

Landscape mosaics



Thoughts and proposals
for the implementation
of the Council of Europe
Landscape Convention

COUNCIL OF EUROPE



CONSEIL DE L'EUROPE

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for the implementation
of the Council of Europe
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Preface

The landscape reflects a present which interacts with a mosaic of memory traces which have diverse symbolic values.

Valerio Di Battista

The European Landscape Convention of the Council of Europe (ETS No. 176)¹ aims to promote landscape protection, management and planning and to organise international co-operation. It applies to the entire territory of the parties and covers natural, rural, urban and peri-urban areas. It concerns landscapes that might be considered outstanding, but also everyday or degraded landscapes. The convention represents the first international treaty exclusively devoted to all the dimensions of landscape, considered from a perspective of sustainable development.

The Council of Europe is continuing the work undertaken, since the adoption of the convention in 2000, to examine and illustrate certain approaches to landscape.² This book, entitled *Landscape mosaics – Thoughts and proposals for the implementation of the European Landscape Convention of the Council of Europe*, explores certain ways of understanding the landscape and makes proposals for more attention to be paid to it.

It brings together the reports presented by Council of Europe experts on the occasion of the Council of Europe conferences on the European Landscape Convention, organised at the Palais de l'Europe in Strasbourg, on 23-24 March 2017, 6-7 May 2019 and 26-27 May 2021. Representatives of governments and international organisations, both governmental and non-governmental, who took part in these meetings were able to discuss the subjects dealt with and make progress in the implementation of the convention.³

The experts who contributed to the production of this book are warmly thanked for the quality of their reflections and their proposals:

- ▶ Valerio Di Battista – Towards a grammar of European landscapes;
- ▶ Régis Ambroise – Designing agricultural landscapes for sustainable development;
- ▶ Patrice Collignon – The rural landscape in transition: energy, agriculture and demography;
- ▶ Mauro Agnoletti – Experience of Tuscany, Italy;
- ▶ Carmine Nardone – The Manifesto for the beauty of rural landscapes in Campania, Italy;
- ▶ Jean Noël Consalès – Urbanisation, town planning and landscape;
- ▶ Felix Kienast, with F. Wartmann, A. Zaugg and M. Hunziker – A review of integrated approaches to landscape monitoring;
- ▶ Barry Hynes, Valentin Riehm, Maguelonne Déjeant-Pons, with the contribution of Enrico Buergi – Experiences with public funds and the landscape;
- ▶ Yves Luginbühl – Landscape and responsibility;
- ▶ Michael Oldham – Professional recognition of landscape architects;
- ▶ Claire Cornu – Dry stone walls in the landscape, inheritance and innovation for rural sustainability;
- ▶ Gerhard Ermischer – Walking the landscape;

1. Adopted by the Committee of Ministers of the Council of Europe in Strasbourg on 19 July 2000, the European Landscape Convention (<https://www.coe.int/en/web/conventions/full-list/-/conventions/treaty/176> ETS No. 176) – now entitled “Council of Europe Landscape Convention” – was opened for signature by European states in Florence on 20 October 2000. A protocol amending the convention (<https://www.coe.int/en/web/conventions/full-list?module=treaty-detail&treaty-num=219> CETS No. 219), which entered into force on 1 July 2021, aims to promote European co-operation with non-European states wishing to implement the provisions of the Convention, by opening it to their accession.

2. *Landscape and sustainable development – Challenges of the European Landscape Convention*, Council of Europe Publishing, 2006; *Landscape facets – Reflections and proposals for the implementation of the European Landscape Convention*, Council of Europe Publishing, 2012; *Landscape dimensions – Reflections and proposals for the implementation of the European Landscape Convention*, 2017. www.coe.int/en/web/landscape/publications.

3. Conference reports: Documents CEP-CDPATEP (2017) 19; CEP-CDPATEP (2019) 20; CEP-CDPATEP (2021) 16. www.coe.int/en/web/landscape/conferences.

- ▶ Klaus Fürst-Elmecker: Traditional forms of thought and spirituality;
- ▶ Michael Oldham, with the contributions from Ana Luengo, Niek Hazendonk, Leor Lovinger, Indra Purs: Urban landscapes and climate change: the contribution of landscape architects to improving the quality of life;
- ▶ Régis Ambroise: Landscape and the responsibility of stakeholders for sustainable and harmonious development.

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Chapter 9

Professional recognition of landscape architects

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Founding President of the European Foundation for Landscape Architecture (EFLA), an Honorary Member of the International Federation of Landscape Architects Europe (IFLA-Europe) and Vice-President and Fellow of the Landscape Institute, United Kingdom.

Introduction

The importance of landscape to society

The European Landscape Convention states that each party undertakes to promote “training for specialists in landscape appraisal and operations” and recognises the need for trained professionals, experts in the broad field of landscape architecture, a profession that applies aesthetic and scientific principles to the design, planning, analysis and management of both the natural and built environments.

However, the impact from the lack of clear professional recognition of experts, practitioners and specialists in the broad field of landscape architecture needs to be considered. In some states, landscape architecture, in all its forms, is a relatively young profession with limited representation in comparison with other, recognised and older professions.

It is important to recognise that the role of the landscape architect is fundamental to an integrated and holistic planning process which develops landscape strategies alongside social, economic and environmental policies. Ensuring a democratic vision that is capable of reasserting collective interests, surpassing cultural differences, strengthening the links between people and their environment and establishing landscape policies and programmes that will ensure plural and collective participation, is central to this role.

The following summary gives an overview of how the profession is regulated and recognised, or insufficiently recognised.

A brief history of landscape architecture and the profession

Landscape architecture has its roots deeply embedded in nature and culture. Indeed, the heritage of the European city dates back to Hellenic Greece and the establishment of the ancient Greek city or *polis*. Over 2 500 years ago, the open space of the agora was an essential part of the city, a meeting place or assembly, key to the aspirations of democracy and community, as well as providing a focus for commerce. The agora was in the public domain, but early examples of historic gardens and private estates also date back over 2 000 years. Hadrian’s Villa, for example, in Italy, provides evidence of the huge value that was given to landscape development.

The patios and cloisters of mediaeval Europe – Christian and Muslim – as well as the orchards and vegetable gardens used for productive purposes, the great gardens of the Italian and French Renaissance, the Boboli Gardens in Florence, the gardens of the Palace of Versailles, and the rural landscapes of Capability Brown and Humphrey Repton in England, all bear witness to the value placed on landscaping.

What was developing in Europe was by no means unique; these aspirations were worldwide, though unsurprisingly always in the domain of the rich and powerful. The gardens of the Mughal Empire of India and the Imperial Gardens of Japan not only demonstrate this but also provide further evidence and understanding of why landscape is perceived to perform such a hugely important role in improving the quality of life for those who can afford it and benefit from it.

The Industrial Revolution, with the resultant mass movement of people from rural environments to the city, heralded a change with the development of parks and gardens for city dwellers. An example from the United States of America is the development of Central Park in New York (designed in 1857 by landscape architect Frederick Law Olmsted and architect landscape designer Calvert Vaux). This project was realised on 315 hectares of land acquired by the city authority and was planned to serve as a green lung for the rapidly expanding urban population. Only 15 years later (in 1872) Yellowstone was designated the first national park in the world. There are now over 400 national parks in Europe. They are managed to provide public access for recreation and vocational training. They protect sensitive landscapes, with particular attention to the interrelationships between geomorphology, geology and land use, including for agriculture, forestry and wilderness. Since the close relationship between human intervention and our impact on nature is now better understood, international conventions have become crucial to maintaining a better balance amid increasing global problems.

Investment in landscape, in all its forms, helps ensure harmonious and socially cohesive societies in which cultural and economic development can flourish. The manner in which many communities live, work and play relates directly to their local landscape. The approach to landscape management is crucial to people’s livelihoods, responding to socio-economic needs as well as addressing ecological issues, confronting the realities of climate change, preventing unsustainable exploitation, responding adequately to growing urbanisation, industrialisation and pollution and ensuring innovation, sustainability and quality of life.

Thus, from the great art of garden design, landscape architecture has evolved from its early beginnings as chiefly a design profession to one which now encompasses a wide variety of needs, including regional planning, nature conservation, green routes, woodland management and scientific interest, as well as responding to the rapidly changing challenges in the urban environment. Indeed, the art, science, planning and management related to

the environment are vitally important for humankind and landscape architecture is now a profession that contributes greatly to modern society worldwide. Nevertheless, landscape architecture itself is still a profession that is insufficiently recognised in some states, and yet landscape is internationally recognised as a most valuable asset of the world in which we live. Landscape is the medium in which human life unfolds, it is the medium in which all human activities take place and where nature functions, even if the two are not always in perfect harmony.

