a French geographer, recently published an atlas of globalisation where he reveals some interesting data:

“While for some people our world is nothing but uncertainty, disorder or chaos, the responsibility of the geographer is to prioritise the questions raised, identify the dynamics and single out future challenges. In particular, a very small oligarchy owns most of the world's wealth: 400 million people (only 8% of the world's population) own 86% of the wealth, and among them a super-elite (0.7% of the population) own 45.6%. At the other end of the spectrum, 73% of the world's population make do with the crumbs (2.4% of the wealth). So when the value of the world's financial assets reached an all-time high of 128,500 billion

29. See PRIEUR Michel and DUROUSSEAU Sylvie, “Landscape and public participation”, in *Landscape and sustainable development: The challenges of the European Landscape Convention*, Council of Europe Publishing, 2006 <https://rm.coe.int/16804895e6>; LUGINBÜHL Yves, “Landscape and democracy”, in *Landscape Dimensions: Reflections and proposals for the implementation of the European Landscape Convention*, Council of Europe Publishing, 2017, <http://rm.coe.int/1680714486>.

euros in December 2016, for example, the richest 10% of the population owned 79% of that wealth, compared with only 1% for the poorest 50% of the people.”³⁰

These few figures show the context in which our societies are developing in the 21st century, faced with increasing inequalities. The question of political responsibility and a concept of ethics that runs through every aspect of economics, politics, science and the environment, including landscape, needs our urgent attention. Only in this way will we be able to imagine a future beneficial to all mankind. This is not a disaster scenario, just a reminder that by playing the sorcerer’s apprentice with technical and technological development and believing that we are mightier than nature, mankind is embarking on a perilous voyage on a ship that could well capsize. Being responsible therefore means accepting to question current trends in economic development on a colossal scale, the frenzied race to produce ever more while depleting the world’s natural resources, now that we know the cost.

How can landscape help us build a different future, a society of well-being, solidarity and collective responsibility? Even if landscape is obviously not the only sensitive field of action, it presents us with an undeniably promising path for, as the product of the interrelations between man and nature, it gives us access to many aspects of everyday life, through the disciplines of economics, history, geography, ecology, anthropology and so on. All these disciplines address the question of landscape in one way or another, making it central to forging a more humane future.

2. Responsibility and landscape

How the concept of responsibility applies to landscape is not immediately obvious. If you think about it, however, all individuals are responsible for the things they do which change their living environment: owners who build a house on a plot of land are responsible for transforming the landscape. It is not only their own landscape they transform, but also that of their neighbours and of society as a whole. How individuals act depends on what they know or what knowledge they can glean from observing their own surroundings. That is why knowledge, be it technical, scientific, social or political, cannot disregard the empirical knowledge which is most often mobilised in the civic participation process. Empirical knowledge stems from local cultures and social relations (with neighbours, local officials, etc.). These different kinds of knowledge form a corpus which helps to understand how people relate to nature or landscapes. Although they are not always strictly accurate and are sometimes based on local beliefs, they provide insight into society’s feelings towards its environment. Which means it is essential to chart and examine all this knowledge in order to analyse which responsibilities fall to people, singly or collectively, with regard to the landscape.

These empirical forms of knowledge provide the fertile ground on which the individual’s landscape governance is based, integrated into his or her environment.

2.1. Governing landscape

Governing landscape concerns every inhabitant of a place, every “resident landscape architect”, or what Bernard Lassus calls the “*habitant paysagiste*”,³¹ that is, a person who composes his or her own

30. CARROUE Laurent and BOISSIERE Aurélie (for the cartography), *Atlas de la mondialisation*, ed. Autrement, Paris, 2018, 90 maps. Laurent Carroué is research director at the French Institute of Geopolitics, University of Paris 8.

31. LASSUS Bernard, *Jardins imaginaires*, Presses de la Connaissance/Weber, “Les habitants paysagistes”.

landscape with his or her own imagination, but it also concerns a local population, a municipality, a regional institution, a State, and ultimately all mankind. It is more than just a question of spatial planning, for the knowledge extends far beyond the mere demographic, economic and geographical data that formed the basis of planning documents from the 1960s to the 1980s. It includes social feelings towards landscape and nature, in which the scientific community did not really take an interest until the 1980s. Some geographers, such as Élisée Reclus,³² however, had already looked at the sentimental factor; this little-used term did not really come into its own until much later, at the turn of the century, even though it was perfectly capable of explaining these social sensitivities.

The question of governance has been covered in numerous works, but what does it mean to “govern a landscape”. How do the people involved in spatial planning integrate the landscape dimension into their work when developing their plans for the future, the landscape of the future? The questions of responsibility and ethics arise. According to Hans Jonas:

“[...] one other aspect of the required new ethics of responsibility for and to a distant future is worth mentioning: the insufficiency of representative government to meet the new demands on its normal principles and by its normal mechanics. For, according to these, only *present* interests make themselves heard and felt and enforce their consideration. It is to them that public agencies are accountable, and this is the concrete way in which the respecting of rights comes about (as distinct from their abstract acknowledgment). But the *future* is not represented, it is not a force that can throw its weight into the scales. The non-existent has no lobby and the unborn are powerless. Thus accountability to them has no political reality behind it yet in present decision making, and when they can make their complaint, then we, the culprits, will no longer be there.”³³

The challenge of landscape governance is therefore to foresee a future which is unknown and which cannot be represented by any government. Prospective science is a difficult discipline based on developing scenarios. Where landscape is concerned, the first scenarios were developed in the Netherlands, where a vast study of landscapes was undertaken in the 1990s in an attempt to imagine their future. Scenarios are only hypotheses, however, which do not claim to predict the reality of the future landscapes imagined. Prospective science often consists of studying what kind of future existing development trends are likely to lead to, but the results do not claim to be accurate, they are only suppositions which do not make allowance for things that might suddenly happen to alter the direction of the trends concerned. Observation of the scenarios suggested by landscape development trends prior to the economic crisis of 2008, for example, would not have given reliable results because the economic crisis changed the course of events.

The subject can be addressed using participative methods, however, where stakeholders express their wishes for the future and test their credibility. It is essential here to measure the question of landscape governance against the capacity of societies and their institutions to propose obligations, constraints or prohibitions that respect an environmental conception of ethics. This is what Hans Jonas has to say about it:

Paris, 1977.

32. RECLUS Élisée, 1866, “*Du sentiment de la nature dans les sociétés modernes*” (The feeling of nature in modern societies”, *Revue des Deux Mondes*, Paris.

33. JONAS Hans, *op. cit.*, page 44.

“What force shall represent the future in the present? That is a question for political philosophy and one on which I have my own, probably chimerical and no doubt unpopular, ideas. For, before that question of enforcement can become practical, the new ethics must find its theory on which what should and should not be done – the dos and don’ts – can be based. That is: before the question of the power to execute or influence comes the question of what *insight* or value-knowledge will represent the future in the present?”³⁴

The author of *The Imperative of responsibility* in this way raises the question of what intuition and value-knowledge should represent the future in the present. In other words, intuition is the ability to suppose, to imagine, as researchers do. Without intuition there can be no hypothesis, and therefore no problematics and no results; it is by intuition that the researcher produces hypotheses and addresses the issues in order to build a research programme. If researchers can do this, why not policy makers? No doubt they can. Politicians should also be capable of imagining the future of spatial and landscape planning through a project. But this is not something they can do alone; they need to surround themselves with the skills needed to formulate such a project; value-knowledge – the value being landscape in this case – is indispensable. The European Landscape Convention refers to it several times. Article 1.d refers to the heritage value of landscape; Article 6.A (Awareness-raising) mentions the value of landscapes; Article 6.B (Training and education) refers to the values attaching to landscapes;³⁵ and Article 6.C (Identification and assessment) cites the particular values assigned to landscapes by the interested parties and the population concerned.³⁶

Note that the term “value” refers to a system of values that may relate to aesthetics, the feeling of belonging, affection, local cultures, nature, social relations and in particular neighbourly relations. Feelings are also involved, in that in many reports on landscape reference is often made to emotion. The term is imprecise, however, and over-used in the media to mean a number of different things; feelings is a much better word for what human beings experience. People speak, for example, of joy, anger, surprise, disgust, gloom, sadness, enthusiasm, etc. When used in reference to landscape these feelings refer to something tangible, like the joy of feeling good in a landscape or of having contributed to the quality of the landscape. When a winegrower in Cinque Terre (Italy) says that the landscape brings him joy, for example, he is expressing satisfaction at having helped to create and look after his landscape of terraced vineyards. Just as someone might feel disgust at the sight of a landscape degraded or polluted by fly-tipping.

