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SCIENTIFIC AND CULTURAL ORGANIZATION

CONVENTION CONCERNING THE PROTECTION
OF THE WORLD CULTURAL AND NATURAL HERITAGE

World Heritage Committee
Fourteenth Session

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Item 8 of the agenda: Monitoring of the state of conservation of World Heritage cultural properties

1. At its fourteenth session, the Bureau, while acknowledging that the replies to the questionnaire entitled 'Information update on the cultural sites inscribed on the World Heritage List' did not always make it possible to take stock of the problems involved in the conservation of the cultural properties on the List, nevertheless considered it useful to continue the exercise, in particular for the purpose of compiling a technical file on the sites included. It also requested the Secretariat to 'report to the Committee ... on the missions that were to be carried out during the coming months by experts sent by Unesco to endangered sites'. Furthermore, the Bureau expressed concern about the state of conservation of Kathmandu Valley and about the project for the development of the Pyramids Plateau.

2. Since the Bureau's meeting two expert missions have been organized: (i) to Timbuktu (Mali) to examine the state of the site and to assist the authorities of Mali in preparing a file for its nomination to the List of World Heritage in Danger (CC-90/CONF.004/3 Add.); and (ii) to Portugal to make a diagnosis of the damage caused by recent storms to the Monastery of the Hieronymites and the Tower of Belem in Lisbon and to the Monastery of Batalha.

3. The Monastery of the Hieronymites, the Tower of Belem and the Monastery of Batalha

These properties were included in 1983 in the World Heritage List under criteria (iii) and (vi) for the whole of the Monastery of the Hieronymites and the Tower of Belem, and under criteria (i) and (ii) for the Monastery of Batalha. At the request of the Portuguese authorities, an expert mission was carried out on the three buildings in May 1990, financed by the World Heritage Fund (US \$5,900). The purpose of the mission was to make a diagnosis of their state of deterioration, resulting in particular from heavy storms, and to provide the competent authorities with advice for their restoration and conservation. The report can be consulted in the Secretariat.

Although these monuments differ from one another in respect of their cultural identity, analysis of the pathological problems observed revealed that the main causes could be attributed to the following common factors: humidity, the poor quality of the stone and weaknesses in the resistance offered by the bearing walls. The damage due to the humidity derives from a variety of causes: upwellings of water through capillary action, defective waterproofing and rainwater dripping on the facades. The deterioration to the stonework is the result of the use of rocks whose microstructure is unsuitable for them to bear being exposed to excessively harsh weather conditions for a period of years or indeed of centuries. The bearing walls which are in freestone are cracked or broken because of insufficient mechanical resistance. To repair and prevent a worsening of this damage various techniques can be envisaged. However, in view of the many factors involved, in some cases a precise diagnosis can be arrived at only on the basis of specific experimental measures. Furthermore, the state and quality of these works of art are such as to make it necessary for the Portuguese authorities to be informed of the recent techniques available for diagnosis and restoration. The organization of specialized training courses, specifically adapted to the practical problems affecting the monuments, would be useful for their conservation.

More specifically, at the Monastery of the Hieronymites, the main problems for the conservation of the buildings are as follows: stability of the structures; water seepage; maintenance of stonework, timber work and roofing. The many dilapidations apparent, in the form of cracks, breaches, separations and canting, give cause for fearing more substantial damage if consolidation work is not undertaken. But a precise diagnosis cannot be arrived at on the basis of visual observations. A series of experimental measures should be taken in order to have a scientific base for determining future lines of action. Furthermore, the water seepage points to inadequate waterproofing of the roofing and of the jointing of the walls. Dampness contributes to the weathering of stone. Before carrying out a programme of waterproofing operations, it is essential for the weak points to be located where water is likely to penetrate. The establishment of a team responsible for continual maintenance and monitoring further deficiencies would prevent certain types of deterioration from growing worse.

The various problems affecting the stonework of the Tower of Belem may be set in two categories: damage to the stone and mortar exposed on the outside to the elements and deterioration of the surface of the stone inside the building. From the point of view of its stability, the Tower of Belem is very sound. The visible dilapidations can be remedied quite easily. The most important measure to ensure good conservation is to make up for the lack of ventilation and airing in the cannon room. Water seepage due to defective jointing may also cause damage which will grow worse with time. Cleaning of the black parts and fungicidal treatment would enhance the external appearance of the building.