The multiplicity of actors

Landscapes are the result of complex socio-economic processes in which a myriad of variables act. In addition, the identity of landscape is based on its dual nature, the natural-cultural dichotomy, which is evident in it being classified under environmental protection acts (laws on the conservation of nature and the environment) and/or on the conservation of heritage (laws on the protection of monuments and/or complexes, intangible heritage and so on).

The complexity of the landscape, which establishes a bridge between science and aesthetics, between the technical and the humanistic, allows many disciplines to converge on its care. These include those disciplines capable of analysing and understanding landscape as a biophysical matrix – specialists in geography, soil science, climate, topography and hydrology, as well as biota specialists such as biologists, ecologists, environmental engineers, forestry engineers and agronomists – and specialists who understand its cultural matrix, such as archaeologists, art historians, ethnobotanists, architects, civil engineers, lawyers and jurists, economists, sociologists and anthropologists.

This degree of specialisation is the climax of a secular process dating back to the classical period, gaining strength in Europe during the Renaissance with the creation of universities and teaching centres, and institutionalised at the end of the 19th century with the creation of academies and similar bodies. It is at this moment – driven by the ideas of modernity that swept the continent at the beginning of the 20th century – that professional training became specialised, focused and oriented and, while achieving spectacular scientific progress, also lost a broader and more humanistic vision of knowledge.

Perhaps it is this confidence in “specialisation” that introduces a need for a broader vision in landscape projects, a need which is not immediately apparent. This lack of definition of a global profile that protects and co-ordinates these differing specialisms is as bad as trusting an orchestra to play a piece of

music without a conductor. Therefore, it is essential and fundamental to have the presence of a professional who has been trained to incorporate a capacity for dialogue and understanding with themes that range from understanding the physical environment to understanding its more artistic or historical nature.

A landscape architect benefits from years of specialist professional training in order to qualify. A short module in a degree course in architecture or engineering is not a viable substitute. Their bases are diametrically opposed. While the vision of architecture and engineering work uses inert materials normally generating an immutable project over time, landscape architecture recognises that the scope of its work is based on an understanding of the environment in which we live. Its main characteristic is that landscape is dynamic, affected by constant change, and management of the phases through which it will evolve is fundamental.

Landscapes have been created through an organic and cumulative process, including geological episodes and activities lasting many millions of years, through human influence for millennia and by innumerable generations of people. Changes in the physical landscape have accelerated in recent decades, through the effects of demographic and climate change, globalisation, economic crises and social divisions, all of which have disrupted the traditional balance that previously existed between people and place.

Landscape architects are trained to manage these layers and the identities that they provide while ensuring that landscape development will have, if not positive, at least a minimal negative impact on the dynamics and integrity of natural ecosystems. The aim is to reassert collective interests by surpassing cultural differences, thereby strengthening the links between people and their environment, in order to ensure a quality of life for all. Knowledge, skills and practical experience in landscape planning and development are used to provide advice to decision makers, administrations, civil society and non-governmental organisations.

1. Professional bodies and global recognition

The development of professional bodies

In the early years of the 20th century, professional institutions that both represented and regulated practitioners began to be formed. For example, in 1929 the Institute of Landscape Architects was established in the United Kingdom. In its first decade, it represented fewer than 50 people: now, after major changes in the 1980s, when the institute changed

its name to the Landscape Institute and opened its doors to a wider membership that included landscape managers and scientists, it represents well over 6 000 professional members. In Germany, the profession evolved slightly differently, with formal recognition of the profession predating that in the United Kingdom. However, between 1934 and 1945, the term “landscape architect” was illegal in Germany and was replaced by the term garden designer. In order to use this job title, it was necessary to be a member of the Association of German Garden Designers (*Bund Deutscher Gartengestalter*), which was established in the Reich Chamber of Fine Arts.

Subsequently organisations were created across Europe. In Germany, at the Technical University (*Technische Hochschule*) of Berlin-Charlottenburg, an Institute for Garden Design (Institut für Gartengestaltung) was created in 1909 and continued at the Humboldt University until 1949. The first school in Europe to offer teaching in Landscaping was in Ås, near Oslo, Norway, in 1919, at the Faculty of Agronomists; it continues today within the Institute of Landscape Planning. In the United Kingdom, the Landscape Institute began courses in landscape architecture in 1929, establishing the first higher degree at the University of Reading. The first Landscape Architecture Programme in Poland was established in 1930, at what is now the Warsaw University of Life Sciences. Similar programmes appeared around Europe: in the Netherlands a four-year course has been taught since 1934 at the University of Boskoop, followed later by Wageningen and Amsterdam; in Portugal the first course in Landscape Architecture was created at the Lisbon Higher Institute of Agronomy in 1945, followed by that of the University of Évora; in Denmark the first course was established in 1960, at the Agricultural University, in 1963 at the Royal Academy of Fine Arts and in 1965 at the Architecture School in Aarhus; in Belgium, at Melle and Vilvoorde, specialist courses began in 1956; in Israel a landscape architecture programme began at the Institute of Technology in Haifa in 1982. There are now schools in 29 European states, almost all of which have adopted the “Bologna process”, converging degree structures and sharing standards for quality assurance and common recognition practices.

Indeed, despite the term “landscape architect” now being commonly understood and used worldwide, the actual use of the word “architect” is still problematic in some European states, although these are now few.

The International Federation of Landscape Architects (IFLA)

In 1948, the International Federation of Landscape Architects (IFLA) was founded in Cambridge, England,

with Sir Geoffrey Jellicoe as its first president. It represented 15 states from Europe and North America. In 1978, the IFLA headquarters were established in Versailles, France; they are now in Brussels, Belgium. IFLA currently represents 76 professional associations from Africa, the Americas, Europe and Asia Pacific.

Recognition of the profession by UNESCO

In 1965, IFLA was first admitted to Category C (mutual information relationship) of the United Nations Education, Scientific and Cultural Organization (UNESCO). In 1970 IFLA advanced to Category B (information and consultative relationship) and in 1987, after many years of discussion with UNESCO and after intensive collaboration, especially in the division of cultural heritage, IFLA was admitted to Category A (consultative and associate relationship), thus achieving an important landmark for the profession. In July 2012 the IFLA/UNESCO Charter was agreed for landscape architecture education. It expressed the wish to:

- ▶ improve the quality of life for communities and all their inhabitants and users;
- ▶ recognise and nurture cultural diversity and biodiversity;
- ▶ add social and cultural value to sites and outdoor public spaces;
- ▶ promote an approach to landscape planning and design interventions which enhances social sustainability, [meets] cultural and aesthetic needs, and the physical requirements of people;
- ▶ employ an ecological approach to land-use planning, design and landscape generation that ensures sustainable development of the built environment through the appropriate integration of biological, land, water and atmospheric systems;
- ▶ recognise the role of public realm landscape as a place for social and cultural expression interchange and make these [places] accessible to all individuals and communities;
- ▶ promote equity through work with disadvantaged groups or communities and the development of solutions that are affordable and accessible to the broad population.

This charter has helped establish the professional scope of landscape architects and the objectives of their training. These include the interdisciplinary nature of landscape architecture, which encompasses the humanities, natural and social sciences, technology and the creative arts, without forgetting the context of public, social and environmental policies, which help to establish an ethical framework for professional decision making.

Recognition of the profession by the International Labour Organization

In some states, such as Spain and Italy, the profession is still very closely associated with the study of architecture. Indeed, in these two states and in France, architects still dispute the use of the title of landscape architect. However, in 1968, the profession of landscape architect, having by then already existed in Europe for 50 or so years and a hundred years elsewhere, was officially recognised by the International Labour Organization (ILO) in Geneva in a chapter entitled "Architects and Town Planners". In the recent edition of the International Standard Classification of Occupations (ISCO 08) published by the ILO in 2012, Landscape Architects are classed in group 2162, next to Building Architects (group 2161).

The European Foundation for Landscape Architecture (EFLA) and the European region of IFLA (IFLA Europe)

In 1987 the European Commission decided that sectoral directives in distinct professions were no longer viable because the process of achieving them had been too lengthy and hugely inefficient. This resulted in Directive 89/48/EEC being issued on a general system for the recognition of higher-education diplomas awarded on completion of professional education and training of at least three years' duration. The national professional associations representing the 12 member states of the European Economic Community at that time recognised the immediate need to come together more formally, to harmonise both professional training and practice in the field of landscape architecture. The result was the establishment of the EFLA in 1989.

Other organisations rapidly formed around EFLA, including affiliated professional bodies representing landscape architects from European states that were not members of the EU, bringing together both students and schools. The European Council of Landscape Architecture Schools (ECLAS) was convened by the Berlin Technical University in 1989. In the same year, the European Landscape Architecture Students' Association was formed, the principal objective of which was "to increase the possibilities for collaboration and exchange between students of landscape architecture throughout Europe, by means of improving the circulation of information and ideas".

