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Teaching landscape architecture: tuning programs in Europe for a common policy. The Romanian case

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Abstract: The article is discussing the gap existing between the Landscape Architecture curricula in Europe and Romania. Based on the definition of the landscape architecture as a world-wide (excepting Romania) recognised profession, several European and international organisations are developing a common view on landscape training and education programs.

The entire presentation is based on the main international documents concerning Landscape Architecture form the professional and educational points of view.

Keywords: education, profession, curriculum, core competences

1. Introduction

In the present context, that imposes Landscape Architecture as a major education and research field in Europe, ECLAS (European Council of Landscape Architecture Schools exists to) represents the main organisation that, since 1991, fosters and develops the dialogue between members of Europe's landscape architecture academic community.

The tuning programs developed in the frame of Le:Notre program (Landscape Education: New Opportunities for Teaching, Research and Education), also known as the European Institute of Advanced Studies in Landscape Architecture, are aiming to create a common educational base for all landscape architects and

engineers throughout Europe. Tuning Educational Structures in Europe is a large scale European project, with accompanies the Bologna process. The Tuning project is carried out by academics that work at institutes of higher education.

EFLA (European Foundation for Landscape Architecture) was equally involved as an active partner in the tuning and academic programs recognition process in order to construct curricula adapted to the professional demands on the market. Two Romanians schools are part of ECLAS and LE:Notre and also part of EFLA (Bucharest and Timisoara), thus trying to forge an European educational program in our country.

Landscape Architecture education started in Romania in 1998 in Bucharest and Timisoara, several other schools being opened afterwards (Iasi, Cluj, Craiova, Oradea, Bucharest). The evolution of our landscape education is merely a negative one. This situation is due to a lack of understanding of what landscape architecture represents as profession. In Romania we are confronted with an almost general confusion between landscape architecture and garden architecture or gardening.

Another confusion is created by the various formations of landscape professionals. As landscape architecture educational programs are organised in horticulture, architecture or ecology faculties, thus generating multiple diplomas (landscape architect, landscape engineer, landscape planner, landscape designer...), it is largely believed that a "hierarchy" should exist among the professionals. This is a huge mistake to consider that the administrative organisation of a landscape architecture curriculum is similar with the professional development and training and landscape architects or landscape engineers have different education and training programs.

As landscape architecture suppose an interdisciplinary approach of spatial planning, integrating design, ecology, social sciences, constructions and other "classical" fields, the educational programs are complex and, from administrative point of view, they can be hosted by various universities or faculties from the related professions (arts, architecture, engineering, environmental studies...). In Europe is recognised that is no difference between landscape architects, engineers or designers, all of them being trained in order to accomplish different task related to their work (design and planning, field work, constructions and detailing, planting...).

2. Landscape Architecture – a profession

The landscape architect, designer or engineer (as defined by EFLA) "plans and designs urban and rural landscapes that satisfy human and natural, aesthetic and functional requirements. These activities are based on knowledge of the natural processes and cultural values that underlay a continuous process of formation of

landscapes, and the opportunities and constraints encountered in the intervention in existing environments."[1]

"Landscape Architects conduct research and advise on planning, design and stewardship of the outdoor environment and spaces, both within and beyond the built environment, and its conservation and sustainability of development. For the profession of landscape architect, a degree in landscape architecture is required.

(a) developing new or improved theories, policy and methods for landscape planning, design and management at local, regional, national and multinational levels;
(b) developing policy, plans, and implementing and monitoring proposals as well as developing new or improved theories and methods for national parks and other conservation and recreation areas;
(c) developing new or improved theories and methods to promote environmental awareness, and undertaking planning, design, restoration, management and maintenance of cultural and/or historic landscapes, parks, sites and gardens;
(d) planning, design, management, maintenance and monitoring functional and aesthetic layouts of built environment in urban, suburban, and rural areas including private and public open spaces, parks, gardens, streetscapes, plazas, housing developments, burial grounds, memorials; tourist, commercial, industrial and educational complexes; sports grounds, zoos, botanic gardens, recreation areas and farms;
(e) contributing to the planning, aesthetic and functional design, location, management and maintenance of infrastructure such as roads, dams, energy and major development projects;
(f) undertaking landscape assessments including environmental and visual impact assessments with view to developing policy or undertaking projects;
(g) inspecting sites, analysing factors such as climate, soil, flora, fauna, surface and subsurface water and drainage; and consulting with clients and making recommendations regarding methods of work and sequences of operations for projects related to the landscape and built environment;
(h) identifying and developing appropriate solutions regarding the quality and use of the built environment in urban, suburban an rural areas and making designs, plans and working drawings, specifications of work, cost estimates and time schedules;
(i) monitoring the realisation and supervising the construction of proposals to ensure compliance with plans, specifications of work, cost estimates and time schedules;