Governing a landscape therefore means taking people’s feelings about it into consideration, sounding them out and understanding them in order to take them into account. This is not easy, especially for politicians trying to develop projects that might help get them re-elected. But sounding out, studying and discussing people’s feelings about the landscape, even via participative development projects, takes time. The exercise of democracy involves scales of time and place; and landscape is not confined to any one time-scale: the time of nature may range from billions of years, as in the formation of the universe, to a fraction of second, in the case of an earthquake, for example. Then there is social time, which ranges from prehistory and the appearance of the human species to the time it takes to send a message on the Internet, which is less than a second. An elected official’s term of office, the time it

34. *Ibid.*

35. Each Party undertakes to promote: c) school and university courses which, in the relevant subject areas, address the values attaching to landscapes and the issues raised by their protection, management and planning.

36. 6.C. Identification and assessment: b) to assess the landscapes thus identified, taking into account the particular values assigned to them by the interested parties and the population concerned.

takes to produce a landscape project and the ensuing debate between elected representatives and the general public all belong to this social time-scale.

Responsibility for deciding whether or not to engage in a debate with the people to define the future of their living environment, their landscape, therefore lies with their elected representatives. This “responsible commitment” is not an obligation (a “do” or “don’t”), but a possibility, a choice (“to do or not to do?”). It is a matter of considering a political conception of ethics based on respect for the rules and the given word, and respect for people’s future well-being. So it is a question of responsibility, which may be individual or collective.

2.2. Individual responsibility and collective responsibility

The individual and collective dimensions of responsibility must be understood in relation to the landscape. Individuals are responsible for the evolution of their own landscape, on their plot of land, in their block of flats (when they put flower pots on their balconies or hang their washing out to dry, for example), in their gardens (such as cutting down a tree or putting up a fence). This individual responsibility is also manifest when we elect the officials responsible for town and country planning decisions (including decisions to change planning regulations, to build housing estates, to build new roads or plant trees along a path, for example). It is also the responsibility of such officials to join a local environmental or landscape protection association and to approve or oppose municipal council planning decisions. But this crosses the line with collective responsibility as these individuals are part of a group acting jointly on the local environment. So individual and collective responsibility are closely intertwined; there can be no individual responsibility without collective responsibility. Collective responsibility may be that of the group to which the individual belongs, or that of the politicians who govern the territory where that group lives, and consequently the landscape. Responsibilities are exercised on several levels: local, regional, national and international. The implementation of the European Landscape Convention, for example, takes place on an international level, or more precisely on a European level, but the fact that communities outside Europe – in Latin America, for example – take an interest in it shows that its influence extends beyond Europe.

When a politician proposes a development project he or she is individually but also collectively responsible for it. Insofar as the project relates to the landscape, the question of responsibility also arises; the project concerns not only the knowledge mobilised, but also the scales of time and space. A project is a joint or collective undertaking, initiated on an individual level, that of the individual behind the idea – the landscape specialist, architect, geographer or planner. These each have their own responsibility, which brings their professional skills, their work and their deontology or ethics into play. The French Landscape Federation, for example, has developed a professional Code of Ethics, as Pierre Donadieu, professor emeritus at the National Landscape School in Versailles, reminds us:

“This ethical approach was implicit for a time in France, until very recently when the French Landscape Federation drew up a Code of ethics. It embodies the moral principles, the ethics of the profession, and in that declaration of landscape ethics there is one word that is always present, even today, the word “work”. The “work” is the finality of landscape action ...”³⁷

37. DONADIEU Pierre, “Debating the landscape: Didactical issues, learning processes, training”, Haute École du paysage, d’ingénierie et d’architecture de Genève (HEPIA), 25-27 October 2017.

He wrote this in the context of a debate on three terms: ethics, reflexivity, responsibility. The subject is at the heart of the question of responsibility. The term “work” had in fact already been used in the same way by Élisée Reclus:

“The nature French people understand best and most love to contemplate is the gently rolling countryside where crops alternate gracefully off into the distant horizon of the plains. [...] Men everywhere who contemplate this scene see the marks of the industry of their peers: nature, shaped by labour, has become humanised, so to speak, and the spectator likes to see him or herself in the collective work.”³⁸

In this quote from the renowned geographer he is indeed referring to a joint work, that is, a collective responsibility. But in Pierre Donadieu’s contribution the landscape as a “work” can also mean an individual work, like landscape gardeners used to see it, and still do today, when they create a garden. Then it is their own responsibility they are engaging vis-à-vis the owner; yet here too this garden also engages its creator in a responsibility that may affect the surrounding area, and is therefore a collective responsibility.

The new generations of landscape architects have developed other methods and are now much more interested in landscaping projects covering vast areas. Their responsibility is therefore collective, shared with the clients, the inhabitants and the administrative officials concerned. Landscaping on this scale first appeared in the United Kingdom in 1970, under the name Landscape Planning, and also in the Netherlands, considered pioneers in landscape studies. In reality, however, landscaping was almost implicit in the programmes launched in the United States, with the famous landscape architect Olmstead and his “Greenways”, parks that crossed cities in the form of green belts. In a similar vein, French landscape architect Jean-Claude Nicolas Forestier had developed a theory of cities and parks and created many works in South America and Spain (including the Maria-Luisa gardens in Seville). He also published a book that would later inspire other landscape architects.³⁹ Before the 1970s many specialists worked at city level to create parks and promenades, such as A. Alphand,⁴⁰ a friend of Baron Haussmann who, with his assistant Jean-Pierre Barillet-Deschamps⁴¹ reshaped the Paris cityscape under the Second Empire. He designed the parks known as the Bois de Boulogne and the Bois de Vincennes and many more besides. In England another landscape theorist, Ebenezer Howard, proposed “marrying the city and the countryside” in his book *Garden Cities of Tomorrow*, imagining that this was the way to universal happiness.⁴² He had a strong influence on his successors:

“The town and the country may, therefore, be regarded as two magnets, each striving to draw the people to itself – a rivalry which a new form of life, partaking of the nature of both, comes to take part in. This may be illustrated by a diagram of “The Three Magnets,” in which the chief advantages of the Town and the Country are set forth with their corresponding drawbacks, while the advantages of the Town-Country are seen to be free from the disadvantages of either [...]

38. RECLUS Élisée, *op. cit.*, p. 365.

39. FORESTIER Jean-Claude Nicolas, *Grandes Villes et systèmes de parcs*, Hachette, Paris, 1908.

40. ALPHAND Adolphe, *Les Promenades de Paris. Histoire [...] Étude sur l’art des jardins et arboretum*, J. Rothschild Editions, Paris, 1867-1873.

41. LIMIDO Luisa, *L’Art des jardins sous le Second Empire. Jean-Pierre Barillet-Deschamps (1873-1924)*, preface by Yves Luginbühl, Champ Vallon, Seyssel, 2002, 290 p.

42. HOWARD Ebenezer, *Garden Cities of Tomorrow*, The Tientsin Press, 1917, 167 pages.

www.gutenberg.org/files/46134/46134-h/46134-h.htm

Town and country must be married, and out of this joyous union will spring a new hope, a new life, a new civilisation.”⁴³

Utopian ideas were widely used, analysed and criticised by Hans Jonas, for one, in respect of the Marxist utopia, which ended in disaster. Theoretical analysis is making a comeback, however, to criticise the neoliberal political and economic system, which creates marked social inequalities and an unfair distribution of the fruits of economic growth. These are all examples of collective responsibility, the landscape being definitely an object of responsibility.

2.3. Landscape, the object of responsibilities

“I am responsible for my landscape, you are responsible for your landscape, he/she is responsible for his/her landscape, we are responsible for our landscape, etc.”; this is one way schools could teach children to conjugate the verb “to be”. It is a reminder that everyone is responsible to society for their actions on their surroundings. But do people realise that? Probably not. It all depends on the education they received, on their involvement in the shaping of their landscape, on the role the public authorities are prepared to let them play in governing the territory. Clearly, therefore, politicians must listen to the people and allow them to express their ideas about the future of their landscape. Even if political practices have developed over the years, they are not yet always on this same wavelength: more often than not they settle for a public survey in which the people concerned can express their views on a large- or smaller-scale local development project. But such a survey is not really effective if it just means a commissioner looking at the opinions expressed and preparing a summary without any debate. It is nothing like when sociologists, anthropologists, geographers or sometimes landscape architects conduct a series of semi-directive interviews, record and transcribe what is said and analyse the results.