At the Monastery of Batalha the problems encountered are of several different kinds. In order of importance, the following have been noted: impairment of the stability of the building due to mechanical action; deterioration of the stone in its ornamental function, connected with physico-chemical and biological changes revealed by the crumbling of the stone and the colouring of the facades; and the problems of the stained-glass windows, the most important ones in Portugal, dating from the fifteenth century. Several factors are endangering the perfect conservation of these stained-glass windows. The stone mullions, which existed in the bays and on which the windows were fixed, have suffered damage. In particular, at the time of the earthquake in 1755, the stained-glass windows were subjected to considerable tension under

the effect of the torsion experienced by the church. Since then, certain provisional restoration measures have consisted in inserting the windows into wooden frames. But no valid conservation measure has been taken to solve the problem of the distortion of the lead work and the broken panes. The desirable short-term measures are set out in the technical report. At the Monastery of Batalha the main problem concerns the preservation of the building's stability. Before practical consolidation measures can be proposed, a thorough study must be made of the causes of the deteriorations regarding which precise knowledge is lacking at present.

The mission initially requested to examine the three aforementioned properties nevertheless provided the expert with an opportunity to visit other Portuguese sites included in the World Heritage List, namely the Convent of Christ in Tomar and the Monastery of Alcobaca.

The Convent of Christ in Tomar mainly shows deterioration resulting from dampness, giving rise in particular to the colouring of the facades due to water dripping from the roofs. The continued presence of surface humidity leads in addition to a proliferation of moss and lichen. The question that most urgently needs to be settled concerns the humidity in the Rotunda of the Templars. On this depends the conservation of the sixteenth-century gilt and polychrome paintings. The main problem in the Monastery of Alcobaca is due to the presence of groundwater beneath the building. The resulting upwellings of water through capillary action are causing damage to the stone in many places. Borings and a study of the groundwater level would allow the best possible solutions to be proposed with a view to remedying this phenomenon. Deterioration of the ornamental parts in stone was noted, resulting from the poor quality of the stone used. In particular, this stone has proved to be unsuitable for use in the foundation mass. Before deciding on the most appropriate consolidation operations for the stonework, it is essential to monitor changes in the width of the existing cracks.

4. Kathmandu Valley

Placed on the World Heritage List in 1979 under criteria (iii), (iv) and (vi), Kathmandu Valley is the subject of an international safeguarding campaign which has served in the first place to draw up a Master Plan for the management and conservation of the cultural monuments throughout the valley.

Under the terms of the nomination submitted in 1979 by the Nepalese authorities, seven sites were included in the World Heritage List: the Kathmandu, Patan and Bhadgaon (Bhaktapur) Darbar Squares, the two Buddhist stupas of Swayambhu and Bodhnath and the two groups of Hindu temples in Pashupati and Changu Narayan. Considering that the three Darbar Squares are composed of 91 large buildings, the Swayambu stupa of 12 architectural structures and the groups of Hindu temples of 28 buildings, regarded as being of exceptional importance, monitoring the state of these various monuments is proving to be a complex task, both for Unesco and for the Nepalese authorities.

In 1989 Kathmandu Valley was the subject of the questionnaire sent in on the monitoring of the state of conservation of cultural properties. The authorities touched in general terms on the restoration work done under the Action Plan for the Campaign. Only two properties, the Changu Narayan temple and Mani Keschav Narayan Chok on Patan Darbar Square, were cited as requiring urgent restoration measures in both cases, the rebuilding of certain parts of structural consolidation proved necessary. At its thirteenth session the Committee had been informed that the roof of the Bishwanath temple on Patan Darbar Square had fallen in.

Emergency assistance has been requested three times from the World Heritage Fund: in 1979 and 1980 to consolidate the Swayambhu temple (\$32,500) which was threatened by a landslide, and in 1989 for the work to be carried out on Biswanath temple (\$34,000).

Since the beginning of the Campaign, Unesco has provided \$213,200 (\$24,200 regular budget, \$43,000 World Heritage Fund, and \$146,000 Unesco's Special Account). In addition, Unesco has received approximately \$80,000 in the Trust Fund, of which about \$65,000 have been transferred to the government. UNDP made financial contributions of almost \$546,000 between 1972 and 1980, and bilateral agreements between the Government of Nepal and several countries provided a further \$110,000. For the government's part, over the period 1975-1990, \$5.2 million were committed to the general preservation of cultural sites and monuments in Nepal. Apart from direct financial contributions, help in kind has been provided by a number of countries, but it has been very difficult to plan the conservation work and to carry it out in a systematic way.