[1] European Foundation for Landscape Architecture, Education Committee Report, Education Policy Document 1998

(j) conducting research, preparing scientific papers and technical reports, developing policy, teaching, and advising on aspects regarding landscape architecture such as the application of geographic information systems, remote sensing, law, landscape communication, interpretation and landscape ecology;
(k) managing landscape planning and design projects;
(l) performing related tasks;
(m) supervising other workers"[2]

A non-exhaustive list concerning the projects and activities that should involve landscape architect or engineers includes:
Airport master plans and planting plans, Botanical gardens, Business parks, Cemeteries, Ecological parks and networks, Environmental Impact Studies and Assessments, Forest, Garden Fairs and expositions, Golf Courses, Highway/motorway alignment and design, Historic parks and gardens, Historic landscapes, Housing renewal and new projects, Industrial sites, Lake shore development, Land reclamation, Landscape planning, Land use suitability studies, Leisure and tourism, Mineral extraction and mining (quarries), Monuments and sites, Nature areas, New towns, Outdoor recreation facilities, Port facilities, Power lines, Private and public gardens, Railway corridor alignment, Railroad yards, Reclamation of derelict land, Regional planning, Retail and commercial zones, River rehabilitation, Roadside planting, Roof gardens, Rural land improvement/ re-allotment schemes, Townscape appraisals, Town planning, University campus planning, Urban parks, Urban plazas and pedestrian zones, Waste disposal sites…[3]

3. Landscape Architecture – what professional training?

In this professional context the outline for a Common Course Structure for European Schools is based on a minimum of four year of education and training and embraces the following four objectives:

- design and planning skills based on artistic/creative talent and an ability to think along the lines of logic and reason.
- an intellectual development based on a broad background knowledge of - and reflection on - human related and natural processes.

[2] Definition of the Profession of Landscape Architect for the International Standard Classification of Occupations /International Labour Office / Geneva
[3] European Foundation for Landscape Architecture, Education Committee Report, Education Policy Document 1998

- a technical know-how in order to understand the implications and consequences of design and planning decision.
- an understanding of the different roles of landscape architects in interdisciplinary teams and an ability to manage planning processes.[4]

ECLAS is defining landscape architecture as a field of professional activity and an academic discipline is concerned with the conscious shaping of the outdoor space at various scales. It involves planning, design and management of the landscape to create, maintain, protect and enhance places so as to be functional, beautiful and sustainable and appropriate to diverse human and ecological needs. (...)

Contemporary landscape architecture can range from carrying out large scale landscape planning or design projects, such as developing landscape proposals for the future large regions or integrating significant infrastructure projects into the landscape and ameliorating their impacts on the environment, through the formulation of strategies for the provision of green space structures and urban nature conservation, to the detailed design of new housing or commercial areas, individual parks, urban public spaces and gardens. Equally landscape architects may be involved in the development of concepts for the long term management of historic gardens and landscapes, recreation areas in the urban fringe or of national parks and protected landscapes.

In all cases the focus of the professional activity is the development and formulation of planning and design solutions for spatial problems of landscape conservation and development, involving the integration of specialist knowledge from a wide range of disciplines and the interests of society as a whole as well as a large number of institutional actors. This frequently takes place in interdisciplinary teams involving other environmental professions, such as architecture, urban and regional planning and civil engineering.

While many academic disciplines have an interest in the study of a wide range of different aspects of landscapes, as is clear from the above outline of the nature of the discipline, the central focus of landscape architecture is on active intervention in the landscape through means of planning, design and management. The goals of intervention can be located anywhere on a scale starting with the protection or conservation of landscape resources and their associated meanings and values, through to creating new landscapes through development projects.