If the landscape is truly to become an object of responsibility, the most important thing remains the public debate that needs to be organised between elected officials, residents, urban and spatial planning technicians and citizens’ associations engaged in defending the landscape, nature or the environment. The debate is the moment when the details and procedures of a project are discussed, challenged and accepted in order to reach a compromise, and a moment where all participants become aware of their role, of their involvement, that is to say, of their responsibility in the final decision. Their individual responsibility and their collective responsibility enable each of them to realise what they are undertaking in the name of their morality, their empirical or scientific knowledge of the landscape, of the nature of the landscapes around them, in which they live every day. It is a key factor in the quality of life of every citizen.

This is how responsibilities are shared between the stakeholders concerned, leading to an ethics of the landscape. This approach makes citizens responsible for their own future and that of everyone else, for we are all in the same “boat”, pitching on the swell of the political ocean, buffeted by the waves of globalisation, tossed by the storms of the international markets, the ecological, economic, geopolitical and social uncertainties that hover over the world. These uncertainties are part of the challenge facing spatial and landscape planning. The debate must be prepared to accept disagreement and analyse the different positions in order to reach a compromise. This means examining in what measure the

43. HOWARD Ebenezer, *op. cit.*

responsibilities are shared, how and by whom, and how they can be brought together in a common purpose.

3. Sharing responsibility

Responsibility for landscape cannot be confined to one single citizen, elected member or institution. It must be shared between all those involved in spatial and regional planning. This is essential for a project's success: projects can achieve their objectives only if all those concerned agree on the terms of reference, structure and implementation. This means that the respective tasks of project staff, local inhabitants, elected representatives and public officials must be laid down in advance and carefully apportioned. Such an operation is neither simple nor easy: it requires a level of participation that elected representatives do not always appreciate, because of the time taken by the necessary discussions and negotiations if a compromise is to be secured.

Allocating tasks also signifies the allocation of responsibilities. Each participant has his or her own responsibility in the project design process. However, these responsibilities are not the same for everyone. Elected representatives are responsible for proposing projects, determining the content, ensuring that all those concerned are included in the discussions and then reaching a decision based on all the facts of the case, after listening closely to the wishes, criticisms and proposals of the participants in those discussions. Ordinary members of the public will not have the same responsibility. Their role will be to examine projects closely, reflect on their content in the light of their own local knowledge, consider how they might adversely affect their own quality of life and discuss them with neighbours and other persons taking part in the debates. In other words, their role is to participate in the discussions and express their support, criticisms or doubts. The same applies to the other participants, who also have quite specific responsibilities. This is what is meant by shared responsibilities.

3.1. Shared responsibilities

The landscape has often been described as a "common good". The term is frequently used by social scientists to signify an asset, be it a geographical area, public space or any other form of environment that belongs to the community at large. This common good must therefore be managed by the community which carries responsibility for looking after it. A distinction can be drawn between common and shared responsibilities. Shared responsibilities do not imply that everyone has the same responsibilities, since the latter depend on the particular individual or group concerned. The responsibilities of these different individuals and groups therefore interact, which in turn means that there has to be interaction between the various stakeholders themselves. For example, if an official of the government agricultural department proposes a hedge replanting project in a rural landscape that has suffered from the development of industrial agriculture, he or she assumes a certain responsibility *vis-à-vis* the farming community. But this responsibility interacts with farmers' own attitudes to the project. Some of them may agree to its implementation whereas others may oppose it because it fails to comply with their objectives regarding mechanisation and the size of their plots. This is simply one example among many that can easily be imagined.

Landscape, as something held in common, implies a sharing of responsibilities. How, though, can such a sharing be effected in a diverse society in which social perceptions of landscape vary and may be based on different views? We must now consider the terms of, and arrangements for, sharing.

3.2. Sharing

Sharing can apply to numerous aspects of landscape projects, such as initial studies, research, relevant knowledge and so on. It is a form of trading or barter. The first form of sharing is the sharing of knowledge, whether this be of the landscape itself, its evolution, its constituent elements, how it is structured or the values ascribed to it by both resident and visiting populations. Such knowledge therefore takes multiple forms. It may be the product of research (that is academic learning) that sometimes has to be clarified to make it comprehensible and acceptable to the other protagonists. Research often uses statistical data on such subjects as demography, housing, protected areas, industrial establishments and agriculture. This has to be translated into documents that are easy to read and understand, particularly by local inhabitants. Agricultural statistics, for example, can form the basis of graphs or maps showing changes in crop types or numbers of agricultural holdings. Expressing them in the form of maps is an alternative to land use documents which do not reflect the landscape as individuals perceive it. It then becomes possible to interpret these maps by transforming them into “block diagrams”, which are familiar to landscape architects. Properly drawn up, such coloured graphical presentations illustrate the structure and evolution of the landscape and are much easier for ordinary individuals to understand. However, they also have to include the underlying geological structure, in order to bring out the interrelationship between the sub-soil and the aspects of the landscape on which it is based.

The relevant specialist knowledge also extends to social representations of landscapes, as they emerge from, in particular, geographical, sociological and anthropological surveys. Young landscape architects have been trained to use, and indeed collect, such data. This sort of information is essential to establish how ordinary citizens perceive their everyday environments and what values they ascribe to them. It ensures that projects are soundly based and reflect the wishes of local inhabitants. Such empirical data can be exchanged at meetings between the various categories of project participant.

Sharing also involves the exchange of legal information about planning and urban development documents. It is also important when preparing spatial and regional development projects so that local participants are not involved in proposals that conflict with the law. Similarly, sharing can extend to methods of analysing landscapes, and the use of collective study sessions and workshops, for the joint development of projects, whose content will also be shared. The question of sharing responsibilities can be taken still further, particularly with regard to the implementation of measures taken by elected representatives in co-operation with local inhabitants, public officials and the various voluntary associations locally active in landscapes, environmental and nature protection.

A form of responsibility sharing, which can be termed the “spirit of participatory democracy”, raises the question of how responsibility is apportioned between those concerned and what functions each group of participants is able to fulfil. Who does what, and how?

3.3. Sharing between whom, and how?

The allocation of functions, or tasks, is a key stage during which responsibilities are shared.

Initial appraisal

The process of drawing up a landscape project usually starts with an initial appraisal of the state of the landscape. Most studies of this type are carried out by landscape architects but with the increasing prevalence of participatory approaches there has been a growing trend towards interdisciplinary assessments by teams of specialists, public officials and representatives of the voluntary sector. Such a team can then assemble the basic data needed for an initial appraisal that takes account of all aspects of the evolving environment. It is also necessary to diversify the teams of specialists to include a range of subject skills, such as geography, sociology, anthropology and ecology, as well as economics, to ensure maximum possible coverage of the relevant knowledge. Local inhabitants are also often the best placed to add their own empirical knowledge of their area, even though this must be seen for what it is, namely information to which specialists can then apply rigorous protocols to check its accuracy, before interpreting it and transforming it into a more technical form, without changing its character.

Naturally, landscape architects, specialists, local inhabitants and other local and regional figures have different places and roles in the process and do not have the same responsibilities. But it is essential that they all share the same information and apply it to ensure that the project development process is conducted rigorously. A participatory approach implies that initial appraisals are the fruit, not of a single official but of the combined local or regional community working together to advance the project. The whole process from the initial appraisal to a project that has been accepted and approved by all those concerned raises the question of how to conduct meetings arranged to achieve the desired objective.

The conduct of such meetings, whether they are intended to inform those directly involved and the general public about the launch of a project, or organise collective landscape study sessions or workshops on the different phases of the project, is not to be taken lightly. Everyone involved must have an opportunity to speak, with no interference in their right of expression. However, it may well be that certain local participants are less able than others to express themselves in public, enabling particular local leaders to impose their points of view. The person conducting the meeting, or moderator, must therefore decide precisely which are the critical moments at which to offer individual participants the floor and then do so fairly and on an equitable basis. Meetings are normally moderated by landscape architects but certain specialists in the field consider that it must be someone totally unconnected to the process under way. Such an approach is not necessarily the most appropriate since persons who are unfamiliar with the concerns and preoccupations of the relevant local or regional groups may not always guide discussions in the most fruitful direction. The choice of moderator must therefore be discussed and reflected on with care before the process gets under way.