Therefore, it is considered that an UNDP project could assist the Campaign to continue the development of the type of institutional infrastructure that will be required in Nepal to preserve the cultural heritage of that country. The UNDP project would provide front end funding for broader planning issues, a detailed planning of the Campaign, and some core funding for training and associated equipment prior to the relaunching of the Campaign and during the first 1 1/2 to 2 years of the Campaign. The project would run for three years with a budget of approximately \$435,000 from UNDP and a contribution of \$87,000 (in kind) from the government. The specific objectives of the project would be as follows:

- to review and update the Master Plan and develop a General Action Plan for the Kathmandu Valley;

- to develop a detailed Action Plan and Marketing Plan for the re-defined International Safeguarding Campaign;

- to increase the capacity of the Department of Archaeology to conserve and present the cultural heritage of Nepal by:

 - providing additional training of the staff,

 - improving the conservation laboratory.

As part of the review of the implementation of the Action Plan for the Campaign, the state of restorations in progress has been ascertained (a copy of the report can be consulted in the Secretariat). The working group that met to evaluate the Campaign recommended that a limited number of monuments and sites be concentrated on. Of the 88 originally included in the inventory drawn up for the Campaign, the following were singled out: the Swayambhu stupa with its 12 buildings, Patan Darbar Square (19 buildings) and the Hindu temple of Pashupati consisting of 13 parts, all three specifically listed at the time of the inclusion of Kathmandu Valley in the World Heritage List.

5. The Pyramid fields from Giza to Dahshur (Egypt)

This site, placed in 1979 on the World Heritage List under criteria (i), (iii) and (vi), was in 1988 the subject of the questionnaire sent in to provide updated information on cultural properties included in the List.

At the time, the answers concerned four elements: the Sphinx, the Cheops complex at Giza and the pyramids of Kephren and Mykerinos. A change in the legislation on protection has been reported. A law dating from 1983, consolidating the State's power for site management has been supplemented by provisions for the administrative centralization of the measures to be adopted. Furthermore, the law extends protection to buffer zones around archaeological sites which are delimited by decision of the authorities.

Over the past few years the pyramid area has been increasingly threatened, mainly due to the growing number of visitors and to uncontrolled development of the nearby village. In order to halt the resulting deterioration of the monuments, the Egyptian authorities drew up a development plan for the whole area. Since this plan gave rise to some controversy within Egypt, the Minister of Culture decided to establish an international advisory committee of experts to advise the Egyptian authorities on the development plan and he requested the Director-General to suggest the names of high-level experts from other countries who could take part in the committee together with Egyptian experts.

The advisory committee, composed of nine Egyptian experts and six non-Egyptian experts, met in Cairo from 14 to 18 May 1990 and studied the various aspects of the project, the main objective of which was to provide a better protection of the site by taking a number of rehabilitation measures and by totally enclosing the area.

The Committee gave its full support to the rehabilitation measures included in the project, namely:

- firm control of access to the area;
- removal of all modern buildings, platforms, walls, fences, etc.;
- removal of all macadam roads and replacement by stabilized sand;
- prohibition of any motorized vehicles except electric cars operated by the keeper of the site;
- control of the flow of visitors;
- creation of a fixed route for camels and horses;
- exclusion of all other animals: dogs, goats, etc.

and underlined the urgency of taking these measures.

As regards the means to enclose the area, the Committee recommended:

- (a) on the eastern side near the Sphinx: that, after the necessary archaeological excavations had been carried out, a light structure be installed, slightly below the level of the ground as it stands today, and including gently sloping stepped rows of seats for the sound and light show; the height of the new structure should not exceed six metres; a simple barrier should be erected on both sides of the above-mentioned structure to prevent any unwarranted intrusion or construction;
- (b) on the northern side at the end of Pyramids Road: the entrance to be installed on this side to control the access of visitors should be a very light and simple structure which should not adversely affect the topography or present characteristics of the hill and not impair the view.

The main recommendation of the Committee was that a master plan of the whole area, including the buffer zone, be prepared on the basis of comprehensive studies. In transmitting the report of the advisory committee (which is available for consultation by the Committee) to the Egyptian authorities, the Director-General drew attention, in particular, to this recommendation and indicated that, since the site was protected under the World Heritage Convention, the Committee would certainly wish to have an opportunity to examine the master plan before it is implemented. He also conveyed to the Egyptian authorities the concern expressed by the Bureau at its meeting in June 1990 that construction work might endanger this site and drew attention to the fact that the Bureau had underlined the need to maintain its integrity.

With regard to the Sphinx, the Director-General granted \$100,000 for safeguarding operations. An expert mission in November 1989 confirmed how urgent it was for action to be taken to safeguard the Sphinx, involving detailed studies enabling the installation of replacement stones of the same quality but of higher resistance to the action of destructive agents. He recommended that the Unesco allocation be used for the purchase of equipment for this purpose (a porisimeter and a compression testing machine) and for tests to be carried out on the stone of the nominated sculpture. This equipment has been provided.