Landscape architects are thus trained to undertake planning, design of management projects concerned with spatial and temporal interventions in the landscape as their central or core competence. Such interventions may be at a larger territorial scale (landscape planning), at a smaller scale on a site of limited

[4] European Foundation for Landscape Architecture, Education Committee Report, Education Policy Document 1998

size (landscape design) or involving variable time scales (landscape management). It is by these activities that landscape architects contribute to the implementation of policies that address climate change, loss of biodiversity, sustainable development, soil protection, water management and flood protection, quality of life in cities and rural areas."[5]

Thus, the training of landscape architects or engineers involves more scientific fields as ecology and vegetation, urbanism and urban open space, landscape design and planning, constructions, materials and engineering, social sciences, cultural studies...

This complex training is based on political and social demands, as described in various European documents, laws, conventions, policies and programs.

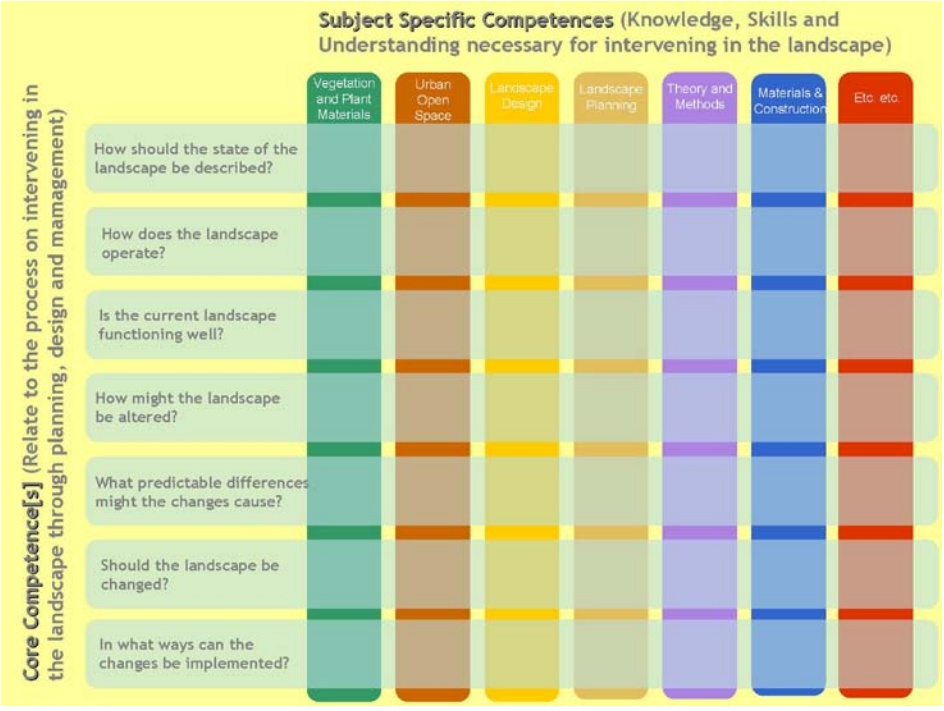

Figure 1: Subject specific competences - Source: The Tuning Project ECLAS – LE:NOTRE Landscape Architecture Education in Europe Tuning Landscape Architecture Education in Europe, version 19

[5] The Tuning Project ECLAS – LE:NOTRE Landscape Architecture Education in Europe Tuning Landscape Architecture Education in Europe, version 19

Concerning the European landscape architecture education, EFLA defined the areas of knowledge and skills:

LANDSCAPE DESIGN AND PLANNING.

Design and Planning Theory.

The ability to interpret general goals in society, converted into specific objectives, into landscape design principles, strategies, and methodologies.
Courses: landscape architecture and planning theory; design and planning methodology and their application in case studies.

Design and Planning Skills.

The development of a creative talent, of a sensibility to form, colour and texture; an ability to generate concepts in space and time; to evoke, project and transfer images.
Courses: basic design, free hand drawing and painting, modelling, design studio projects.
The ability to fit new development into an existing environment within the scope of comprehensive regional planning with an emphasis on visual and ecological requirements and potentials.
Courses: landscape planning studio projects**,** regional planning courses.
The development of the skills of communication, negotiation and presentation.
Courses: verbal presentation exercises, language courses, free hand drawing, technical drawing, model making, computer graphics.