Preparing the project

All the documents necessary for preparing projects must be made available to every individual or group concerned. They must be lodged in a room of the town hall or institution responsible for the proceedings, so that they can be consulted by any local inhabitant who cannot attend all the relevant meetings. The launch of a new project may also lead to the acquisition of new information as it progresses. This new information is valuable to the project because it can cast doubt on measures already taken, which will then have to be modified. An Austrian team of researchers has used the

expression “adaptive management”,⁴⁴ to refer to projects that draw on the knowledge that they themselves generate.

This type of project commits participants to a continuing process of analysis and appraisal and requires them each to have clearly established tasks to match their responsibilities: for the academics, produce the relevant information and knowledge and transmit their empirical findings to local inhabitants; for public officials of the departments concerned, ensure that the measures taken are compatible with local and regional and urban planning legislation; for the landscape architects, have a clear idea of what form of landscape will emerge from the completed project; and, finally, for elected representatives, formalise the proposed measures and secure agreement on the final compromise.

The allocation of tasks therefore reflects each participant’s own area of responsibility, as this interacts with those of the others. No particular category of participant has its own area of responsibility in isolation. This complicates the process of developing a project but at the same time makes it more rewarding and one that is shared between all those concerned. This is the price for ensuring a democratic future for the landscape in question. However, it is not always easy to apply this participatory approach, given the number of obstacles faced. Political decisions taken directly by elected representatives of local or regional authorities, either alone or in conjunction with members of the relevant council, are clearly secured more rapidly and do not require the time needed for debate, which can lead to disagreements and conflict. However, it is preferable to take a little more time to discuss the details of a project and consult all those concerned, to avoid the conflicts that will inevitably arise if no such consultations take place. To some extent, such a negotiation process will serve to strengthen and reinforce citizens’ image of their elected representatives. Such an approach contributes to local inhabitants’ sense of well-being *vis-à-vis* their landscape.

4. Responsibility, landscape and well-being

The purpose of landscape projects is to improve people’s quality of life and therefore their well-being. This is made clear in the preamble to the European Landscape Convention, which highlights the link between the resulting rights and responsibilities:

“The member states of the Council of Europe signatory [to this Convention] ... believing that the landscape is a key element of individual and social well-being and that its protection, management and planning entail rights and responsibilities for everyone”.

Any discussion of well-being must also take account of its opposite, ill-being. The concept of human well-being might imply a vision of a utopian, or at least ideal, society. Human society cannot exist without a hope of better days and this is the context in which the idea of utopia can be invoked. In a period of apparent world-wide disenchantment, a little utopia might serve to revive such hope. This at a time when democracy is in crisis, large parts of the population are threatened by climate change, social inequality has been at its highest level for generations and major industrial and financial lobbies are bringing pressure to bear on our political institutions.

44. TÖTZER Tanja and GIGLER Ute, “Mechanisms leading to the transformation of open space in the metropolitan region of Vienna, Austria: is there a need for a new management paradigm?”, colloquy *De la connaissance des paysages à l'action paysagère* (From knowledge of landscapes to landscaping action), Ministry of Ecology and Sustainable Development, Bordeaux, 2-4 December 2004 (Ed. Quae, Paris, 2007).

However, is utopia so desirable, when the great utopias of history have led to impasse or indeed human disasters? The German philosopher Hans Jonas turns to this question on a number of occasions in his book:

The critique of utopia that is coming to an end would have been excessively explicit if Marxist utopia, which is closely allied to technology, was merely an “eschatologically” radicalised version of what the world-wide technological impulse of our civilisation was moving towards anyway. In other words, technology could be efficient as such, but did not have a quasi-utopian dynamic. The critique of utopia was therefore a critique of technologies in anticipation of its extreme possibilities. The critique of utopia, as an extreme model, does not, therefore, serve to refute an error of thought, regardless of its influence, but rather to establish its necessary fundamental alternative, namely that of establishing an ethic of responsibility that today, after centuries of Promethean post-Baconian euphoria (which is also one of the origins of Marxism), must contain its immodest ambitions. What is clear is that we are gradually becoming the prisoners of the processes that we ourselves have set in motion. The principle of responsibility rejects the premature assumption of inevitability, and even more so the concept of inevitability sanctioned by the will of history. In so far as the critique of utopia, as an attempt to redress current concepts of will, can have an influence, it is already a contribution to the ethics of responsibility.⁴⁵

Progress, linked to the dynamics of technique and technology, is therefore a form of utopia that draws humankind into the trap of the sorcerer’s apprentice, namely the pursuit of a Promethean dream of dominating nature that risks bringing about its irretrievable loss. Seen from this standpoint, progress actually offers a threat of global disaster, but it can also be seen from another point of view, that of the search for more balanced ways of improving living conditions to contribute to social well-being. As Hans Jonas notes, the critique of utopia can have an influence on thought and contribute to the ethics of responsibility. We therefore have to focus on the contribution that responsibility can make to the well-being of human beings and other living organisms.

4.1. The contribution of responsibility to the well-being of human beings and other living organisms

Individuals’ responsibility regarding their landscape or surroundings entails a concern for their own quality of life and that of their fellow beings. It is not a case of doing what is good rather than bad, since there is no clear distinction between the two: this is too simplistic. What are good and bad depends on each individual’s perception. Nevertheless, how can such individuals contribute to their fellow citizens’ well-being? This is a complex matter implying a form of responsibility that links individuals to their personal and more general ethical principles. Persons who want to contribute to the well-being of their family, neighbours or the local community cannot be exempted from the laws and regulations that govern their lives. They are required to be aware of them. This is not always the case, even though ignorance of the law is no excuse. But even if they are unaware of the relevant legislation, individuals can still adopt a form of behaviour towards others and their surroundings or their landscape that contributes to the well-being of all their fellow citizens, for example by separating household waste or taking part in tree- or shrub-planting operations in their locality, as is often the case in several countries. Similarly, individuals’ conduct may conflict with the general interest, for

45. JONAS Hans, *op. cit.* pp. 297 et 299.

example by leaving rubbish in a roadside ditch or using weed killer on a bank that is shared with a neighbour. Individuals therefore all have a responsibility for contributing to their fellow citizens' well-being or ill-being.

The question of responsibility regarding other living beings is crucial since all such beings contribute to the quality of the environment and their surroundings. This does not just refer to the affection people might feel for a domestic pet such as a cat, dog or hamster, but to all the animals and plants that form part of the environment and also contribute to humanity's well-being. Animals were long considered mere furnishings, lacking any consciousness. They are now acknowledged as conscious beings, of whose well-being human beings must take account. The living conditions of farm animals such as chickens, pigs and cattle are often deplorable: they may be cooped up in enclosed breeding areas with quite ridiculously limited freedom of movement. Numerous organisations have been militating for years for a change in the living conditions of animals in such environments but even though matters are improving there are still many unresolved problems of this kind across the world.

One of the most symptomatic cases concerns bees. These pollinators are essential for the reproduction of a high proportion of all cultivated or wild plants. Their survival is critical for that of humanity because they make it possible to produce fruits and numerous cultivated plants necessary for human food supplies. Yet the use of pesticides, particularly that of the toxic insecticide Gaucho,⁴⁶ decimates the bee population. According to the French national beekeepers' association, the number of hives in France fell from 1.45 million in 1996 to 1 million in 2003. Between 1995 and 2001, average annual honey production fell from 30 to 24 kilos per hive. According to the United Nations Food and Agriculture Organisation (FAO), annual French national production fell from 17,000 tonnes in 1990 to 11,000 in 2012.⁴⁷

Farmers' use of this pesticide, particularly in the treatment of seed crops, has become very controversial. In recent years, there have been numerous actions brought by beekeepers against one of the main producers of this product which is dangerous for pollinators. The manufacturers of Gaucho denied its toxicity and argued that the bees' death had been caused by a parasite, varroa, whose mites reproduce in the hives. The beekeepers, however, maintained that it was Gaucho that was mainly responsible for the disappearance of large numbers of bees. Only after a long battle between the various protagonists, and following numerous pro-Gaucho decisions, was this insecticide finally withdrawn from the market.⁴⁸ The relationship between responsibility, well-being and landscape is at the centre of this issue because the landscape depends on plant growth and its long-term survival, which to a large extent is ensured by pollinators.

46. Gaucho is used to protect a number of crops by treating the seeds. The active agent, imidacloprid, is a neonicotinoid that is applied to seeds before seeding or to the leaves of plants. It is diffused through the plant's vascular system. Insects absorb it when they suck the plant's fluids. Imidacloprid is a particularly effective insecticide which acts very rapidly and remains for a long time in the plants and the soil. It is widely used in the cultivation of sunflowers, rice, vegetables, maize and autumn cereals. Its toxicity takes the form of over-stimulation of the nicotinic acetylcholine receptors of the insects' nervous system.