One of the principal objectives of EFLA was to establish a common base for the mainstream professional training of landscape architects and to support this with a network of recognised schools throughout Europe. This was assisted by a Schools Recognition Panel which was established both to help with the development of schools of landscape architecture

and to regulate their performance and adherence to the standards set by EFLA.

At the beginning of the 2000s, the worldwide body, IFLA, underwent several important structural changes and EFLA became the European Region of the International Federation of Landscape Architects (IFLA Europe), which effectively inherited the statutes, regulations and legal status of EFLA as a non-profit organisation registered under Belgian law. IFLA Europe comprises 34 national representative organisations. Professional associations with membership exist in the following states: Austria, Belgium, Bulgaria, Croatia, the Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Israel, Italy, Latvia, Lithuania, Luxembourg, the Netherlands, Norway, Poland, Portugal, Romania, Russia, Serbia, Slovakia, Slovenia, Spain, Sweden, Switzerland, Turkey, Ukraine and the United Kingdom.

As a non-governmental organisation, IFLA Europe not only aims to defend the landscape architecture profession, recognising excellence in professional training courses and promoting the best practice in operations in all member states, but also strives to influence and enhance the quality of the landscape. This is now the body which represents the profession across Europe. IFLA Europe participates in the work of the Council of Europe to promote the aims and objectives of the European Landscape Convention: the organisation is included as an observer of the Council of Europe's Steering Committee for Culture, Heritage and Landscape (CDCPP) and the Council of Europe conferences on the European Landscape Convention.

In recent years, IFLA Europe has contributed to this process by reporting on the work of its General Assembly on various topics: Landscape Democracy (Oslo Resolution, 2014); Cultural Landscapes (Lisbon Resolution, 2015); Urban Landscapes (Brussels Resolution, 2016); Migration (Bucharest Resolution, 2017) and Climate Challenges (London Resolution, 2018). The aim was to encourage a dialogue not only at European level but also between professionals and citizens alike, to promote actions in favour of landscape.

A charter was agreed and adopted by IFLA Europe's General Assembly at its meeting in London on 9 September 2018. This document brings together details of the organisation and its governance, as well as data on the core requirements for professional training. They include reference to the School Recognition Panel, public and private practice, the responsibilities of liberal professionals, intellectual property, professional independence and probity. Finally, the document also states the organisation's

close reference to the objectives of the European Landscape Convention.

Importantly, the charter defines landscape architecture as “the profession that applies aesthetic and scientific principles to the analysis, planning and management of both natural and built environments” (with reference to the European Landscape Convention). A landscape architect is defined as “a professionally qualified person recognised by an IFLA registered professional association (or otherwise, as regulated by national law) operating in the field of landscape architecture”.

Formally recognising this professionally qualified person is a joint responsibility of national governments, the Council of Europe and the European Commission, working in conjunction with the national associations of landscape architects. However, there is a responsibility for national professional associations to play their part in this process by becoming, if necessary, self-regulatory bodies, involved in professional training and practice, controlling, monitoring and sanctioning, where necessary, the activities of their members, in order to ensure probity, quality of service and consumer protection for the benefit of the public and the clients they serve.

2. Professional training and practice

Developing a mainstream professional training system

The development of a mainstream professional training system for landscape architects was one of the principal objectives of EFLA and subsequently both IFLA Europe and IFLA World. The European Landscape Convention has also considered the need for the training of specialists in the domain of landscape architecture and for the establishment and support of schools 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. It also notes the need to train specialists in landscape appraisal and operations, and that multidisciplinary training programmes in landscape policy, protection, management and planning are necessary for professionals in the private and public sector (Article 6.B).

IFLA Europe considers the provision in the European Landscape Convention for awareness raising, training and education as being important and is committed to meeting these needs through the professional training of landscape architects and in their application to professional practice. Maintenance of the quality of professional training and professional standards forms a central part of its activities.

The definition of the profession of landscape architect for the International Standard Classification of Occupations, compiled by the ILO in 2012, was the subject of a further study carried out in 2017. This study (Bruschi 2017) incorporates the ILO ISCO 08 International Standard Classification of Occupations’ global definition of the profession of a landscape architect (2162) and further develops it.

Landscape architects conduct research, analyse and realise the potential of the landscape at all stages, scales and contexts of the development process, including policy development and planning; site inspections and feasibility studies; strategic vision, planning and review; master planning and spatial design; preparation and implementation of detailed design and its long-term management, maintenance and rehabilitation.

The tasks include:

- ▶ co-ordination of policies affecting the landscape at a national, international, regional and sub-regional level;
- ▶ consultation with clients, management and other stakeholders, including national governments, regarding proposed legislation and policy; changes to the planning process; and type, style and size of proposed buildings, parks, sports facilities, roads and other open spaces;
- ▶ preparation of planning guidance, codes, environmental and visual impact assessments, guidelines and detailed landscape strategies about implementation, management, maintenance, conservation and rehabilitation;
- ▶ research to develop or improve theories, technologies and practices in the arts and sciences of landscape architecture, including the philosophy, theory, practice and pedagogy of design;
- ▶ raising of aspirations for quality environments through demonstration of excellence and public engagement;
- ▶ connection of spatial strategies and visions to specific proposals, through the planning and consultation processes, acting as expert witnesses at public inquiries, leading, co-ordinating, mediating and contributing to multidisciplinary design teams;
- ▶ research and analysis of site data (geographical and ecological features, landforms, soil types, vegetation, hydrology, visual features and human structures), and formulation of land use recommendations and environmental impact statement;
- ▶ research and design feasibility studies, strategic reviews and master plans, technical and economic plans for urban regeneration and city building, infrastructure works and reclamation, the renewal of transport systems, climate

adaptation and mitigation, the siting and planning of new towns, roads, power stations, national pipelines and utilities, the development of strategies for tourism, recreation, agriculture, forestry, conservation and heritage and the design of ecological, economically and socially sound urban, suburban, peripheral, rural and wilderness environments;

- ▶ preparing reports, site plans, working drawings, specifications and cost estimates, location and details of proposals, including ground modelling, structures, vegetation and access, landscape management and maintenance plans for existing or new landscapes;
- ▶ preparation of schematic and detailed design proposals and appropriate documentation for the implementation of site-specific proposals for open spaces, both public and private, including communication of the proposals for specification, costing and construction, with due regard to function, quality, existing legal, technical and advisory standards and regulations;
- ▶ specifications and contract documents, project supervision, co-ordination, moderation, mediation and implementation, ensuring compliance with regulations and quality standards;
- ▶ undertaking planning, design, restoration, management and maintenance of cultural and historic landscapes, parks, sites and gardens. (Luengo Añon et al. 2018)

The profession continues to adapt, responding not simply to society's changing needs and aspirations, but also to constant change affected by global matters such as climate change, environmental awareness, pollution, world economics and legislation. However, the need to produce a more diverse profession, concentrating less on design, is already very clear. Indeed, in some states the profession has already significantly changed in order to embrace other closely related disciplines.

The importance of increased diversity in a changing world

The world is being subjected to rapid change, and its needs are changing. Diverse impacts such as climate change and technological advances will transform urban and rural communities. The need to preserve and conserve important natural resources, culture and heritage is now better recognised.

In each state, the circumstances in which landscape architects work and contribute to society vary. There is no standard model that applies throughout, nor should there be. However, a higher degree of harmonisation, both in professional training and practice, is still important to eradicate some inconsistencies that continue to exist and to assist the

free movement of professionals. Therefore, while developing and practising core levels of expertise and skills, there is nevertheless a need for a diversity of professionals who can respond not simply to national differences but also to the rapid change that is affecting society at all levels. Indeed, with respect to the European Commission, the need to adopt a Common Training Framework, as prescribed in the Professional Qualifications Directive 2005/36/EC, is important in that it provides for a general system of equivalence of professional qualifications. This has been recognised for some time.

At present, in 22 states (Austria, Belgium, Bulgaria, the Czech Republic, Denmark, Finland, France, Germany, Greece, Hungary, Ireland, Italy, Latvia, the Netherlands, Norway, Poland, Portugal, Slovakia, Slovenia, Spain, Turkey and the United Kingdom), there are at least 95 higher professional training colleges and universities offering over 200 courses which are recognised by IFLA Europe's School Recognition Panel. Graduating from any one of the courses is a fundamental step in demonstrating the equivalence of professional qualifications. Nevertheless, the profession needs to continue to strengthen and widen its professional training functions.

