GUIDELINES FOR EDUCATION AND TRAINING IN CONSERVATION OF CULTURAL HERITAGE

Education and Training as part of the Capacity Building in the Conservation of Cultural Heritage

AIM OF THE GUIDELINES

While it is generally recognized that there is the need to ensure a widespread conservation of cultural heritage, to have an adequate number of (adequately) competent persons, there is some confusion in public opinion and disagreements amongst authorities regarding the exact nature of the specialization required. Therefore, while on the one hand it is recognized that conservation is a specific discipline, on the other hand the professionals and the specificity of the conservation techniques are not yet clear and consistent, as is the case for other disciplines such as medicine, jurisprudence, etc.

That is why it is useful in these guidelines to define schematically, but clearly, also the different categories of expertise, the skills, and the training required for each of them, not forgetting that the degree of training depends on their basic education and that the quality of their activities will depend on their social ethics. The field of interest of these guidelines is not limited to just the years of specialisation but extended to all levels of education.

CAPACITY BUILDING ACTIVITIES FOR TARGET GROUPS

The General Public and Community

It is necessary to raise in the general public the ability to observe, acknowledge and respect their heritage, to perceive with a critical spirit their surroundings and to appreciate associated values; to become a permanent stakeholder in what has been done and that can be done to protect this heritage. Such education must start from the primary and secondary schools, as it is the most effective system to ensure understanding.

This education should start from school-age children, integrating in educational programmes, and continuing in adult education with cycles of conferences and seminars on local cultural heritage and on conservation policies in general; using lectures, debates and exhibitions, public debates, and interaction with other realities and cultures.

Non-Governmental Organizations (NGO)

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orientation; Empowering orientation;
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**Authorities and institutions**

It is necessary to sensitize and empower local administrators, public institutions and private social and socio-economic and territorial managers, who should understand their role and responsibility in cultural and economic benefits of heritage conservation, sustainable environmental and social-cultural development.

Raising of awareness can be achieved through workshop and seminars, or through meetings and even an international exchange of experiences.

**Project Designers**

This discipline is specialized in problems of architectural conservation, integrated conservation of historical cities, cultural landscapes and/or land management, concerning the preservation of the tangible and intangible cultural assets. Their education generally takes place at the university level; nevertheless, the educational programs of current University courses introduce conservation only marginally or even not at all. It is therefore necessary that special courses be introduced in programmes of architecture, engineering, urban planning and landscape design on subjects in conservation:

**Architects and Planners**

Without overloading the programmes, courses of specialization should be organized so that the student is able to understand the heritage language, and the methodology of approach and the needs of the various human disciplines, respecting the environment;

Teaching of the history of architecture and urban planning must provide for the history of the techniques of construction and urban planning, the succession of forms as well as existing historical features, involving construction and function;

The basic scope of the teaching methods should be project design, prescribing the study of historical and morphological characters of the physical and social context, where the subject matter of the project is located, the town planning arrangement, and the existing legislation concerning the architectural or urban conformation as well as the functions and the proposed levels of use;

In programmes of specialization, a non-negligible part should be dedicated to the maintenance, monitoring and optimization of the heritage assets over time;

**Civil Engineers**

Training objectives should include as a priority the raising of awareness of the reference framework aimed at the conservation, when concerning structural design and a search for harmonious integration in the overall conservation project;

The courses of building science should not forget the traditional methods of static calculation, as well as those derived from local specificities with the reuse of original materials;

Courses should be offered on specific techniques suitable for maintenance and rehabilitation, as well as the non-invasive insertion of technological installations and infrastructures;
Specific and in-depth courses should be offered on the history of architecture and urban planning, as well as the history and methods of intervention of other disciplines.

**Landscape Designers/Architects**

Training of landscape designers should provide for specialization in the restoration and conservation of territory, creating areas of vegetation that guarantee the conservation of local traditional landscape;

Special courses should be dedicated to the study of the evolution of the landscape, the recognition of local and indigenous characters, and the perception of open spaces for present-day living;

Extended studies should be dedicated to the research of the techniques of recovery and restoration of historic gardens;

Provision should be made for redevelopment projects of the urban landscape and settlements, respecting local values and traditions as well as seasonal variations.

**Historians, Archaeologists, Heritage Managers**

Specialized in the history of the monuments and antiquities, invited respectively to define or influence the policies of conservation, to identify and perform actions for the recovery of historical documentation, to plan and manage the preservation of heritage according to their competence.