MAN, SOCIETY AND ENVIRONMENT

Landscape history and theory.

Knowledge of the fundamental concepts of the relation between man and his physical and socio-cultural environment. A general understanding of notions of changing values, attitudes beliefs and behaviour in the course of time.
Knowledge of the way in which our heritage of cultural landscapes was formed and transformed over time. The history of settlements, of land use, of sites and monuments. The notions and principles of conservation and renewal. Landscape as a continuous process from past to present to future.
Courses: historical-, physical-, social- and economic geography, anthropology, sociology, environmental psychology.

History of Fine Arts, of Architecture, Urban Design and Landscape Architecture.

Knowledge of the contribution of the Fine Arts in the past as well as in the present to architecture, urban design and landscape architecture, as the basis of design philosophies, design styles, aesthetic standards and symbolic interpretation.
A study of examples of designed environments and buildings in ancient and modern times. This in the context of cultural, political and economic developments.
Courses: history and theory of art & architecture, urban design, of garden & parks design. Contemporary trends.

Principles and rules of government

Knowledge of the fundaments of landscape and environmental policies. Environmental and planning legislation and procedures. The role of international, national, regional and local government organisation in environmental planning and design.
Courses: planning and environmental legislation & procedures.

NATURAL AND FUNCTIONAL ASPECTS OF LANDSCAPE

Ecology

Knowledge of the physical and biotic basis of natural systems and the ability to appraise their existing and potential value; both for protection and development: finding design and planning potentials.
Courses: general and applied ecology, geology, climate, topography, soil science, hydrology, vegetation studies, plant materials, planting plans. Park and nature management.

Land Use Types and their Functional Requirements

Knowledge of various land use types, their developments over time, their internal functioning and their territorial claims, interrelationships, compatibilities. Requirements in terms of layout and management.
Courses: functional and planning aspects of agriculture, housing, industry, infrastructure, outdoor recreation & tourism

TECHNIQUES AND MANAGEMENT

Data processing techniques

Knowledge of, and the skill to apply, the techniques of inventory and assessment of landscapes and sites, the use of Geographic Information Systems, and the use of computers in design and planning process.
Courses: data collection and evaluation techniques, landscape analysis,
remote sensing and photography, Geographical Information Systems, (graphic) computer techniques

Landscape Construction and Engineering.

Knowledge of the materials and the techniques employed in the implementation of plans: the grading and modelling of ground form, the drainage and catchment of water, the construction of roads, pavements, walls, bridges, ponds and water courses etc. Also land reclamation and drainage. Planting plans, the handling of nursery stock, planting schedules. Further the knowledge of the rules of alignment and construction of highways, (rail)roads and other infrastructure.
Courses: building construction, landscape construction, rural engineering, highway engineering, biological engineering

Project management.

The organisation of private and public offices. The writing of briefs and specifications**,** of cost estimates, the supervision of construction and maintenance.
Courses: professional practice, economics, marketing, management organisation.

Landscape management

A knowledge of the relation between the layout of urban and rural parks systems and their long term use, development and maintenance.
Courses: landscape management techniques, ecological aspects of farm management.[6]

The landscape education is considered to be project and studio-work based, at least 50% of the study time must be spent on the training of design and planning skills and working on projects in studios. [7]

[6] European Foundation foe Landscape Architecture, Education Committee Report, Education Policy Document 1998;
IFLA - UNESCO Charter for Landscape Architectural Education

[7] European foundation for Landscape Architecture, Education Committee Document, Requirements and procedures concerning the recognition of Landscape Architecture programmes, 1998;

This is one of the most important aspects concerning the tuning or Romanian curricula to the European demands for landscape education. The confusion between the administrative organisation and the professional and scientific field generates the inadequacy of our programs. As most part of Romanian landscape programs are developed in the frame of horticulture faculties the landscape domain of training and education is integrated completely to the horticulture one. Thus the fundamental courses for landscape architecture, as defined by the Ministry of Education and Research, are:

- Mathematics
- Chemistry and biochemistry
- Biophysics and agro-meteorology
- Botany
- Soil sciences
- Plants physiology
- Genetics
- Ecology and environment protection
- Microbiology
- Descriptive geometry and perspective