For example, in the late 1980s, the Landscape Institute of the United Kingdom opened its doors to a range of graduates with a broader expertise in landscape planning, landscape management and science. Now it aims to expand its professional membership once again. The institute acts as a quasi-licensing authority, recognised by the British Government as a "regulatory body", and one of its central concerns remains to ensure that its members are professionally competent, and that professional indemnity insurance is carried by all members practising in the private sector. In this way, the protection of the consumer and the general public interest are safeguarded. Aspiring members are obliged, after a minimum of two years following graduation, to present for a Professional Practice Examination, which is a two-stage examination comprising a three-hour written paper: those who pass then undertake a *viva voce*. The process of continuing professional training is enforced through a credit system, Continuing Professional Development. In addition, there is a close relationship with the schools, ensuring a general high standard of professional training.

In some states the schools function simply to provide strongly design-oriented professional training. In addition, in certain states the professional association has no control or influence over the schools, does not have authority to license practice and largely operates to simply maintain a list of professionals over whom it has few powers and exercises little control. These states do not provide a statutory

requirement to join the association and many professionals choose not to do so.

There is an increasingly urgent need for governments to engage with their professional associations not only to further develop professional training and professional training opportunities, but also to establish rules for formally recognising the profession of landscape architect. Society is faced with many challenges both in cities and the countryside, such as climate change and degraded landscapes. Landscape architecture is one of the professions whose expertise is necessary to ensure a proper response to these challenges to improve the well-being of people, and thus, social cohesion.

Bearing in mind the depth and breadth of expertise that the profession is capable of providing, more needs to be done to recognise its importance. Unfortunately, in some states the opposite is happening and, in some circumstances, other professions try to exclude landscape architects from the market. Society at large can, however, benefit from their competence. Effectively, poorly conceived landscapes, "hard" or "soft", urban or rural, often fail, cost huge amounts of money to maintain, systematically drain revenue resources and contribute in some cases to global warming. It is important to note that the way that landscapes are managed has a much greater and longer-term impact on society than design alone, which is only the start of the process. Ignoring this fundamental consideration in the design stage will inevitably be costly in many dimensions, social, environmental and financial.

3. Professional recognition

The current situation of the recognition of the profession by some European states, and comparison with that of other regions of the world

The situation regarding professional recognition of landscape architects in Europe is, to say the least, complex.

The article, "The title landscape architect in Europe", stated that:

in general, in north western Europe, [the profession] is well established and recognised *de facto* by the public and private sector. In some States, for instance Germany and Holland, the title is protected while in Scandinavia and the United Kingdom anyone can use the title but in fact the profession is well recognised. In Russia the usual title is "Green Engineer" and [the term] landscape architect has a lesser currency. (Holden and Tricaud 2008)

Since then, while there have been some improvements, there have also been serious disappointments. For example, the title "landscape architect"

is now properly protected in several states, but in others the use of the term is still not allowed. In France, to distinguish the profession from gardeners, the title "conceptual gardener" (*paysagiste concepteur*) is currently being considered. In this context, the word conceptual relates more to design and completely ignores the planning, science and landscape management roles in which landscape architects are increasingly engaged.

While some states, through their professional training system, maintain that landscape architects can only really be designers, others consider that landscape architects cannot be designers in the urban field, simply because of their science-based training. Croatia, for example, considers that only architects, architect urbanists and engineers (including electrical engineers) can be designers. Public authorities noted in this regard:

Regarding the claim that landscape architects have qualifications for performing spatial planning, we note that Landscape Architecture is one of the branches in the scientific field of technical science, classified within the field of architecture and urbanism, whereby the architectural profession gains in completing the university study of architecture and urbanism. Accordingly, we consider that landscape planning should be considered in the context of spatial and urban planning and that the necessary competences for carrying out these tasks ... are Architects or Architect Urbanists. (Williams 2018)

A similar stance has been taken by some other states. In Slovenia, for example, only architects can perform work in detailed spatial planning and urban plans.

It now seems necessary to generalise the adoption of a balanced multidisciplinary approach, including architects, landscape architects, town planners and other professionals, without one of these professions being privileged over another. The adoption of such an approach at governmental level, based on appropriate legislation, should make it possible to provide appropriate responses to people's concerns about their living environment.

Part 1 (General Principles) of Recommendation CM/Rec(2008)3 on the guidelines for the implementation of the European Landscape Convention includes the following requirements:

1.1 A. Consider territory as a whole

The Convention applies to the entire territory and covers natural, rural, urban and peri-urban areas. It includes land, inland water and marine areas. It concerns landscapes that may be considered outstanding as well as everyday and downgraded landscapes.

1.1 B. Recognise the fundamental role of knowledge

The identification, description and assessment of landscapes constitute the preliminary phase of any landscape policy. This involves the analysis of morphological, archaeological, historical, cultural and natural characteristics and their interrelationships, as well as an analysis of changes. The perception of landscape by the public should also be analysed from the viewpoint of both its historical development and its recent significance.

1.1 I. Develop mutual assistance and exchange of information

Information exchange, the circulation of theoretical, methodological and empirical ideas between landscape specialists, and learning from these experiences, are of fundamental importance in ensuring the social and territorial relevance of the European Landscape Convention and in achieving its objectives. (CM 2008)

Landscape has no frontiers

In an attempt to achieve a better understanding of the nature of landscape, it is increasingly said that landscape has no frontiers. The Black Forest in Germany does not suddenly stop at the Swiss border, and the Danube with its related flora and fauna crosses a large part of Europe; and flows through four great capital cities.

Landscape strategic planning at local, regional and national level is important in understanding, protecting, conserving and managing a state's valuable and sometimes diminishing landscape assets. The landscape structures that such studies identify do not stop at the urban fringe of towns and cities. Indeed, in terms, for example, of biological dispersal, hydrology and ecosystems, it is essential that these interrelated structures do not stop. Encouraging natural landscapes, including urban forests, to penetrate the urban environment by design and management to provide green corridors, linked natural areas, areas for casual and formal recreation and traffic-free alternative communication routes, are essential for modern cities and are likely in the future to gain even greater significance. Green infrastructure, sometimes referred to as "blue-green infrastructure", is a strategically planned network that combines the elements that are essential to urban, climatic and environmental challenges by building with nature. This holistic approach, combined with appropriate management, is the core of landscape architecture.

In the United States of America, the title "landscape architect" has been protected through the use of a state register. This effectively licenses landscape architects with a right to practice in 49 of the 51 states. A separate organisation, the Council of the Landscape Architectural Registration Boards, exists alongside as a national examination authority. This body is intended to "protect the public's health,

safety and welfare by establishing and promoting professional licensure standards". The American Society of Landscape Architects was founded on 4 January 1899 to "establish Landscape Architecture as a recognised profession in North America". It currently represents over 15 000 members.

The Architects' Council of Europe (ACE) represents over 500 000 architects in Europe. It is recognised as a very powerful and influential body. By contrast, IFLA Europe represents fewer than 20 000 landscape architects in Europe practising in a very wide range of activities. About half of these are concentrated in two states, the United Kingdom and Germany. However, in several European states, even where the European Landscape Convention has been ratified, the practice of landscape architecture is still difficult when restrictive practices continue to exist. This situation becomes more complicated when laws require an architect's signature. It would be preferable to adopt and encourage multidisciplinary practice where a more thorough and comprehensive expertise can be applied to development projects.

At the 21st Council of Europe meeting of the Workshops for the implementation of the European Landscape Convention, "Landscape and Education", held in Tropea (Italy) from 3 to 5 October 2018, it was reported that many national associations were organised in a system of "chambers", e.g. in Bulgaria, the Czech Republic, Germany, Hungary, Italy, the Netherlands and Slovakia.

Regulated professions and the European Union

Directive 2005/36/EC on the recognition of professional qualifications came into force in 2007 (European Parliament 2005). It is a cornerstone of the European Commission's Internal Market Strategy, first laid out in Lisbon in March 2000 (European Parliament 2000), and it encapsulates the right to pursue a profession, in a self-employed or employed capacity, in a member state other than the one in which the professional qualifications have been obtained. Directive 89/48/EEC of 21 December 1988 "on a general system for the recognition of higher-education diplomas awarded on completion of professional education and training of at least three years' duration" provides a general system for the recognition of higher-education diplomas. Both directives incorporate sectoral directives relating principally to the medical profession, vets, dentists, ski instructors and architects.

At the beginning of the 1990s EFLA proposed, through the European Parliament, to draft a sectoral directive for landscape architecture. This initiative was not, however, pursued. The lack of involvement of landscape architects in projects certainly reduces the competition between professional categories. However, society loses the unique expertise of landscape architects.