Their education generally takes place at the University level in the same discipline; for most it continues also in postgraduate courses of specialization or centres of higher education, mostly addressed to artistic aspects of the heritage. There is generally need for more specific knowledge, such as:

- as part of the history of art and architecture, to be introduced to the theory and history of architectural and urban conservation, including the basics of the history of technology;
- for archaeologists, there should be in-depth studies in non-destructive survey methods and techniques of exploration, together with the policy of conservation and presentation of sites and collections;
- for managers, the introduction of elements of knowledge of the causes of deterioration of environment and heritage due to climatological and anthropological factors, as well as systems of prevention and monitoring;

Updating on systems of inventory and information should be offered in addition to methods of research, exploration, etc. in standardised programmes.

**Conservator-Restorers**

Specialists in their respective sectors of cultural or material heritage, who need to be able to intervene on the built heritage by analysing and recognizing decay, assisted by laboratory, proposing therapy and consequently taking responsibility for the execution of conservation work.

This type of specialist is typically trained in centres of advanced specialization already having obtained education at university. The training should be theoretical and practical, and
should foresee specialization in the conservation of artistic features that are part of the architectural heritage.

The programmes of specialization should contain:

- notions of the history of art in the field of specialization, including analysis of the use of materials and techniques, as well as the socio-cultural context where it is expressed;
- the theory and history of restoration and analysis of the criteria of intervention over time, including local traditions;
- notions of chemistry, physics, mineralogy and climatological conditions for the recognition of the causes of decay;
- systematic survey using destructive and/or non-destructive methods, as well as photography and structural analysis;
- traditional and innovative restoration methods, taking into account the diverse state of conservation, and verification of the validity and appropriateness of the intervention in relation to efficacy or invasiveness;
- concepts of documentation and cataloguing of analyses and operations.

**Scientists, Specialists of laboratories, researcher**

Some disciplines of laboratory and research are indirectly involved in conservation issues: chemists, physicists, biologists, analysts, etc. are in charge of investigations and verifications in order to identify the State of decay, the causes and pathologies of the deterioration of the property, as well as the testing of new and experimental therapies.

Generally this discipline acquires conservation knowledge through professional experience, but it is desirable that also university programmes in their discipline introduce courses that contain:

- notions on the history and theory of restoration, along with the history of technology in the area of their specialty;
- knowledge of materials and causes of decay and consequent methods scientific and technical examination and analysis taking into account weight and dimension;
- knowledge and testing of laboratory products, conservative laboratory treatments, etc., as well as notions of climatology;
- laboratory methods of documentation and research.

**Site Managers & Technicians**

**Directors of works**

Typically having attended university courses, but who must fulfil the practical task of performing interventions on architectural, urban or landscape heritage. Beyond academic specialization this discipline needs a practical preparation on work site, including the ability to organize the work and contacts with contractors. It is thus necessary to provide for the in-depth specialization of a practical type in training work sites or in pilot projects. This
specialization could also be open for foremen of contractors or crafts people, but for them the principal scope should be theoretical knowledge of the field.

Courses of specialization should include in particular:

- knowledge about the history of restoration and methods of intervention, as well as on programming interventions for different types of conservation;
- knowledge about the history of the technical characteristics of construction, knowledge of materials and their use, as well as the causes of decay or degradation;
- teaching of traditional and innovative techniques for the conservation, extending from planning of the work site to execution;
- criteria for the implementation of projects and practical alternatives, in terms of documentation of the works and the planning of subsequent maintenance;
- exercises on the organization of work sites, control of schedules, and the management of the required human and material resources.

Craftspersons

Operations of maintenance and conservation work, involving re-integration, replacement or reconstruction, require the contribution of craftsmen skilled in traditional crafts but who also need to be educated in conservation requirements.

Their field of activity and carrying out their work even after the specialization are still subject to the decisions of the director of works and the conservator/restorer in charge.

Having had mostly practical apprenticeship and being generally already involved in their professional activity, the possibility of further qualification would require knowledge of the conservation principles, attending intensive or evening courses;

The contents of the courses for qualification or specialization must contain:

- recognition of the character, value and history of the heritage concerned in its essential elements and its contexts;
- notions of the theory and methods of conservation and evaluation, and updating of the methods and techniques of sustainable maintenance;
- study of phenomena, processes and causes of decay, including the most appropriate analytical techniques, as well as methods of analysis and risk management;
- mastery of traditional techniques and know-how in the various needs of in-situ conservation, and capacity to understand, evaluate, apply the appropriate techniques.

Conservation Technicians

specialist in practical actions with double competence of knowing how to apply traditional and innovative techniques.