47. French Wikipedia article on Gaucho: [https://fr.wikipedia.org/wiki/Gaucho_\(insecticide\)](https://fr.wikipedia.org/wiki/Gaucho_(insecticide)), consulted on 17 April 2019.

48. Regulation (EU) No 485/2013 of the European Commission of 24 May 2013 amending Implementing Regulation (EU) No 540/2011, as regards the conditions of approval of the active substances clothianidin, thiamethoxam and imidacloprid, and prohibiting the use and sale of seeds treated with plant protection products containing those active substances.

The responsibilities of the various parties in this area are shared unequally. Some, such as beekeepers, have a responsibility via their contribution to the well-being of both human and bee populations, whereas others are responsible for ill-being through the manufacture of a toxic substance that not only kills bees but also creates a risk of toxicity in humans, since this dangerous product may also be found in honey.

The question of well-being is more difficult to assess in the case of plants. When can plant life be considered to experience well-being or ill-being? Although research has shown that plants communicate with each other via hormones in their roots and that they can warn neighbouring plants of parasite attacks, there is little scientific data to suggest that they experience pain or stress. However, it has been observed that in times of drought, oak trees' bark turns white and their branches become brittle. Specialists recognise these symptoms as signs of hydric stress. At all events, it is clear that plants can suffer from lack of or too much water, from damage that has not properly healed, thereby enabling parasites to enter the plant's vessels, or from cryptogamic diseases. This leads to the paradoxical situation that, in order to treat them, it is necessary to use products that may pose a risk to the health of humans or useful insects.

The relevance of the concepts of what is useful and what is harmful in the case of animals and plants is open to question. For example, cows are useful because they provide milk or meat that supply proteins and vitamins, particularly vitamin B, which help promote the development of the human body. They can be harmful when they emit methane, a greenhouse gas. Foxes, on the other hand, may be considered harmful because they seek out and attack chicken coops and may transmit rabies to humans, which can be fatal. Similarly, boars damage crops by digging up the ground in search of edible roots, and even gardens, by creating wallows in lawns. Yet this same species is useful because it provides meat that is much appreciated by lovers of game.

Since non-human living beings are not responsible for their actions, at what point can a species be deemed to be useful or harmful? This is the subject of ethical debate. Any species can be both useful and harmful. For example, ticks, which transmit Lyme's disease, are considered harmful because their bite can lead to a person's death. However, they also form part of the food chain: they are eaten by other insects, as well as birds and small rodents, such as field mice. Some ecologists think that the word "harmful" should be expunged from the ecological dictionary. But how will the mother of a child who is bitten by a tick and has then contracted Lyme's disease react to this? Who can decide on the value or harmfulness of a species? This is a serious responsibility that can lead to errors of judgment: do scientists have more legitimacy to answer this question? Or is this the province of politicians, ordinary citizens or animal or plant protection organisations?

This role should be devolved to an ethics committee composed of representatives of these various types of interest. Such committees have already been established in several European countries⁴⁹ such as France and Germany. In point of fact, there are several ethics committees in these countries, including ones established by universities or professional associations, or, for example, by German *Länder*, which advise, monitor and oversee scientists from an ethical and legal standpoint. Examination by, and the approval of, ethics committees are accepted practice in the fields of medicine and psychology, as well as other disciplines. Their role is to protect the safety and rights of human

49. In fact, there are ethics committees in most European countries, as well as at international level: in UNESCO, the Council of Europe and the European Union. See a selected list produced by the French National Consultative Ethics Committee: www.ccne-ethique.fr/en/pages/useful-links, consulted on 12 February 2018.

beings, as specified in the 1964 World Medical Association Declaration of Helsinki, entitled “Ethical Principles for Medical Research Involving Human Subjects”.⁵⁰ A number of committees are also concerned with experiments on animals. In France a national ethics committee serves a dual function, that of a forum for debate and consultative committee. The Helsinki Declaration specifies that in medical research on human subjects, considerations relating to the well-being of the human subject should take precedence over the interests of science and society. It also states that appropriate caution must be exercised in the conduct of research which may affect the environment, and the welfare of animals used for research must be respected.

The question of well-being is therefore a major aspect of responsibility *vis-à-vis* the environment, but in the foregoing examples it mainly concerns medicine, human health and animal welfare.

4.2. How the landscape contributes to well-being (updating of knowledge)

An initial Council of Europe report, published in 2006,⁵¹ highlighted the links between well-being, ill-being and landscape. The issue of well-being and ill-being has since evolved in a number of respects, particularly with regard to landscape’s contribution to individual and social well-being. This is recognised in the preamble to the European Landscape Convention and has given rise to numerous publications. Landscape contributes to well-being by offering both local inhabitants and visitors pleasant surroundings, and because it responds to the system of values that people attribute to it. However, this assessment depends heavily on how the general public view their surroundings, which can vary greatly, depending on a number of factors. A landscape that has suffered ill effects from the misguided behaviour of irresponsible persons can also contribute to ill-being.

The methods used to assess the well-being afforded by the landscape have changed significantly in recent years with the development of socio-economic evaluation of amenities (that is, non-traded goods) such as landscape, biodiversity and the environment. In recent decades there have been numerous studies and research projects on evaluation methods. In 2008, Joseph Stiglitz, a winner of the Nobel Prize in economics, in collaboration with Jean-Paul Fitoussi and Armatya Sen, produced a voluminous report for the French President on France’s economic performance and social progress.⁵² The report considered at length the question of well-being and its relationship to the environment, work and education. It reviews, and criticises, the use of countries’ GDP (gross domestic product) to measure well-being.⁵³ The Council of Europe’s 2004 report also made this point. Equating well-being with GDP is no longer appropriate, as several counter-examples attest. Joseph Stiglitz and the members of his committee strongly recommended the use of qualitative criteria, to replace orthodox quantitative methods, such as those based on the hedonic pricing or willingness-to-pay approaches or the travel-cost method. These methods amount to attributing a price to an amenity, based on surveys in

50. The Helsinki Declaration is a statement of ethical principles to provide guidance to physicians and other participants in medical research involving human subjects. Medical research involving human subjects includes research on identifiable human material or identifiable data.

51. Council of Europe, 2006, *op. cit.*

52. STIGLITZ Joseph, FITOUSSI Jean-Paul and SEN Armatya, Report of the committee on measuring economic performance and social progress (the so-called Stiglitz Report), for the President of the French Republic, 2009.

53. The criticisms cite the example of the oil tanker *Exxon Valdes*, which grounded off Alaska and polluted the coasts of the United States. The subsequent clean-up operations led to a rise in GDP that would have implied an increase in well-being, which was evidently not the case. This was one of the reasons for the abandonment of the GDP/well-being link.

which individuals from different social groups are asked how much they would be willing to pay to preserve a threatened species, a heritage site, a nature reserve and so on. The result is in fact always the same, whatever the subject of the evaluation: for example, to protect a whale or a landscape, the amount that individuals are prepared to give up is approximately 20 €, which is clearly quite out of keeping with what they represent in reality.

Less orthodox economists have now developed more qualitative methods that no longer try to estimate the price of an amenity but instead attempt to value it according to either quantitative or qualitative criteria. Such assessments are based on the principle of valuing amenities according to the well-being they engender. The method is easily understood but does not place a value on the well-being itself. Another form of evaluation starts from the opposite standpoint, namely that landscapes are the product of the economy – social activities structure the landscape and modify it – so that the well-being arising from a particular landscape in question has to be seen, and assessed, as the result of human and natural action on its biophysical elements. This form of evaluation is very different from the orthodox methods of classical economics.

Since 2014, the French Val de Loire Mission, a body charged with managing the landscape of the Loire valley, a UNESCO world heritage site, has been carrying out a socio-economic assessment of the well-being arising from its landscape and heritage. The research is based on the principle that the landscape is the product of the economy and on the following hypothesis, namely that the landscape and heritage induce well-being or ill-being for local inhabitants and visitors, which it is possible to evaluate in the light of changes in them and in associated economic activities. The research has involved the following stages:

- analysis of changes in the landscape and heritage using statistics on population structure, housing, agriculture, natural areas, industrial and craft activities and listed establishments such as quarries and sand pits and plant posing an industrial risk. The analysis was carried out in two sectors of the Loire valley and resulted in maps showing changes over two periods, from 1975 to 2013 and from 1999 to 2013;
- semi-structured interviews with two samples of local inhabitants, municipal or *département* elected representatives, officials of relevant public departments and members of local and regional associations, transcription of the results and analysis of the views expressed to identify criteria of well-being or ill-being, classified by sector of activity;
- meetings with persons interviewed in the survey to discuss collectively the findings regarding which landscapes engendered well-being or ill-being;
- workshops with the same persons to identify the criteria of well-being and ill-being by sector of activity and place them in order of importance;
- final analysis of the results obtained and preparation of an analytical framework for presenting the criteria of well-being or ill-being; conclusions.