Figure 1. Member states of the European Union regulating the status of the profession of landscape architect (Forcek-Brataniac 2019)

The “regulated status” of the profession of landscape architect in the member states of the EU is accorded into eight states (Germany, Hungary, Italy, Luxembourg, the Netherlands, Slovakia, Slovenia, and the United Kingdom); Iceland is in the process of becoming the ninth member of this group. For the

profession to be recognised automatically (by Directive 2005/36/EC, Article 49a) across the European Union, 10 member states need to confer regulated status. For the free movement of professionals, IFLA Europe has in place a standard procedure to help aspiring transnational candidates to complete the process.

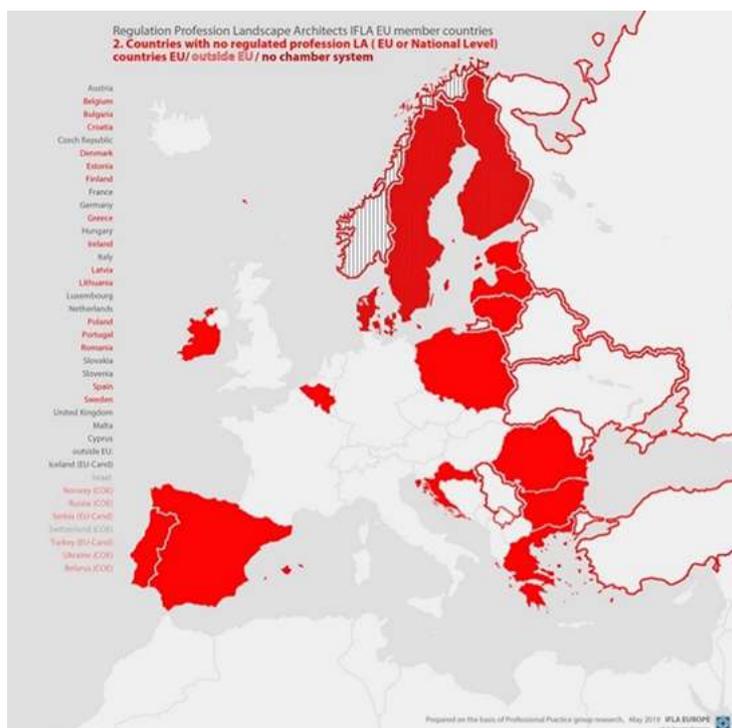


Figure 2. Member States of the European Union with no regulated status of the profession of landscape architect at national or European Union level (Forcek-Brataniac 2019)

4. Investment in landscape

Design and management

Landscape has always been appreciated simply for its beauty. However, we live in a world where, in order to convince some professional developers, bankers, investors and, particularly, politicians, it is necessary to demonstrate some real monetary value that can be derived from investing in landscape, and managing it. Landscape, in broad terms, is often seen as a “cosmetic”, as an add-on or as an embellishment to a development project, which, *in extremis*, can be omitted without any real loss. Such a lack of consideration, which might seem insignificant, has the effect of impoverishing the landscape, a living environment essential to the life of society.

In a paper on building design, Judith H. Heerwagen asks “What makes a good habitat?” (Heerwagen 2012). In answering the question, she sets out the following six features: connection to nature; sense of community and belonging; behavioural choice and control; opportunity for regular exercise; meaningful change and sensory variability; and privacy, when desired.

Connection to nature is not simply direct access to outdoor natural spaces, but also indirect contact such as a view from a window, or even simulations using internal planting, posters and paintings. What is true, however, is that the more complex these interrelationships are, where plants and trees are combined with moving water, for example, the more this contact generates higher emotional, physiological, social and cognitive benefits, reducing stress and fatigue, improving emotional functioning and improving the ability to focus on important activities (Heerwagen 2000; Ulrich 1993).

Natural capital

How can landscape, amenity and nature conservation be quantified, both in terms of real monetary value and real financial loss? Putting a monetary value on these assets has never been considered an easy process. However, at the outset, compared to building costs, landscape is an extraordinarily cheap commodity, representing on average much less than 5% (often no more than 2.5%) of overall development costs. In spite of being more aware of the health and well-being benefits that accrue for society when it has easy access to well-developed green space, there are still difficulties in allocating precise financial figures to this.

In this respect, a paper published by the Landscape Institute of the United Kingdom in 2011, “Why invest in landscape?”, investigated some wider benefits accruing from seven very different projects. These benefits, quite apart from the direct improvements

to the visual amenity, the microclimatic and ecological/biotic environments, the benefits of pollution reduction, providing green routes (pedestrian and cycle routes away from traffic) and the increased safety that such schemes achieve, can be financially quantified, and can be summarised as follows:

- ▶ increased visitor numbers, frequentation, shopping numbers;
- ▶ job creation;
- ▶ increased private-sector investment;
- ▶ smoothing the planning process;
- ▶ accommodating waste (rather than transferring it to landfill);
- ▶ increased saleability;
- ▶ increased rental values.

These benefits closely mirror those identified in a paper entitled “Economic benefits of green spaces” regarding the United States:

- ▶ green space can improve property values;
- ▶ investment in green space was contributing to one of the fastest growing industries, the environmental horticultural industry (quoting 1 964 339 jobs and \$95.1 billion in added value);
- ▶ there was a business benefit, with increased value of business premises;
- ▶ parks improve property values;
- ▶ views of plants increase job satisfaction;
- ▶ nature increases worker productivity;
- ▶ green space helps decrease air conditioning costs (some studies show that this can be as much as 20-40%), reduce energy consumption and urban heat; the cooling effect of an average-sized lawn is equal to about 9 tons of air conditioning);
- ▶ landscaping renews business districts;
- ▶ landscaping creates an employment and tourism boost;
- ▶ retail activity increases;
- ▶ businesses grow;
- ▶ drainage systems are protected. (Project Evergreen 2020)

When taking one simple element in the landscape, a tree, an examination of its beneficial impacts indicates that the crown of a mature tree operates as a free-standing anti-flood reservoir. In one year, such a tree can effect the evaporation of 1 500 gallons (5 680 litres/5.68 cm) of rainfall, instead of this falling on the ground and running off. This same tree can achieve carbon sequestration of 9.25 kgC/m² cover, giving an estimated urban tree gross sequestration rate per hectare of 0.8 kgC/ha/year; 0.3 kgC/m² cover.

Urban forests can play a significant role in helping to reduce atmospheric carbon dioxide levels. Urban forests are likely to have a greater impact per area of tree canopy cover than non-urban forests due to faster growth rates, increased proportions of large trees, and possible secondary effects of reduced building energy use and consequent carbon emissions from power plants. However, urban tree maintenance emissions can offset some of the carbon gains by urban forest systems. (Nowak and Crane 2001: 381-9)

Decision No. 1386/2013/EU of 20 November 2013 on a General Union Environment Action Programme to 2020, entitled "Living well, within the limits of our planet", states that "the Union is densely populated and over 70% of its citizens live in urban and peri-urban areas and face specific environmental and climate-related challenges".

Two hundred years ago the majority of Europe's population lived in the countryside and many were agricultural workers; the air was cleaner and the problems of climatic change that are now being experienced did not exist. In the present urban environment, quality of life varies hugely; populations that are usually sedentary need space for leisure and recreation, to benefit from clean air and water, to enjoy traffic-free communication routes and access to nature. Deprived areas, often associated with urban deserts, degraded or absent landscapes, are more often associated with crime and social disruption as well as unemployment, poverty, poor education and ill-health. All these factors impact hugely on the economy of a city, a region or a nation. Analysis of a number of studies clearly demonstrates the human and economic benefits that accrue from access to nature.

Studies of the built environment have tended to concentrate on practices and standards that respond to health and safety, illness and absenteeism associated with poor indoor air quality, but outdoor air quality, particularly in cities, cannot be ignored. Indeed, it is recognised increasingly that poor air quality in cities can contribute significantly to poor health and premature mortality. There are no standards on how design can promote health, well-being and other positive experiences such as engagement with place and sense of community (Heerwagen 2012). Studies over recent decades show that contact with nature generates emotional, physiological, social and cognitive benefits. A study of public housing projects in Chicago demonstrates that housing developments with large trees attracted people outdoors and, once there, they talked to their neighbours and developed stronger social bonds than people in similar housing projects without green space and trees (Walker 2003).

Another study conducted in France, carried out on the urban fringe of Dijon, analysed the sale of 2 520

homes (Brossard et al. 2006) and showed that the spatial arrangement of trees is a significant factor in house valuation. Even scattered copses of trees within 70 metres of a house have a positive effect on house price.

The term "natural capital" has emerged. It is now in common use and deals with methods to help establish monetary values as a way of presenting useful information to those involved in making strategic, financial and management decisions. The economist E. F. Schumacher originally introduced the term in 1973 with the publication of his book *Small is beautiful*. Indeed, in 2013 the EU's 7th Environment Action Programme noted the following as a priority objective: "to protect, conserve and enhance the [European] Union's natural capital" (European Parliament 2013).