This discipline results from the recent conservation policies, and is formed at the level of apprenticeship with the notions of conservation; he or she will act as assistant to the
conservator/restorers or to specialists of conservation contractors.

The programmes of craft schools for apprenticeship should introduce subjects related to conservation, to be integrated with simulated work-site training at the school facility or in real work sites. The didactic process should accompany the entire period of apprenticeship, but will require training assistance in the early part of the study period.

The contents of the courses are those intended for craftsmen; these should be integrated with information on the application of techniques and innovative materials, as well as concepts on occupational medicine about the toxicity of products handled.

RESOURCES REQUIRED FOR CAPACITY BUILDING

Development of training programmes requires financial, technical and human resources as well as the necessary legal and administrative frameworks. It will be essential that such facilities are in balance with the goals. If the direct running cost of the programme (including all teaching) is = X, one has to add to this the cost of staff, administration, premises, scholarships, student travel, etc. In fact the total cost of a training programme, therefore, may be several times the direct teaching cost. In addition, organization especially of international or regional training requires experience which can only be acquired by doing it, and is reflected in the administration, the necessary agreements, contracts, and payment arrangements. The process should include contacts with teachers in the preparatory phase, and the faculty should have regular meetings throughout the process. This is easier when teachers can be found in the same area, and more difficult when foreign faculty is used. There is a need to identify the elements of this process, and recommendations or guidelines could be developed concerning organization of new training.

Legal and Administrative Frameworks

While in the past, the conservation of heritage sites was mainly subject to specific legislation in this field, the expansion of the notion of heritage has introduced new challenges to this field. Indeed, already the concepts of ‘conservation’ or ‘integrated conservation’ associated with various other terms has evolved over time. For example, the notion of Historic Urban Landscape, introduced by UNESCO since 2005, goes beyond the specifically protected areas, taking into account the wide landscape context. Consequently, there is need to verify the entire range of legal and administrative instruments guiding and controlling related activities in the different states and communities so as to be consistent with the aims and objectives of the integrated conservation of territories and objects associated with heritage values.

Institutional Resources

Universities and Training Centres

A university is an institution of higher education and research, which grants academic degrees in a variety of subjects. A university is a corporation that provides both undergraduate education and postgraduate education. The word university is derived from the Latin universitas magistrorum et scholarium, roughly meaning ‘community of teachers and scholars"
Higher, post-secondary, tertiary, or third level education refers to the stage of learning that occurs at universities, academies, colleges, seminaries and institutes of technology. Higher education also includes certain collegiate-level institutions, such as vocational schools, trade schools, and career colleges, that award academic degrees or professional certifications.

Research can be defined as the search for knowledge, or as any systematic investigation, with an open mind, to establish novel facts, solve new or existing problems, prove new ideas, or develop new theories, usually using a scientific method. The primary purpose for basic research (as opposed to applied research) is discovering, interpreting, and the development of methods and systems for the advancement of human knowledge on a wide variety of scientific matters of our world and the universe.

Research is generally included especially in post-graduate courses, usually as an option to continue for a Master’s degree or a doctorate. Through research many training centres have obtained a respectful amount of knowledge on specific issues. Such research is an important way to provide material evidence for on-going debates on safeguarding measures or conservation treatments. Systematically programmed research will also be essential as a support activity to training. More research is required especially in the application of conservation philosophies, scientific methods of diagnosis, and treatments.

Training programmes should be provided with appropriate facilities, including a good library and documentation centre with reference collections, possibility for coordinated research, and access to computerized information networks where feasible, studio spaces, lecture rooms, staff offices, laboratories, as well as necessary equipment for surveys, inspections, analysis and monitoring of structures and materials. There is also a need for a range of monuments and sites within a reasonable distance.

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Human Resources

Teachers and Instructors

There are basically two ways to be involved in teaching conservation: one is for university professors and teachers in other relevant institutions to specialize in the subject, the other is for practising conservationists to get involved in teaching activities either regularly or occasionally. In the first case, with professional teachers, the issue is mainly to debate about the development of conservation approach, and in particular to establish and maintain links with the practice and reality. In the second case, with practitioners, there is a need, first of all, to learn to communicate with participants of training programmes, and, secondly, to be able to present specific case studies in a form useful for other practitioners, i.e., to be able to draw conclusions through comparison, and to recommend methodologies. Collaboration of the two
types of teachers will be beneficial as they can be complementary, and, with due attention, they could jointly develop the teaching capacities of each other. Generally it takes several years to become a teacher, and only with an active mind, and through continuous improvement. It is necessary for teachers to live with their time, to update their information, and to keep in touch with other vocational and professional training centres for exchange of information about conservation approaches, teaching methods and materials.