As noted above, this research is continuing with the drawing up of indicators of well-being and its opposite, using a multi-criterion analysis.

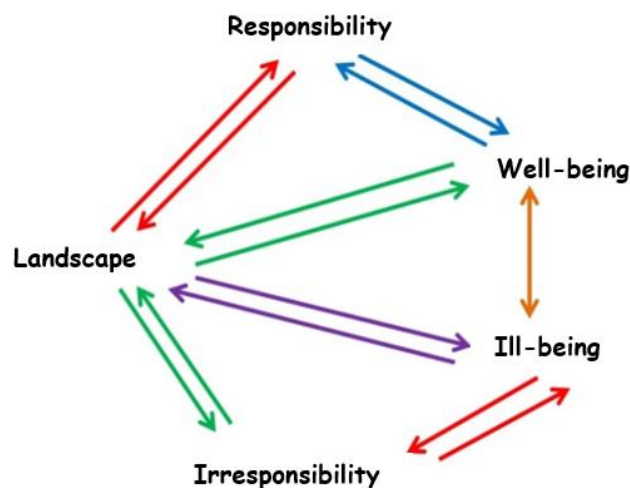
These various activities now offer the prospect of establishing indicators of well-being and ill-being, with a view to moving on to an operational phase in which economic activities can be adjusted to help secure a better quality of life. One essential point should be noted: local inhabitants had no difficulty in expressing their views on well-being and ill-being, which they unambiguously attributed to factors

relating to sectors of the economy. They spoke of their particular feelings and sensations and talked about their own responsibilities and those of politicians and other concerned parties. A shorter and more structured survey has been carried out with tourists visiting the Loire valley.

4.3. The interactions between responsibility, landscape and well-being

Considering the interactions between the concepts of responsibility, landscape and well-being is not an easy task because it implies mutual relationships between the three. This is a complex issue, as reflected in Edgar Morin's discussion of the subject.⁵⁴ The first point to make is that individuals who feel responsible for the quality of their surroundings, or landscape, must take action on behalf of their own well-being and that of their fellow citizens. The same "duty" applies to elected representatives, officials of the relevant public services and the voluntary sector. It can be argued, to some extent, that landscape entails rights and duties, which are constituent elements of responsibility.

The social perceptions of landscape show that account has to be taken of possible conflicts between individual positions on the subject. Individuals may appreciate a landscape for its aesthetic appeal while at the same time regretting the fact that it fails to reflect the social or ecological values to which they are attached. The interaction between responsibility, landscape and well-being or ill-being may be illustrated as follows:



Interactions between responsibility,
landscape and well-being

The two-way arrows represent the interactions between the three concepts of responsibility, landscape and well-being. Such interactions also apply between irresponsibility, ill-being and landscape. Between well-being and responsibility, for example, the interaction signifies that individuals are responsible for the well-being their actions may bring about but at the same time the interaction works in the opposite direction because well-being incites individuals to be responsible for their actions.

54. MORIN Edgar, *Introduction à la pensée complexe* (Introduction to complex thought), Seuil, "Points", "Essais", Paris, 2005, 160 pages.

However, irresponsibility, landscape and ill-being also interact. Misguided members of the public may behave in ways that damage the landscape, for example by using pesticides in their garden or dumping rubbish in a forest. These are acts of irresponsibility towards the landscape and their fellow citizens, while ill-being gives rise to a sense of irresponsibility in that failure to respect the rules of social harmony or solidarity may incite other people to act in the same way. This is particularly noticeable in the case of litter in the streets or in the countryside: it is enough for just one person to drop an unwanted item onto the pavement for this object to attract others. The same phenomenon can be seen in the countryside, where objects abandoned by the roadside attract other items of rubbish.

There is also interaction between well-being and ill-being: the well-being of some may be at the expense of others, and vice versa. This two-way process is a reflection of social perceptions of the landscape, which are not the same from one individual to another. What one person considers to be an aspect of well-being may to another appear detrimental. Hedges, for example, for some signify shelter for birds and a source of biodiversity, whereas for others they may be obstacles to their view of the landscape. There are numerous similar examples.

It is essential to raise the question of commitment, which is at the heart of these interactions. This implies a need to assume responsibility with regard to the landscape and to those who contribute to its establishment and development. If ordinary citizens wish to accept responsibility for their surroundings, if academics and researchers seek to produce knowledge that will be of value to the future of humanity, if members of voluntary organisations set out to improve quality of life and the environment, they must all, at the very least, be committed to their task. Responsible citizens, responsible researchers and responsible civil society activists are all committed to the landscape, the land in which they live and the entire planet, even if they are acting at their own particular level. This is an absolute precondition if their activities on behalf of the well-being of their community and of everyone are to be successful.

4.4. Indicators of well-being, role of individual and collective responsibility

Since the growth in studies on the economic evaluation of ecosystems, biodiversity and natural areas, researchers have set out to develop indicators to directly measure the impact of these non-traded goods. There are far more research studies and investigations in the field than can be covered in this report. Since there is now a multiplicity of such indicators, we need to clarify the meaning of the word. Several terms are used to cover the same concept, but they do not have exactly the same meaning; there are significant if subtle differences between indicators, descriptors and criteria, which can lead to considerable confusion and possible misinterpretations.

Reference should be made, in this context, to the aforementioned report on measuring economic performance and social progress.⁵⁵ The report cites numerous indicators, from physical ones such as carbon gas emissions into the atmosphere to ones that reflect public confidence in political governance by elected representatives, not to mention indicators of biodiversity and educational achievement:

“Some more direct non-monetary indicators may be preferable when the monetary valuation is very uncertain or difficult to derive ...; broaden income measures to non-market activities”⁵⁶

55. STIGLITZ Joseph, FITOUSSI Jean-Paul, SEN Armatya, *op. cit.*

56. Stiglitz Report, recommendations 3 and 5, p. 13.

This observation confirms the previous discussion where it was noted that non-traded goods such as the landscape or the environment cannot simply be valued in monetary terms. The same applies, but even more so, to well-being, which as the Stiglitz report notes, is a subjective good or asset. Yet although it is subjective, it can be valued using objective criteria or descriptors, such as number of threatened species, noise, number of qualifications obtained in school or university and so on. These descriptors are all quantifiable and can help to measure quality of life and well-being, at least in part, because many other criteria are needed to provide a complete picture.

The procedure for determining indicators of well-being is not exactly the same as the one that applies to quality of life, the one that numerous economists are seeking, or of biodiversity or the quality of ecosystems. In this case, the aim is to develop indicators of the well-being afforded by the landscape. Nevertheless, the methods developed to assess quality of life are relevant because they offer significant examples of the successful outcome of research and provide guidance in the formulation of indicators of landscape-induced well-being. The French national observatory of biodiversity has proposed several indicators of biodiversity,⁵⁷ such as changes in the surface area of permanent grassland considered to be ecologically functional, the fragmentation of natural environments or levels of participation in biodiversity education activities. These are clearly quantifiable and potentially objective criteria. Moreover, they can also be applied to the landscape and the well-being it affords, particularly biodiversity education, which is a measure of people's awareness of the landscape, one that is admittedly partial, but nevertheless relevant.

The French biodiversity observatory has also focused on the issue of wetlands, which throughout the world have major implications for biodiversity because of the trend towards draining such areas to make them suitable for crop growing, whereas they in fact constitute important reserves of rare or threatened species. A survey has been carried out in France by 200 experts from various public bodies, such as the national hunting and wildlife agency and the national water and aquatic environments agency, local and regional authorities and voluntary organisations such as the bird protection league and natural area conservatories. The purpose of the survey was firstly to review the state of wetlands and how it was evolving and then to focus on ones where pastoral activities were on the increase or declining and similarly with fishing, and where invasive plant species were becoming established. The results are of relevance to the question of landscape and well-being. A particularly interesting section of the survey concerns changes in social perceptions of wetlands and the conduct of interested parties such as farmers, hunters, elected representatives, developers, local inhabitants, manufacturers, fishermen and tourists. This shows that the group that has modified its conduct the most comprises elected representatives who are most aware of this issue. They are followed closely by manufacturers, all of whom have changed their behaviour.

