## Recommendation on control of physical deterioration of the architectural heritage accelerated by pollution (88/5)

(Adopted by the Committee of Ministers on 7 March 1988 at the 415th meeting of the Ministers' Deputies)

The Committee of Ministers, under the terms of Article 15.b of the Statute of the Council of Europe,

Having regard to the European Cultural Convention signed at Paris on 19 December 1954, in particular Article 1 thereof;

Having regard to the Convention for the Protection of the Architectural Heritage of Europe, opened for signature at Granada on 3 October 1985, recognising that the architectural heritage constitutes "an irreplaceable expression of the richness and diversity of Europe's cultural heritage, bears inestimable witness to our past and is a common heritage of all Europeans", in particular Articles 8, 16 and 17, paragraph 3, thereof;

Having regard to the resolutions of the European Conference of Ministers responsible for the Architectural Heritage, held at Granada on 3 and 4 October 1985, in particular Resolution No. 4 on the physical conservation of the architectural heritage and the need to combat pollution;

Considering that the acceleration of the material deterioration of the heritage traceable to pollution seriously threatens its survival and the possibility of its being handed down to future generations;

Bearing in mind that the specific problems of conserving the architectural heritage must be taken into account when defining comprehensive policies pursued by member states for combating pollution and improving the quality of the environment;

Noting that the development of exchange of experience and information in Europe on heritage policy implies increased consultation on problems concerning the deterioration of materials and on techniques for the physical conservation of buildings,

Recommends that the governments of member states:

- take the organisational and programming measures necessary for the development in each country of scientific research on the degradation and conservation of materials;
- take account of the need to protect the architectural heritage when implementing the general policies pursued by the public authorities to reduce pollution;
- increase European co-operation with a view to extended mutual scientific and technical assistance,

bearing in mind the principles set out in the appendix to this recommendation.

## Appendix to Recommendation No. R (88) 5

## I. Organisational and programming measures necessary for the development in each country of scientific research on the degradation and conservation of materials

Since it is only by sustained research and long-term activities that it will be possible to handle information, to observe the development of weathering agents, mechanisms and phenomena, to develop continually updated methods of conservation and upkeep and to monitor their effects, it is necessary to stimulate and promote the creation and support of permanent institutions whose aim is:

1. To improve information on available data and progress of research in particular by:

centralising data resulting from research and practice in appropriate conservation bodies;

ensuring easier access to and utilisation of the mass of available data, by means of:

- bibliographic lists,
- critical analyses,
- abstracts.
- the establishment of information centres where specialists can identify problems and where experts in the natural sciences, architecture, quality crafts and restoration techniques can meet;
- 2. To pursue interdisciplinary and specialised research on the weathering of materials, from the following points of view:
- identification of existing problems,
- analysis of the interaction of weathering processes and phenomena,
- monitoring of the impact of pollutants and other agents of deterioration,
- study of the materials and structures of monuments and other architectural sites, and examination of their reaction to weathering agents and factors, bearing in mind any previous treatment applied,
- continuous monitoring of the weathering processes;
- 3. To carry out research and practical experiments on conservation methods encompassing all these phenomena:

The objective would be:

- i. to study what can be done to arrest external and internal causes of degradation:
- by reducing and monitoring the sources and action of the pollutant concerned, and
- by reducing and eliminating other man-made factors such as unsuitable or harmful materials used for restoration, conservation and upkeep purposes;
- ii. to improve buildings, making them more resistant to weathering agents, by identifying and eliminating intrinsic factors accelerating deterioration such as:

- building defects which weaken the structures and permit the penetration and capillary movement of water, preventing drainage and creating harmful micro-climates,
- lack of protective coatings, deliberately or accidentally removed,
- the effects of materials not resistant to degradation;

iii. to continue the improvement of conservation methods and the monitoring of their effects by:

- developing and utilising materials and products in keeping with the original qualities of the monument to ensure that what is done is non-irreversible and the original structure tampered with as little as possible,
- having recourse primarily to the traditional techniques in use at the time the building was erected, replacing them by contemporary techniques only where the former prove inadequate,
- monitoring and assessing the impact of action on the materials and buildings treated;
- iv. to improve methods of upkeep and their application;
- 4. To encourage countries to train a given number of researchers and specialists capable of understanding the problems in their entirety and in their interdisciplinary context.

It would be necessary to promote:

- i. at the university research level and the planning stage of conservation policies, multidisciplinary training for researchers, teachers and conservationists in the following disciplines:
- theory and general method of heritage conservation,
- in-depth study of the phenomena, processes and causes of degradation,
- conservation procedures affecting the totality of the relevant phenomena;

ii. at foreman and technician level, the training of experts specialising in a range of heritage problems and categories, capable of identifying the problems occurring within a given context and of choosing either traditional or modern working methods;

iii. specialised training for draft workers and restorers, with emphasis on proficiency in traditional craft techniques and the ability to understand and apply specific conservation techniques.

## II. Protection of the architectural heritage when implementing the general policies pursued by the public authorities to reduce pollution

Since the deterioration of the architectural heritage can be exponentially accelerated by a cumulative process, it is essential, whatever specific preventive measures are taken to reduce the degradation of materials, to support general policies aimed at improving the environment initiated by member states or international organisations and reflected in the adoption of:

1. regulations issued at national, regional or local level aimed at the stringent reduction

of emissions of pollutants, particularly sulphur dioxide and nitrogen oxides;

2. urban planning and traffic policies directed at reducing or even abolishing motor traffic in the immediate surroundings of important monuments or major historic sites.

European co-operation with a view to extended mutual scientific and technical assistance by:

- 1. ensuring better multilateral dissemination of information by concentrating the scientific and technical data available in the various countries in existing professional bodies such as ICCROM and ICOMOS;
- 2. developing, whenever this is justifiable and in specific cases, the exchange of experts specialising in problems of the degradation of materials between European countries in the context of the Council of Europe's technical assistance programme;
- 3. organising under the auspices of the Council of Europe a reciprocal exchange of knowledge and documentation on:
- experience acquired during technical assistance missions and results obtained over a period of time,
- other significant experiments carried out in the various member states;
- 4. developing practical long-term co-operation across borders or between regions using comparable building materials and techniques.