Following the recommendations of the expert, a team from the Centre experimental français de recherches et d'études du bâtiment et de travaux publics (CEBTP) carried out in April 1990 an examination and a dynamic sounding in order to estimate the quality of the non-destructive stone and to assess its degree of homogeneity. The Centre concluded from its tests and analyses that the stone of the neck and head of the Sphinx was of good quality.

At the request of the Egyptian authorities, the Getty Conservation Institute is undertaking a research project to determine the factors that are contributing to the deterioration of the Sphinx. To this end, a solar-powered meteorological station has been installed on the back of the Sphinx to monitor environmental data from the site and surrounding area over the next 12-24 months. Information will be collected and analysed on wind speed and direction, solar radiation, ambient and surface temperature, relative humidity and rainfall.

The results of this research project and of the mission undertaken by the CEBTP will enable the experts to diagnose precisely the state of the monument and to draw up a plan of action for its safeguarding.

The Secretariat will report orally to the Committee on any further developments concerning these projects.

6. The Secretariat considered it useful, however, to report briefly to the Committee on sites for which emergency assistance or technical assistance has recently been requested or for which relevant information has not been communicated since the meeting of the Bureau.

7. The island of Gorée (Senegal)

This site placed on the World Heritage List in 1978 under criterion (vi) has since December 1980 been the subject of an international safeguarding campaign following an appeal made to the international community by the Director-General of Unesco.

In 1981 a master plan for the safeguarding operations, setting out the operating criteria for the restoration of the buildings, both public and private, and providing for their functional rehabilitation and for the necessary road works, was adopted.

Accordingly, since the site's inclusion in the List, restoration work has been carried out on several buildings with the help of national, bilateral or multilateral funding.

It is to be noted that of the 10 buildings originally singled out for restoration work in the action plan for the international campaign, only four of them have benefited from work financed by the State or through bilateral arrangements: the House of Sudan, on which the work, financed by the Federal Republic of Germany, is completed; the Captaincy, not yet completed (financed by the Republic of Korea); the 'Victoria Albis' House and the ruins of the 'Diouga Dieng' House have been partly restored or strengthened through national funding. The six other buildings included in the action plan are either in a state of ruin or overpopulated and have therefore not been able to benefit from the functional rehabilitation that had been envisaged:

	<u>Function assigned</u>	<u>State</u>
(1) J. Basse House	Annex exhibition gallery	In ruins
(2) Hortala House	Nursery	In ruins
(3) Former Andrand House	Open-air theatre	In ruins
(4) Former William Ponty School	Cultural centre	Occupied by families of ex-civil servants - 120 persons
(5) Former convent school	Public library	Occupied by families of ex-civil servants
(6) Former nuns' home	Artists' studios	Occupied by families - 50 persons

However, irrespective of the action plan for the campaign, many other buildings have been restored and assigned for use by educational and cultural institutions.

The Fort d'Estrées has received financing from Lebanon and houses the history museum. The Slave House, responsibility for which has been assumed by the foundation Gorée/Fraternité, although still being converted and restored, also houses a museum, which is devoted to the slave trade. The Museum of the Sea, financed by France, has been closed for four years. The Université des Mutants, installed in a building restored by Senegal, is currently being used as a conference centre. The Maison du Marin (The Seaman's House), financed by France, is used for stop-overs by the French Navy. A dispensary has been installed in an old building thanks to joint funding from the Sovereign Order of Malta and Italy, and the Mosque has been restored with the help of the Aga Khan Foundation. The beach Battery has been restored with national funds and converted into a market. The Senegalese Government has also financed restoration work on the buildings housing the police station, the local school, the Lion school, the customs office and the fire station, installed in the former town hall. Harbour development operations, public lighting and highway amenities have benefited from a loan from the World Bank.

An important feature of the island, the 'Western Battery', received emergency assistance amounting to \$33,000 from the World Heritage Fund in 1981. The concern at the time was to consolidate the Battery and the ramparts which were in danger of falling in, having been very affected by the violence of the sea in that part of the island. Despite the work done, these structures are again very much under threat, some parts having already given way. The recent action plan survey has highlighted the poor state of the Manor House (the 'Castel'), which is frequently visited by tourists but has become dangerous.

Assistance amounting to \$19,600 has also been granted from the Fund to help in the training of technicians responsible for rehabilitating the island.