Reference should be made to a number of studies conducted in the Netherlands, the United Kingdom, Italy (Emilia-Romagna) and France.

The first is based on a study of frequentation of certain Netherlands landscapes, focusing on the concept of attractiveness. A wide-ranging survey was carried out based on a questionnaire sent to 4,800 and 1,800 individuals which covered such concepts as unity and coherence, order and organisation of functions, adaptation to individuals' chosen activities, historic and natural character,

57. See, in particular, the 2016 report on the state of biodiversity in France: <http://indicateurs-biodiversite.naturefrance.fr>.

spatial dimensions and sensory properties. Respondents were invited to classify landscapes on the basis of photographs on a scale of 1 to 10. The results were analysed and presented in the form of graphs, accompanied by a map of the Netherlands showing the main types of landscape.⁵⁸ The study and its results call for a number of comments: the survey is based on preferences expressed in relation to photos and their contents, an approach that is often used by certain economists. In the case of landscape, however, such an approach raises problems, since social representations of the landscape may conflict, in that one and the same person may appreciate a landscape and, at the same time, reject it. The results of the survey correspond more or less to what can be observed in France and are to be expected insofar as respondents express a preference for green landscapes with canals. The analysis of the results is not particularly detailed and is fairly statistical rather than focusing on social representations of landscapes, but it nevertheless provides an interesting example of the construction of landscape indicators.

The second study, conducted by Natural England in the United Kingdom,⁵⁹ measured changes to the landscape by assessing modifications to its character over two periods: 1990-1998 and 1999-2003. It is based on the concept of tranquillity, which can be a criterion of well-being. An initial appraisal of landscape transformations was carried out using the method outlined in *Countryside Quality Counts*. One hundred and fifty-six areas were examined by a group of experts to assess their landscapes, on the basis of data on the natural environment and the presence of housing and human activity. The transformations were assessed according to criteria that took account of the state of the landscape: stable or subject to change; neglected or situation improved.

The study was undertaken by various experts. Most of them were government officials or employees of other state bodies or county council officials; only two ordinary members of the public took part. The results were presented in maps. Newcastle University conducted the study of areas of tranquillity, on the grounds that tranquillity was an element of well-being. The tranquillity maps were based on distance from noise sources, such as motorways and other roads, airports, conurbations and so on. This led to the production of a rural white paper. A number of criteria have been applied to extend the concept of tranquillity. A map of the features contributing to tranquillity has been drawn up, based on such characteristics as sky glow and perceived naturalness.

However, the concept of tranquillity is somewhat ambiguous, because of what it implies, namely not being disturbed by an inconsiderate person, by loud music or by the shouts of nearby individuals. Moreover, the experts concerned are not unbiased since they are strongly influenced by their responsibilities and duties in the bodies to which they belong and which are concerned with nature and landscape protection. The maps clearly show that the least tranquil areas are generally urban areas such as London, Birmingham, Sheffield or Liverpool.

58. Experience of constructing landscape indicators by FARJON Hans, van der WULP Nickie and CROMMENTUIJN Leon, "Monitoring program of perception and appreciation of landscapes in the Netherlands", 2009; *Exploring the Visual Landscape: Advances in Physiognomic Landscape Research*, Nijhuis Steffen, van Lammeren Ron and van der Hoeven Frank (ed.), Amsterdam, 2011.

59. BAKER Andrew, Natural England, *Countryside Quality Counts: An Indicator for Monitoring Change in the Character of the English Landscape 1990-2003*; <https://webarchive.nationalarchives.gov.uk/20140712063806> consulted on 17 avril 2019.

www.naturalengland.org.uk/ourwork/landscape/englands/character/cqc/default.aspx.

Another study, carried out in Italy (Emilia-Romagna), was based on objective criteria, namely indicators of naturalness, rurality and urbanisation. The study⁶⁰ uses indicators that are specific to landscape development, but well-being as such is not dealt with so the landscape ecology indicators seem less appropriate in this case.

A study of the Loire valley in France⁶¹ focused on the well-being induced by the landscape and heritage. A series of meetings and collective landscape and heritage study sessions and a workshop helped to identify very varied criteria that can form the basis of a complex “multicriteria” indicator, as recommended in the Stiglitz report. These criteria belong to areas that are just as varied as are human feelings and attitudes, and cover a range of economic activities such as agriculture, crafts and industry, as well as the issues of stone and sand quarrying, employment and unemployment, education, health and tourism, for all of which statistics exist. Other areas concerned include nature and biodiversity, or, in a quite different register, conviviality and solidarity. It is possible to rank all of these criteria on the basis of discussions at meetings and in workshops with local inhabitants, elected representatives, public officials and members of local associations.

Our research therefore identified a number of criteria associated with these different domains that can form the basis of indicators of well-being, or its opposite. A few examples appear below:

Area or activity	Well-being	Ill-being
Places associated with well-being or ill-being	Pleasant and uninterrupted view Agreeable sounds, such as bird songs Pleasant smells	Interrupted view Traffic noise Bad smells
Urbanisation	Controlled Low density High quality of construction Feeling of belonging Lively neighbourhoods Availability of shops and supermarkets Sense of neighbourliness Availability of local services	Urban spread High density High rise buildings Poor quality of construction Sense of not belonging Little sense of local life Lack of local shops and supermarkets too far away No local services
Traffic and travel	Quiet roads, little traffic noise Short journeys between home and places of work, entertainment or shops Availability of public transport Designated bicycle lanes or tracks	Busy roads, high accident risk, frequent noise Distance from place of work and various services Infrequent public transport Few bicycle lanes or tracks
Vegetation and biodiversity	Existence of nature reserves or protected areas Few invasive species Free access to natural areas Preserved hedgerows	Disappearance of endemic species Disappearance of hedges Proliferation of invasive species Limited access to natural areas
Agricultural activities	Maintenance of open fields	Development of industrial farming

60. MALCEVSCHI Sergio, *Indicators for sustainable management of the landscape: some Italian proposals and experiences*, DET- Università di Pavia, 2007:

www.catpaisatge.net/fitxers/seminari_ind/presentacions/MALCEVSCHI_POLI.pdf, consulted 12 October 2015.

61. Research conducted under the auspices of the Val de Loire Mission in conjunction with the Citeres laboratory of the University of Tours, the LADYSS laboratory of the CNRS (national scientific research council), Paris universities 1, 7, 8 and 10, the Cemotev laboratory of the University of St-Quentin-en-Yvelines and the Passeurs landscape studies office in Bordeaux, 2016-2018.

	Protected hedgerows Limited use of pesticides Emphasis on local production and supply chains Measures to help counter climate change	Increasing field size Disappearance of hedges Intensive use of pesticides Industrial-scale production and sale of imported products Expansion of mechanised agriculture at the expense of energy saving and measures to counter climate change
Industrial buildings	Architectural and landscape innovation Restoration of old industrial buildings Inclusion in urban planning documents of measures to ensure that landscape is taken into account in craft and small business areas, industrial zones and shopping complexes	Development of industrial building with no consideration for architectural or landscape considerations No consideration given in in urban planning documents for the landscape aspects of industrial buildings Derelict industrial buildings No architectural and landscape innovation
Historical and local heritage	Recognition and protection of the heritage Measures to protect local heritage Recognition of local heritage by tourist offices and details on available visits Promotion of the waterways heritage	Failure to conserve heritage items and places Failure to preserve old buildings No organised visits to discover the local heritage Little or no promotion of the waterways heritage
Stone and sand quarries	Cessation of extraction activities Landscaping quarries	Expansion of quarrying activities Abandoned non-landscaped quarries
Health	Availability of health services: doctors, hospitals, pharmacies and nurses Promotion of healthy and local organic nutrition	Disappearance or lack of health services: doctors, hospitals, pharmacies and nurses Few or no local organic nutritional activities
Education	Adequate number of primary and secondary schools Locally accessible universities Suitable means of transport for pupils and students Availability of vocational training establishments to train managerial and technical staff to assist the development of industrial and craft activities	Declining number of primary and secondary schools Decline in transport facilities for pupils, students and teachers Few or no vocational training establishments to train managerial and technical staff to assist the development of industrial and craft activities
The Loire and its flooding	Existence of a flood prevention plan Early flood alerts Flood prevention measures in urban planning documents Careful upkeep of Loire river banks and embankments Maintenance of bridge piers to avoid pile-ups and jams	No flood prevention plan Flood alerts non-existent or too late No flood prevention measures in urban planning documents Banks and embankments not properly maintained Little maintenance of bridge piers to avoid pile-ups and jams
Employment	Plentiful employment opportunities Elected representatives' willingness to promote landscape protection, management and development that does not threaten employment	Rising unemployment Rising unemployment used by elected representatives as an excuse for avoiding landscape protection, management and development measures

Source: Research report on the social and economic evaluation of well-being created by landscape and heritage, Mission Val de Loire, ERDF financed programme in the Centre-Val de Loire region, 2018.