FINAL ISSUES

Research, coordinated documentation and monitoring are all essential activities and closely related with the development of strategies for education and training aiming capacity building.

Strategies for Capacity Building

One of the principal scopes of these principles and guidelines is to assist the different institutions and authorities to plan relevant strategies for the education and training as part of the capacity building in the conservation of the cultural heritage. Such strategies could be developed at the national, institutional, or local community level. These would normally include making an assessment of needs and existing resources, and of a strategic plan for meeting such needs and requirements over a reasonable timeframe. Furthermore, the strategy needs to define the individual responsibilities, and make an action plan to monitored and undated at regular intervals.

Strategy, a word of military origin, refers to a plan of action designed to achieve a particular goal. In military usage strategy is distinct from tactics, which are concerned with the conduct of an engagement, while strategy is concerned with how different engagements are linked. How a battle is fought is a matter of tactics: the terms and conditions that it is fought on and whether it should be fought at all is a matter of strategy, which is part of the four levels of warfare: political goals or grand strategy, strategy, operations, and tactics. Building on the work of many thinkers on the subject, one can define strategy as "a comprehensive way to try to pursue political ends, including the threat or actual use of force, in a dialectic of wills – there have to be at least two sides to a conflict. These sides interact, and thus a Strategy will rarely be successful if it shows no adaptability.” Strategy has been extended beyond its traditional fields, military and grand strategy, to business, economics, game theory and other fields.

Research and Documentation

Already for the knowledge of heritage through critical inventories and databases is essential. In addition, humanistic and scientific research require appropriate means at the different levels according to the range of heritage and the specific needs in the area. These would include documentation centres, such as libraries and archives for source material and records, as well as conservation facilities ranging from craft shops to various types of conservation laboratories. Needs for research should be identified in relation to conservation management, e.g., understanding the significance of the heritage resource, the behaviour of its structures and materials, and appropriate treatments. Research is required at all levels, including art- and architectural history, archaeology, materials sciences, structural behaviour, building functions, historic urban or rural areas, etc. The activities should be planned in long-term and
short-term programmes, and properly coordinated. The results should be documented and made available both to those responsible for heritage sites, and to training institutions.

**Monitoring and Verification of Competences**

Performance assessment has gained significant interest as a tool to monitor and improve competence development. In this paper, a developmental use of assessment instruments is advocated, stressing a personalised, self-regulative and learning-oriented deployment of assessment tools. Assessment viewed in this way can support knowledge productivity [1]. From a survey study and subsequent in-depth evaluation study, several observations were made concerning the implementation of performance assessment instruments in organisations. These findings are interpreted in this paper from the perspective of change in conceptions, in management as well as personnel, with regard to the utilisation of assessment instruments for developmental purposes. The findings indicate that there is still a considerable gap between the stated importance of developmental or monitoring assessment and its actual deployment, mainly caused by the prevalent beliefs and culture in organisations with respect to assessment.

Since the arrival of capacity building as such a dominant subject in international aid, donors and practitioners have struggled to determine a concise mechanism for determining the effectiveness of capacity building initiatives. In 2007, David Watson, developed specific criteria for effective evaluation and monitoring of capacity building. Watson complained that the traditional method of monitoring NGOs that is based primarily on a linear results-based framework is not enough for capacity building. He argues that evaluating capacity building NGOs should be based on a combination of monitoring the results of their activities and also a more open flexible way of monitoring that also takes into consideration, self-improvement and cooperation. Watson observed 18 case studies of capacity building evaluations and concluded that certain specific themes were visible:

- Monitoring an organization's clarity of mission-this involves evaluating an organization's goals and how well those goals are understood throughout the organization.
- Monitoring an organization's leadership-this involves evaluating how empowered the organization's leadership is-how well the leadership encourages experimentation, self reflection, changes in team structures and approaches.
- Monitoring an organization's learning-this involves evaluating how often an organization participates in effective self-reflection, and self-assessment. It also involves how well an organization "learns from experience" and if the organization promotes the idea of learning from experience.
- Monitoring an organization's emphasis on on-the-job-development- this involves evaluating how well an organization encourages continued learning, specifically through hands on approaches.
- Monitoring an organization's monitoring processes- this involves evaluating how well an organization participates in self-monitoring. It looks at whether or not an organization encourages growth through learning from mistake.