The same document[8] is defining also the compulsory courses that are considered as specific for the entire field of education:

- Agro-chemistry
- Plants pathology
- Entomology
- Agro-techniques
- Horticulture plants improvement
- Energy resources and machinery
- Topography and land reclamation
- Management
- Marketing
- General vegetables growing
- General fruits growing
- Viticulture

The Tuning Project ECLAS – LE:NOTRE Landscape Architecture Education in Europe Tuning Landscape Architecture Education in Europe, version 19

[8] Ministry of Education and Research, Specific Evaluation Standards for the Agronomical Sciences, Forestry and Veterinary Medicine Commission

- Flowers growing
- Trees growing

All this courses are supposed to represent 35-65% of landscape architects or engineers training and education. Te rest of 35-65% should assure the project and planning, aesthetics, arts and architecture history, social sciences, constructions and engineering, landscape history and theory, urban and spatial development, computer assisted design and GIS training and courses.

Thus, it is practically impossible to spend 50% of the time working on projects and to provide basic knowledge as required by the European structures. Beside these administrative aspects we can highlight an inadequacy of the "fundamental" or "specific" courses to the landscape architecture training demands. Thus land reclamations is all about irrigation for agriculture exploitations, flowers growing is not including spontaneous or pioneer vegetation...

Based on this definition of the core competences by the Romanian educational system in the last 12 years the landscape architecture schools were forced to reduce the project studios, to eliminate aesthetical and cultural courses and to dedicate more time to agricultural or horticultural training. This lack of understanding of landscape architecture as a specific and important profession provoked strong discrepancies between professional needs and common understanding at practical level.

I will not discuss the results that we face today in our cities: the overwhelming kitsch of our public spaces, the lack of ecological approach, the poor quality of our parks and gardens...

As it was underlined by ECLAS "in the case of an academic discipline, the term "core competences" can be used to refer to those distinctive capabilities which give it is specific characteristics and thereby distinguish it from other disciplines. In the case of landscape architecture these can be clearly deduced from the definition of the discipline." [9] in the Romanian case we should reconsider this core competences in order to train real landscape professionals and also to assure real specialists able to applied and develop the European legislations[10] that Romania signed in the last years.

[9] The Tuning Project ECLAS – LE:NOTRE Landscape Architecture Education in Europe Tuning Landscape Architecture Education in Europe, version 19

[10] The main European documents with impact on Landscape Architecture field are presented in the annex of the present article

4. Conclusion

The Landscape Education in Romania is facing a huge disparity with the European tuning programs, professional definition and practice, both in vision and programs.

It is to highlight the fact that the Landscape Architect profession in Europe is not dependent of the type of university organising landscape architecture formation (e.g. Architecture, Agronomical Sciences, Arts and Design, Environmental Sciences, Technical Studies...) – thus is no difference made between Landscape Architects and Landscape Engineers. A profession is not defined by the institution but by the formation!

Even in Romania there are Landscape Architecture schools in the frame of Horticulture, Urbanism and Ecology Faculties. The problem occurs from the guidelines of education centred on faculty not on specialisation, thus the Landscape Architects formed in our schools are sort of Horticulturists, Town planners or Environmental engineers with some knowledge in Landscape Architecture.

A second important gap is resulting from the general confusion between Garden Architecture and Landscape Architecture – so a clear definition of LANDSCAPE (in concordance with the European legislation) should be adopted in the educational system, and to be promoted and forge in the Landscape Architecture programs.

In this context some important steps should be made in order to develop an European-level landscape architecture educational system in Romania:

- To recognise and to define the Landscape Architecture profession in Romania
- To rethink a common ground in the Landscape Architecture education in Romania, in respect of the existing European legislation and tuning programs
- To integrate our schools in the European professionals and academic structures (EFLA, ECLAS, Le:Notre) in order to reorient our educational system along the European guidelines and strategies
- To develop Master and PhD programs in Landscape Architecture, similar with other European programs
- To promote a Romanian legislation in the Landscape Architecture field
- To promote an open dialogue in-between Landscape Architects, Architects, Urbanistes, Ecologists, Geographers, Sociologists and other connected specialists in order to adapt the Landscape Architecture educational programs to the social, cultural, economical and professionals realities

Until then, the lack of a clear vision on Landscape Architecture (largely confounded with gardening) will keep generate inadequate curricula in the Romanian higher education system. It is to the Romanian schools, with the already existing European support, to promote together educational plans and curricula that are able to form real professionals and a field of work and research at European level.