It is beginning to be appreciated that there are real financial values that can be attributed to the natural environment. However, it is especially important to note that natural capital cannot be easily isolated from the built environment and other modifications to the wider environment. While the terms "capital" and "asset" have different meanings in economics, the terms "natural capital" and "natural assets" are generally used interchangeably.

The Natural Capital Committee of the United Kingdom, a group appointed by Her Majesty's Government to advise on natural capital in England, defines natural capital as: "The elements of nature that directly and indirectly produce value or benefits to people, including ecosystems, species, freshwater, land, minerals, the air and oceans, as well as natural processes and functions" (Natural Capital Committee 2014).

Members of the landscape profession are now working closely with others to better understand how this can be applied in urban green space situations, as well as working with private landowners in the rural environment. In simple terms, "the natural capital concept involves understanding the environment in terms of the value and benefits it provides to people" (Landscape Institute 2018).

Landscape architects are especially aware of this concept and are involved in mapping and analysing natural capital assets as part of the initial process of project planning.

Natural capital is therefore a reference to the stock of natural assets, including trees, parks and gardens, which provide health and well-being benefits to people. In order to capture the financial value of natural capital assets and to quantify the costs of sustaining these benefits over time, a framework has been developed which provides a balance sheet showing the benefits provided by natural capital against the cost of maintaining them. This systematic analysis can be applied at the local level, as well as at regional and national level. Such an approach

can significantly aid the production of strategic plans for landscape development, as well as landscape conservation.

These benefits can be quantified. The following example, from the London Borough of Barnet, identifies the principal benefits:

- ▶ improved air quality by absorption of pollutants;
- ▶ improved local climate by cooling during heatwaves;
- ▶ improved resilience to flooding by slowing water flows;
- ▶ improved water quality by filtering water, reducing water treatment costs;
- ▶ improved opportunities for outdoor recreation in more natural environments;
- ▶ improved habitat for a broad range of species.

Each of these has a significant impact on the lives of the people living in the borough. Using available data and valuation evidence, this report estimates the monetary value of some of the largest benefits that natural capital assets provide within Barnet. These include:

- ▶ recreation: visits made to London Borough of Barnet green spaces have an estimated value of over £41m per year;
- ▶ physical health benefits: the value (through the avoided health costs of inactivity) of the physical activity supported by Barnet's green spaces is over £19m per year;
- ▶ property premiums: five case study sites are estimated to provide between £70 and £140m in residential property premiums for the surrounding area. In addition, the same sites may contribute over £0.2m in rental premiums each year;
- ▶ climate regulation: carbon sequestered by Barnet's woodland and grassland is valued at over £70 000 per year.

None of these sums are insignificant; in fact, quite the contrary.

Finally, what does it cost to maintain these monetary benefits? It is estimated that about £4.2m is the annual maintenance cost in perpetuity equating to an ongoing capital liability of £134m in present value terms. These costs maintain 200 open spaces and represent the ongoing natural capital maintenance liability on the balance sheet. The population of the London Borough of Barnet is about 390 000. Thus, the cost per head of population in the borough to maintain this open space is in the order of £10.00 per person per annum.

This kind of analysis is not limited to the urban environment: equally essential is a natural capital

account that puts in place a mechanism for accounting for the unintended consequences of current farming practice, consequences that have led to the pollution of aquifers, pollution of the air and destruction and loss of soils (in particular the fundamental destruction of the microbial health that generates natural fertility, systems that have undermined natural resilience).

While design is important, it is also very clear that how we manage landscapes, both rural and urban, will have a significant impact on human life and the interaction of people with their local and natural environment. How landscapes are used, how effective they will be in the long term and what their long-term maintenance costs will be have a direct relationship between the initial design and how it is managed. Indeed, the profession is now beginning to have a major impact on contributing to and developing sustainable land-management policies.

Budgeting, allocating, managing and misusing funds for landscape works

A poorly designed development project, an ill-conceived landscape or one where finance is ignorantly diverted away from capital landscape works will impact hugely on society in many ways. Such failures do not simply diminish legitimately deserved social benefits to urban communities but also create either much higher long-term management costs or abandoned landscapes. A partially, or wholly, abandoned landscape is a common consequence of non-sustainable high management costs and such dereliction contributes to ill-health, drug abuse, criminality and depression, thus reinforcing ideas of exclusion, poverty, poor education and social division. It is necessary therefore to understand why, in some circumstances, money is diverted away from landscape to fund other things.

While landscape is a relatively cheap commodity, the benefits of it are potentially huge. Finance for landscape works is generally included in the overall budget for the development. It is also common practice that a sum is included to undertake landscape works at the end of the building contract and this will often be arranged as a sub-contract to the building contract. Such an arrangement makes sense in reducing the risk of conflicts arising during the building contract, leaving the whole responsibility for managing and executing the project with the main building contractor. It also makes sense to gather together all the finance for a project, which often requires the public authorities' approval. However, not uncommonly, the finance designated for landscape works is not ring-fenced and is subject to abuse.

It is unfortunate that landscape work is usually executed at the end of a building contract, because

problems that arise during the execution of the contract are frequently resolved by diverting money from landscape works. This tendency, aimed to keep overall contract costs within budget, has unforeseen and unfortunate consequences. It also seems that such decisions are sometimes made without reference to the client. A better understanding of the importance of health and social benefits that accrue from planning, designing and managing landscapes should avoid this kind of outcome. However, crucially, when it does happen it effectively defrauds the public of a resource that they can expect to benefit from.

It is also not that unusual for the landscape architect to be informed of an overspend in other areas of a building contract which impacts on the money available for landscape works: "Oh, we had a problem with the roof" or "We forgot to measure for the taps", followed by a comment such as "There isn't much money left for landscape, you will have to see what you can do". It is difficult to imagine the situation in reversal: "Sorry, some of the trees cost more than we thought, so you'll just have to do half the roof" or "You'll be able to do the bathrooms, but you won't be able to put any taps in." In either case it does not make any sense.

Each year, inestimable amounts of money are diverted away from landscape works to help resolve problems with foundations, roofs or plumbing complications, or to cover minor professional errors or gross mistakes, but the real consequences are rarely appreciated, let alone understood or even cared about. What is therefore actually achievable is often an inadequate solution, and there are real and damaging consequences which impact on both the environment and society at large.

At a time when the environment is known to be under considerable pressure, when it is recognised that there is a need to reduce CO₂ emissions, to control rising sea levels and to rethink the urban environment, it is important to understand the implications of diverting funds away from landscape. Each time it happens there are casualties, but who or what are they?

- ▶ The end user: whoever the landscape works were destined for does not enjoy the full benefit of the finance originally intended for the project.
- ▶ The community in the area where the project is situated. Planting not only benefits a project but may also become a significant landscape element within the local environment. The failure to properly complete landscape works affects everyone in the community. Landscape has no frontiers. The influence of a tree in terms of carbon sequestration does not suddenly stop at the

fence. The visual impact is apparent over a large area, as well as its ability to trap small particles.

- ▶ The local environment, both in the cost-in-use of a depleted landscape and the costly environmental and social consequences in terms of reduced biodiversity and increased carbon footprint.
- ▶ The taxpayers, because invariably they pick up the cost of an increased maintenance budget.

When there is little money left over for landscape works, the solution in temperate climates is usually to simply grass the area, because this is the cheapest way to cover large areas of ground. There is no doubt that the capital cost of providing this is low and, for the project team, it provides a neat solution. The problem seems solved. However, in reality, it is not solved: it is just beginning, as maintenance costs are correspondingly much higher than they should be and the contribution to the local environment is minimal.

Of course, investing in shrubs and woodland does initially cost more, but the long-term maintenance costs are much lower than grass. Trees and shrubs provide a visual benefit to the community as well as enriching the local wildlife. The environmental benefits in terms of biodiversity can thus also be significant. Compare this with a monoculture of grass. Not only does such a solution produce little more than a green desert but, in order to avoid further problems such as becoming a fire hazard, or dereliction, and other anti-social activities such as unauthorised dumping of waste materials, grass also needs regular cutting, sometimes with electric machines but more commonly with petrol-driven mowers. How often does the grass need cutting? How long does it take in manpower costs? What are the carbon emissions, as well as petrol costs? How does this contribute to urban heat build-up? Last but not least, who pays for all this? In southern Europe, where grass cutting is less often needed, vast sums of money are spent on irrigation, in order to keep grass looking good. This has a doubly negative effect: the waste of an important natural resource as well as the energy used in irrigation.

The financial result of this cheap solution, necessitated perhaps because money was unwisely diverted during a building contract, is an expensive barren wasteland, the carbon footprint of which is unnecessarily high. Thus, if the project is governmental, central or local, it is the taxpayers who are the casualties in having to fund increased maintenance costs in virtual perpetuity. It is the equivalent of leaving a tap running, or worse – if petrol-driven machines are used to maintain it – it is like leaving a hot tap running.