The aforementioned research programme has enabled us to list the criteria applicable to various areas of activity and draw up an aggregate indicator of well-being or its opposite. The main components have been statistically analysed. We have also drawn up maps, for example ones showing areas of well-being or ill-being or of changes in economic activity, and photographic records of well-being/ill-being. How people perceive these areas may vary, so that, for example, local inhabitants may appreciate an industrial building insofar as it represents a place of work and employment, while disliking it from an aesthetic standpoint. Landscapes that have undergone major changes, for example when so-called *bocages* (a mixture of woodland and pasture) are replaced by intensive maize production, are deemed monotonous by the local population. What they do like are small hedge-bound fields in which they can relax and take walks. Farmers, on the other hand, prefer fields that lend themselves to mechanisation and high yields. The hedges associated with *bocage* landscapes require expensive and time-consuming maintenance and obstruct the movement of farm machinery. So any interpretation of the criteria of well-being or ill-being also requires a close and accurate analysis of the views expressed by all those concerned.

Conclusions

The issue of the interrelationship between landscape, responsibility, ethics, progress and other concepts raises numerous questions about human societies' obligations with regard to their future. It should first be noted that the concept of responsibility applies only to the human race and not to nature, which is essentially "irresponsible". Human beings are therefore responsible for maintaining natural resources, for climate change and for the landscapes of tomorrow, which will provide the living environment of future generations. So societies have these responsibilities, as parents do for their children's future.

This responsibility offers a major challenge because of its implications for the future of humanity. What makes it even more pressing is the current background of ecological, financial and social crisis, coupled with growing inequality, climate-induced migration and popular mistrust of politicians. In particular, the crisis necessitates an ethic of responsibility towards the landscape. The modern era has undoubtedly changed the situation. Previous societies exploited their natural resources without worrying about their exhaustion, and were not therefore particularly aware of their responsibilities towards future generations. Our vision of the future has changed since the advent of environmental problems, and the environmental ethic, and the responsibilities it entails, now forms part of our political and social debate. Our perception of landscape has also changed, from one that is essentially aesthetic to one that includes its social, political and economic aspects and focuses on the everyday landscape. This is a major change because the challenges it raises are no longer the same, and nor are the accompanying responsibilities, which now encompass a much wider range of economic spheres. One consequence is to extend the scope of landscape studies, which were at one time confined to physical features and forms. They have now evolved into an interdisciplinary approach that includes such areas as geography, geology, economics, anthropology, sociology and philosophy. These subjects did not appear formerly in landscape architects' training. Research has provided many new insights and has highlighted the relevance of the empirical knowledge of local inhabitants. Future spatial planning and landscape management projects must, therefore, make use of this body of knowledge. Individual and collective responsibility for protecting, managing and developing the landscape applies equally to ordinary citizens and to political representatives, local government departments and agencies and the voluntary sector.

The range of relevant studies may, however, give rise to debate and interdisciplinary disputes. This places a responsibility on the academic and scientific community to consider how best to incorporate data on ordinary people's perceptions of landscape into their body of knowledge. It has to be determined how such data should be processed and disseminated, and then taken into account in public decision making. For example in the event of a conflict of opinions between civil society, government and the scientific community, a decision has to be taken on how valid this information is. There are varying theories internationally about climate change and the future of humanity depends on political decisions. More locally, there is increasing concern about the landscape and living conditions. Those concerned can have little impact on the conduct of international climate negotiations or the content of international trade agreements, which are now on a global scale and on which the future of local landscapes depends. Such uncertainties pose a threat to the governance of landscapes, which no longer depends simply on decisions taken at local or regional level but also on negotiations conducted far outside the local ambit.

Landscape has become the subject of individual and collective responsibility. When choosing their surroundings, individuals are all responsible to their fellow citizens, future generations and the natural world that is an intrinsic part of the landscape. All groups of society - nature, landscape and neighbourhood protection societies and others - have a fundamental responsibility towards the future surroundings of people throughout the world. These responsibilities are common to all those concerned in social, economic and local and regional activities. They are shared responsibilities because the landscape is a shared asset. These responsibilities must be shared between all those concerned, be they ordinary members of the public, elected representatives, public officials or members of associations, which means that there must be moral rules that are accepted by all, in other words a collective ethic with regard to the landscape.

The purpose of sharing responsibilities is to secure people's well-being and maintain it for future generations. If the landscape is to contribute to well-being through its capacity to offer pleasant surroundings to both local inhabitants and visitors, it must reflect the system of values people attribute to it. These values have to be determined largely on the basis of how local people view their landscape. These social perceptions are varied and depend on numerous factors. If the landscape no longer reflects these values it becomes run down as a result of the misguided activities of irresponsible individuals and may then contribute to ill-being among all those concerned. The multiple interactions between individual responsibility, collective responsibility, well-being, ill-being, irresponsibility and landscape are therefore at the heart of concerns about people's quality of life.

Economists have used a variety of approaches to measure well-being and its opposite. Other disciplines have also taken up the subject, leading to differing positions. However, what the relevant working methods have in common is recognition of the need to introduce qualitative and well as quantitative criteria.

It should therefore be possible to develop indicators of landscape-induced well-being, about which the following proposals can be made:

- parties to the European Landscape Convention should have their attention drawn to the need to make those responsible for the landscape and for spatial planning aware of their duties and rights.⁶² This could be the subject of a draft recommendation of the Council of Europe Committee of Ministers to those particularly concerned with the landscape and spatial planning;
- in connection with the implementation of Article 6 of the European Landscape Convention on “specific measures”, steps should be taken to:
 - increase the awareness of civil society, private organisations and public authorities of the value of landscapes, their role and changes to them, but also of everyone’s responsibility regarding their everyday surroundings, in other words their everyday landscape;
 - train specialists in landscape appraisal and operations in the ethical and responsibility aspects of their landscape activities;
 - make professionals in the private and public sectors aware of their responsibilities regarding their landscape activities and develop a professional code of ethics;
 - educate pupils and students in the principles of a responsible and ethical approach to their surroundings, and consequently to their everyday landscapes.
- indicators should be drawn up that take account of criteria of well-being or ill-being, applicable to several areas of everyday life and to specific aspects of the landscape and to social and human perceptions thereof; steps should therefore be taken to:
 - update knowledge on changes in the landscape, on the basis of data on population trends, agriculture, protected natural areas, listed buildings and structures, local infrastructure, industrial plant and workshops, teaching establishments and the heritage;
 - identify areas of attention of specific relevance to the landscape, such as locations particularly associated with the concept of well-being or its opposite, in the light of expressed emotions, their appeal to the senses of sight, smell, hearing, touch and taste, and their contribution to such values as feelings of belonging, solidarity and social harmony, their aesthetic and symbolic importance, and so on;
 - identify the impact of economic activities on the way the landscape is experienced from day to day: transport and travel, infrastructure, agriculture, small workshops and industrial plant, quarrying and mining, education, health, tourism and national and local heritage sites.

These proposals, if applied, should help to supply the body of knowledge required to produce long-term programmes encompassing sectoral policies, landscape protection, management and improvement policies and programmes to ensure participation in the process, involving landscape debates that recognise differences of opinion and offer means of discussing the issues arising from landscape development.

62. Recommendation CM/Rec(2017)7 of the Committee of Ministers to member states on the contribution of the European Landscape Convention to the exercise of human rights and democracy with a view to sustainable development, in *Council of Europe Landscape Convention contribution to human rights, democracy and sustainable development*, Council of Europe Publishing, 2018. <http://rm.coe.int/16807bffda>

Appropriate indicators are a necessary precondition of any improvements to the living standards and conditions of those concerned. This may entail changes to economic activity and to the activities of government: the latter is responsible for its citizens' living conditions, and for their well-being and that of future generations.

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