References

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[3] European Foundation for Landscape Architecture, Education Committee Report, Education Policy Document 1998
[4] IFLA - UNESCO Charter for Landscape Architectural Education
[5] European foundation for Landscape Architecture, Education Committee Document, Requirements and procedures concerning the recognition of Landscape Architecture programmes, 1998
[6] The Tuning Project ECLAS – LE:NOTRE Landscape Architecture Education in Europe Tuning Landscape Architecture Education in Europe, version 19

Annex 1.

EUROPEAN LEGISLATION IN LANDSCAPE ARCHITECTURE FIELD: cf. EU-Teach - Implementation of relevant European teaching contents in the studies of landscape architecture

- European spatial development perspective (ESDP)
- Territorial agenda of European Union (Leipzig, 2007)
- Kyoto Protocol, 1997
- Winning the Battle Against Global Climate Change [SEC(2005) 180} COM/2005/0035 final
- A European Union Strategy for Sustainable Development (Commission's proposal to the Gothenburg European Council) [KOM(2001) 264 final]
- The Venice Charter for the Conservation and Restoration of Monuments and Sites (1964)
- Directive 2007/2/EC of the European Parliament and of the Council of 14 March 2007 establishing an Infrastructure for Spatial Information in the European Community (INSPIRE)
- European environmental Agency
- Trans European network (TEN)

- Convention (EG) Nr. 1367/2006 on Access to Information, Public Participation in Decision-making and Access to Justice in Environmental Matters (Aarhus 1998)
- The Sixth Environment Action Programme of the European Community (2001-2012)
- Convention of Biological Diversity (Rio, 1992)
- Convention on the Conservation of Migratory Species of Wild Animals, CMS) (Bonn, 1979)
- Convention on International Trade in Endangered Species of Wild Fauna and Flora CITES (Washington 1973)
- Alpine convention (96/191/EG)
- Framework Convention of Climate change (Rio, 1992)
- European Soil Charta (1972)
- Habitats directive (Council Directive 92/43/EEC (1992) on the Conservation of natural habitats and of wild fauna and flora
- Directive 2009/147/EC of the European Parliament and of the Council on the conservation of wild birds 2009 (SPA)
- Directive 2001/42/EC of the European Parliament and of the Council of 27 June 2001 on the assessment of the effects of certain plans and programmes on the environment (EIA)
- Council Directive 85/337/EEC (1985) on the assessment of the effects of certain public and private projects on the environment (EIA = environmental impact assessments)
- European SEA Directive 2001/42/EC
- Directive 2002/49/EC of the European Parliament and of the Council of 25 June 2002 relating to the assessment and management of environmental noise
- Directive 2000/60/EC of the European Parliament and of the Council of 23 October 2000 establishing a framework for Community action in the field of water policy
- Thematic Strategy for Soil Protection [SEC(2006)620] [SEC(2006)1165]
- Clean Air For Europe (CAFE) initiative, 2005
- Thematic Strategy on air pollution [SEC(2005) 1132] [SEC(2005) 1133]
- Directive 2007/60/EC of the European Parliament and of the Council of 23 October 2007 on the assessment and management of flood risks
- Directive 2006/118/EC of the European Parliament and of the Council of 12 December 2006 on the protection of groundwater against pollution and deterioration
- European Agricultural Fund for Rural Development (EAFRD)

- Life+
- Leader
- European Regional Development Fund (ERDF)
- Charter of European Cities and Towns Towards Sustainability, AAlborg 1994
- Leipzig Charter On Sustainable European Cities/ 2007
- European action programme Lille
- Rotterdam Urban Acquise 2004
- Bristol Accord 2005
- European standards (e.g. on equipment and materials (play spaces EN 1176 (part1-7); En 1177)
- Green paper on policy options for progress towards a European Contract Law for consumers and business COM(210)348
- Directive 2004/35/EC of the European Parliament and of the Council of 21 April 2004 on environmental liability with regard to the prevention and remedying of environmental damage
- The Service Directive (Directive 2006/123/EC of 12 December 2006 on services in the internal market