In terms of overall value for money the decision to divert funds is not a good choice. When minor savings are made in a building contract from diverting funds away from planned landscape works, the long-term financial and environmental consequences can be manifest. What seems insignificant to the decision maker is actually the reverse. So why are such decisions made? It can only be assumed that ignorance is to blame, but the result is that the client is defrauded while the end user, the local community, society and the local environment are damaged. It is therefore important to find some means of protecting funds designated for undertaking landscape works.

Preserve funds for landscape work

What measures can be put in place to protect allocated funds?

- ▶ exclude landscape works from building contracts;
- ▶ include a requirement in contracts with the project manager, architects and quantity surveyors that expenditure on landscape works can only be modified with the express agreement of the client;
- ▶ include a requirement in the planning process that detailed landscape plans should be submitted with each application and that penalties will occur if those plans are not carried out.

Excluding landscape works from building contracts

Funds for landscape works could be excluded from building contracts, with independent landscape contracts following the completion of building works. Building contractors do not focus on landscape works; their priority is to finish a building and move onto another project. Landscape contractors prefer not to be involved with building contractors as sub-contractors, because payment and cash flow tend to be problematic. However, project managers, architects and quantity surveyors object to this arrangement because they often see this as losing control of a very visible element. They will also argue that the landscape works may not be finished on time with the building. This argument is generally of little consequence. Landscape works are a long-term investment. Indeed, of all the three solutions that are suggested here, this is by far the most effective and the easiest to achieve.

Making the client directly responsible for the management of landscape funds

This method has some attraction, but it would be necessary to have a high degree of confidence in clients having a well-developed set of social values with the interests of the community at heart. This method can be used with government or non-governmental organisations but is less likely to be successful with private organisations.

Making implementation of "approved" detailed landscape plans a condition of planning consent

This happens in some states and is a process that could become more widespread. It ensures for the community that the detailed landscape plans that are submitted with a planning application are executed without any major modification. Such a system does require some policing as checks need to be carried out to verify that the condition has been complied with. The downside is that, when intransigent parties do not undertake the works, the sanctions are limited. Litigation and fines are possible, but rarely cost-effective. Nevertheless, this process does generally ensure that the interests of the community are upheld.

Conclusions

Reflections

A period of particularly rapid change is now affecting society (Oldham 2017). Plans for the future can be nullified almost immediately by a new discovery or the development of new systems. If a project is imagined, it will probably be carried out. As a consequence, society is constrained more by a capacity to imagine and manage change, than the ability to design and create new situations and systems. Now, at the dawn of the Fourth Industrial Revolution, with the advent of the internet of things, artificial intelligence, quantum computing, robotics, biotechnology, driverless cars, air taxis, drones and autonomous vehicles, all dramatically reducing human intervention, it is difficult to speculate where this will take humanity. What is sure, however, is that this will affect everyday life and cities will change; most importantly, however, society can also use the opportunity to learn and benefit from these changes, rather than simply becoming victims of global exploitation.

In his book *The fourth industrial revolution*, Professor Klaus Schwab, Founder and Executive Chairman of the World Economic Forum, suggests that this revolution is fundamentally different to its forerunners (Schwab 2016). These earlier revolutions were characterised mainly by advances in technology, and latterly by the potential to connect billions of people via the web, drastically improving the efficiency of business and organisations, including, for example, the regeneration of the natural environment through more sensitive asset management. This new revolution is characterised by a fusion of physical, biological and digital technologies. The rapidity and scope of potential change is unknown, except that it will be vast and will affect every aspect of life. Schwab states that previous revolutions were largely linear in development; this revolution is exponential, expanding in every direction with unforeseen

spin-offs occurring all the time. It has the power to completely disrupt society as well as the potential to substantially improve it.

It is impossible to imagine the scale of the transformations that will take place. Will roads be largely abandoned as merely places to park cars? Indeed, why would we need to own a car if a fleet of autonomous vehicles can transport us about the city, about the countryside and about the world, and such autonomous vehicles will not even be restricted to the ground? Some reports suggest that car ownership will be abandoned in less than 20 years. This change would substantially transform cities, open manifest opportunities for recreation spaces, public squares, sport and entertainment. Just consider, at present streets are completely littered with cars, many of which are only used 5% of the time. It is now the time to seriously think about citywide green infrastructure strategic planning, the holistic approach that is the core of the landscape architectural profession.

But no one profession is equipped to deal with this, let alone lead other professions in a post-Haussmann revolution. Managing cities is a complex business and urban planning is no longer simply, as it was in Haussmann's time, a matter of design with strategic military objectives. Indeed, with the advent of the "smart city", opportunities emerge for the development of intelligent, energy-efficient buildings, electric transport systems and low-energy lighting systems, to mention but a few. To manage this properly, society needs a broad range of highly qualified competent people, professionals as well as elected representatives, not simply people with good professional qualifications in a variety of disciplines, but also people with wide experience and, most importantly, vision and commitment.

This is not a time to start drawing demarcation lines, reverting to a guild system, or like shipbuilding trade disputes in the past, where shipwrights could only build ships and welders and riveters could only weld and rivet. Society needs strong, multidisciplinary teams capable of delivering well-conceived solutions, especially for urban living. Taking into consideration factors such as global warming, air pollution, rising sea levels and dereliction, there is an immediate need to set the right targets to sensitively manage the future and move quickly away from archaic professional demarcation rules that really belong to the end of the 19th century rather than the beginning of the 21st century.

Perspectives

The Council of Europe thematic reports (Council of Europe, 2006, 2012, 2016) on the implementation of the European Landscape Convention set out, in a series of learned articles, the broad spectrum of

activities in which landscape architects are involved in implementing the European Landscape Convention. Some of these articles address in detail the importance of town and regional planning, including the development of landscape policies within the framework of the Convention. They recommend new interdisciplinary approaches and organisational structures "necessary to bring together as many different disciplines as possible in order to begin to understand the 'urban landscape' as an entity in its own right", as well as the need "to overcome sectoral fragmentations that reflect the limited views that people and institutions have of 'their' part of the world" (Corner, 1999; Tress and Tress, 2004). This fundamentally important message must be acknowledged.

A report prepared for the Council of Europe by Ingrid Sarlöv Herlin (Council of Europe, 2012: 269-87) on the training of landscape architects, prepared with the collaboration of the European Council of Landscape Architecture Schools (ECLAS), summarised and assessed the current state of education and professional training of landscape architects in the member states of the Council of Europe in order to provide general recommendations on curricula and educational structures with reference to Article 6. B of the European Landscape Convention. Much of this report is still relevant and, encouragingly, much has continued to develop since then. The report states that since the start of the project in October 2002, the number of European universities that are members of the LE:NOTRE Landscape Architecture Thematic Network project has grown from 72 to over 100. There are now over 200 courses recognised by the IFLA Europe Schools Recognition Panel.

Ingrid Sarlöv Herlin states that landscape architecture is "situated at the meeting point between natural sciences, social sciences and humanities" (Council of Europe, 2012: 272) and that:

combined with skills in planning and design of landscapes, European landscape architecture education is closely related to the aims and ideas of the European Landscape Convention. Landscape Architects can facilitate an interdisciplinary perspective and a bridging between sectors. For decades, landscape architecture education in Europe has provided multidisciplinary education in landscape protection, management and planning. Landscape Architects are specialised to act as generalists and to propose spatial solutions that involve integrated landscape thinking (ibid: 271).

The complexity of European landscapes, coupled with human interactions and interrelationships, has created a study area of considerable breadth and depth. As a consequence, the study of landscape architecture needs to draw on, and integrate, concepts and approaches from both the creative arts

and natural sciences, as well as from many aspects of cultural development, environmental sustainability and technology, including both modern and traditional skills. Nevertheless, there still persists a belief in certain quarters that landscape architecture is a “cosmetic” that can be applied to buildings much like a fashion accessory. Nothing could be further from the truth.

In its totality, landscape architecture has less to do with design and more to do with the creation and management of complex inorganic and organic structures that pervade all aspects of life in both urban and rural contexts. The more integrated these structures are, linking rural, peri-urban and urban areas, the more successful they are, as well as being more useful and more sustainable. In this respect, there is an urgent need, especially in the context of developing cities, for a holistic, nature/culture-centred approach to the environment and for a humanistic view of the way that the places in which we live, work and play function, both in the present and the future. Indeed, unlike buildings, landscape is alive and dynamic, and the legacy that is left behind cannot be simply destroyed without causing significant damage. It is precisely why landscape and development policies need to be centred on sustainable, affordable solutions which respect nature and the environment, as well as addressing the needs of humankind.

Proposals

This report has traced the emergence and development of the profession of the landscape architect and how it has evolved to meet the needs of contemporary society. It has also established how the profession is structured, regulated and managed, at both national and international level. Importantly, it has touched on the formal training of professionals and how this activity needs periodic modification to reflect how the profession can best serve a changing society.

Official recognition of the profession is still in its infancy in some states. Moreover, even if the profession is well established in other states, landscape architects may be excluded from certain sectors of activity. This does not meet the real and day-to-day interests of society, but goes in the direction of strengthening an already inadequate system where the law confers an advantage on one profession at the expense of another. Reducing competition and supporting a profession that has limited competence to practise in specific areas does not benefit the public interest. It would be better to encourage a more interdisciplinary approach to the complex problems that challenge modern society.

Real financial, as well as important social, values can be attributed to landscape assets. The widespread

health and welfare benefits accrued from investment in landscape, whether it is associated with new development or with the conservation and protection of existing landscapes, in both urban and rural environments, is understood. The importance of developing regional and national landscape strategies is appreciated, but, systematically, funds designated for landscape works are often too small, or diverted to other purposes. How the Fourth Industrial Revolution will affect cities is unknown, but the growing importance of green infrastructure in strategic planning is becoming more widely appreciated.

In a sense, the landscape profession has come of age: it is internationally recognised, and it is generally well educated. However, in some cases it urgently needs to be more broadly educated, more universally recognised in a formal way and more able to carry out its functions, for the benefit of society and the environment, without being compromised.

Thus, it is important that the parties to the European Landscape Convention should:

- ▶ recognise the important health and welfare benefits that accrue from investing in landscape;
- ▶ increase diversity in the professional training of landscape architects, particularly regarding science, management and planning;
- ▶ formally recognise the profession of landscape architect at national and international levels; and
- ▶ ensure that finance designated for landscape works is used appropriately.

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Appendices

Appendix 1 – Professional organisations that are members of IFLA Europe

Austria

Austrian Society for Landscape Planning and Landscape Architecture – Österreichische Gesellschaft für Landschaftsplanung und Landschafts

Belgium

Belgian Association of Garden and Landscape Architects – Belgische Vereniging Voor Tuinarchitecten en Landschapsarchitecten (BVTL) / Association belge des architectes de jardins et des architectes paysagistes (ABAJP)

Bulgaria

Union of Landscape Architects of Bulgaria (ULAB) – СЪЮЗ НА ЛАНДШАФТНИТЕ АРХИТЕКТИ (СЛА)

Croatia

Croatian Association of Landscape Architects (CALA) – Hrvatsko Društvo krajobraznih arhitekata (HDKA)

Czech Republic

Czech Association for Landscape Architecture, section of the Landscape and Garden Society (CZALA) – Společnost Pro Zahradni a Krajinarskou Tvorbu (SZKT)

Denmark

Association of Danish Landscape Architects – Danske Landskabsarkitekter (DL)

Estonia

Estonian Landscape Architects' Union (ELAU) – Eesti Maastikuarhitektide Liit (EMAL)

Finland

Association of Finnish Landscape Architects – Suomen Maisema-Arkkitehtiliitto ry (MARK)

France

French Landscape Federation – Fédération française du paysage (FFP)

Germany

German Chamber of Architects – Bundesarchitektenkammer (BAK)

Greece

Panhellenic Association of Landscape Architects (PHALA) – Πανελλήνιος Σύλλογος Αρχιτεκτόνων Τοπίου (ΠΣΑΤ)

Hungary

Hungarian Association of Landscape Architects (HALA) – Magyar Tájépítész Szövetsége

Iceland

Icelandic Association of Landscape Architects – Felag Islenskra Landslagsarkitekta (FILA)

Ireland

Irish Landscape Institute (ILI)

Israel

The Israeli Association of Landscape Architects (ISALA) – יוֹן ילְכִירְדָּאֵל ילְאַרְשִׁיָה דוֹגִיאָה

Italy

Italian Association of Landscape Architecture – Associazione Italiana di Architettura del Paesaggio (AIAPP)

Latvia

Latvian Association of Landscape Architecture – Latvijas Ainavu arhitektu asociacija (LAAA)

Lithuania

Lithuanian Association of Landscape Architects (LALA) – Lietuvos Krastovaizdžio Architektu Sajunga (LKAS)

Luxembourg

Luxembourg Association of Landscape Architects – Association luxembourgeoise des architectes paysagistes (ALAP)

Netherlands

Netherlands Association for Garden and Landscape Architecture – Nederlandse Vereniging voor Tuin en Landschapsarchitectuur (NVTL)

Norway

Norwegian Landscape Architects Association (NLA) – Norske Landskapsarkitekters Forening

Poland

Landscape Architecture Associatiwarzyszenie Architektury Krajobrazu (SAK)

Portugal

Portuguese Association of Landscape Architects – Associação Portuguesa dos Arquitetos Paisagistas (APAP)

Romania

Romanian Landscape Architects Association – Asociația Peisagistilor Din România (ASOP)

Russia

Association of Landscape Architects of Russia – Ассоциация ландшафтных архитекторов России (АЛТАРОС)

Serbia

Serbian Association of Landscape Architects – Udruženje Pejzaznih arhitekata Srbije (UPAS)

Slovakia

Slovak Architects Society – Spolok architektov Slovenska (SAS)

Slovenia

Slovenian Association of Landscape Architects – Društvo krajinskih arhitektov Slovenije (DKAS)

Spain

Spanish Association of Landscape Architects – Asociación española de paisajistas (AEP)

Sweden

Swedish Association of Architects – Sveriges Arkitekter (SA)

Switzerland

Swiss Association of Landscape Architects – Bund Schweizer Landschaftsarchitekten (BSLA)

Turkey

Turkish Chamber of Landscape Architects (CTLA) – Peyzaj Mimarları Odası

Ukraine

Guild of Landscape Architects of Ukraine (GLAU) – Гільдії ландшафтных архитекторов України

United Kingdom

Landscape Institute (LI)

Appendix 2 – Resolutions from the General Assembly of IFLA Europe (Extracts)

IFLA Europe General Assembly, Oslo, Norway, October 2014

“Landscape Democracy is a form of planning and design in which all citizens are meant to participate equally, either directly or through elected representatives in the proposal, development and establishment of the rules by which their landscape and open spaces are shaped.”

IFLA Europe General Assembly, Lisbon, Portugal, October 2015

“The landscapes we live in are social and cultural interpretations of nature. They represent the living archive of humankind’s technological and social development in its endeavour to adapt itself to natural circumstances. As such, landscape resilience is crucial to people’s livelihoods, and it will provide answers to socio-economic needs as well as ecological issues. As a society, we are confronting the realities of increasingly rapid change and the challenge to create a sustainable lifestyle, while maintaining and improving the quality of life for all inhabitants.”

[Resilience is: a) the ability of a substance or object to spring back into shape; elasticity; b) the capacity to recover quickly from difficulties; toughness.]

IFLA Europe General Assembly, Brussels, Belgium, September 2016

“For the first time in history, more than half the population of the planet lives in cities, which are now bigger than ever. These settlements are presenting unprecedented challenges to society and disrupting our relationship with the natural environment. Understanding cities as landscapes will provide for opportunities linking the past, the present and the future in order to achieve social justice, a sense of place, economic health and ecological integrity.”

IFLA Europe General Assembly, Bucharest, Romania, June 2017

“In recent years the world has been subject to the greatest migration of all times, in which hundreds of millions of citizens have been forced to displace themselves globally. Conflict and economic inequalities have grown, presenting a challenge to nation States and especially to the European Union. Understanding landscape’s multi-culturality will help put into practice common transnational policies which reinforce the relation between States and establish an equilibrium for sustainable development.”

IFLA Europe General Assembly, London, United Kingdom, September 2018

“Since the second half of the 20th century variations in climate have accentuated: nowadays the change in temperature and rainfall, the rising sea level and the intensification of extreme episodes such as droughts and fires impose severe consequences

on biodiversity and people’s lifestyles, not only in our continent but worldwide. In this scenario of change and uncertainty in which variables are yet developing, it becomes imperative that we traduce Climate Challenges into a vision for designing, planning and managing our landscapes, as they will be a fundamental resource for the welfare of future generations.”

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The Council of Europe Landscape Convention aims to promote the protection, management and planning of landscapes, and to organise international co-operation in this field. It applies to the entire territory of the contracting parties and covers natural, rural, urban and peri-urban areas. It concerns landscapes considered outstanding, as well as everyday or degraded areas. This publication presents thoughts and proposals for the implementation of the convention and addresses a “mosaic” of key issues related to its future. It forms part of a process of reflection on major themes concerning the living environment.

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