Work on the buildings still to be restored cannot be envisaged however, without the problem of their subsequent use being settled beforehand. Several of them currently house a large number of families living on the island.

8. The Hal Saflieni Hypogeum (Malta)

This site, placed on the World Heritage List in 1980 under criterion (iii), is one of the monuments concerned by the safeguarding campaign launched on behalf of Malta.

In 1979, with financing provided by the Fund (\$2,300), an expert was dispatched to study the problems of climatology and hydrology and to advise the competent authorities regarding the equipment needed to remedy them.

A request was made to the World Heritage Fund in 1981 for the purpose of securing air-conditioning equipment (\$3,570).

When the Working Group established under the International Campaign visited the Hypogeum in April 1983, they noted the problems caused by the high humidity, including the growth of algae on the walls which were damaging the wall paintings, and recommended that the services of experts in hydrology and in ventilation be provided, that modifications be made to the lighting system, and that the buildings overhanging the Hypogeum be demolished and a new entrance built.

The authorities have been monitoring the temperature and level of humidity in the Hypogeum over a period of 3 1/2 years with equipment provided by Unesco. A \$2,700 allocation from the Fund served to send an expert in hydrology who visited the Hypogeum in December 1988 to help determine the origin of the water infiltrating the Hypogeum; his preliminary conclusions were that the main source was groundwater coming from the supply water system and, in particular, used water. Further tests and analyses are being carried out. The lighting system has been modified, with the result that the algae are not developing further. In addition, the special account opened to finance the campaign enabled two experts to be dispatched in 1990 to examine the ventilation system (\$8,360); their report can be consulted in the Secretariat. French experts who worked at Lascaux visited the Hypogeum in June 1990 and advised on the question of ventilation, visitor control and on the new entrance for which architectural plans have already been prepared. The buildings overhanging the Hypogeum have already been demolished and it is now urgent to construct the new entrance to provide adequate protection for the monument.

9. Archaeological site of Leptis Magna (Libyan Arab Jamahiriya)

This site, placed on the World Heritage List in December 1982 under criteria (i), (ii) and (iii), has been receiving constant attention from the Libyan authorities. Since 1987 it has been seriously threatened by climatic conditions resulting in flooding from the Lebda wadi.

In 1988 a Secretariat mission revealed that overflow from the wadi had affected most of the important monuments on the site and, in particular, the thermae, the nymphaeum, the new forum, the basilica, the colonnaded way (the lower part having completely given way), the old forum and the old port. The pumping equipment needed at the time for initial emergency operations was provided with help from the World Heritage Fund (dumpers, US \$18,000).

In November 1989 the Secretariat was informed that the sand had been cleared away from the monuments and the streets. However, standing water still remained in the thermae damaging the mosaics and, because of its salinity, eating into the mortar used for the jointing of the stones. Emergency assistance of US \$8,000 was therefore granted for the purchase of a generator-operated electric pump. However, it is certain that if preventive measures were not taken, Leptis Magna would continue to be threatened by periodic flooding from the Lebda wadi.

It is to be noted that teams of archaeologists from several countries have shown an interest and a desire to contribute to the development of the site once it has been permanently protected from flooding from the Lebda wadi.

In co-operation with the Libyan authorities and in association with the Division of Ecological Sciences, it has been decided to work out a scheme for the protection of the site. Financing is expected to be covered either by the Libyan authorities or by extra-budgetary sources, both for the restoration of the site and for the protective work proper.

Recent funding from the World Heritage Fund (US \$17,500) will be used to dispatch a multidisciplinary mission (archaeologist, hydrologist and hydraulic engineer), planned for October 1990. This mission will be responsible for making a technical study of the water works and other measures required to deal with flooding from the Lebda wadi and from two other neighbouring wadis. The mission also has the task of proposing possible improvements to the existing means of protection.

10. The historic town of Ouro Preto (Brazil)

This site, placed on the World Heritage List in 1980 under criteria (i) and (iii), was dealt with in a reply from the Brazilian authorities to the survey on the state of conservation of world heritage cultural sites carried out by the Secretariat in 1988.

Since its inclusion in the List, changes have been made in the legal and administrative provisions governing it in order to increase the effectiveness of the legal protection provided. The authorities of the State of Minas Gerais - while not encroaching on the powers of the municipal authorities - have issued several decrees aimed at ensuring special protection for the towns of Ouro Preto and Mariano and their natural environment, and at declaring certain areas to be in the public interest so that they can be expropriated with a view to more effectively preserving the environment.

At the federal level, changes in the legislation bear mainly on the administrative relationship between the National Secretariat for the Historic and Artistic Heritage (SPHAN) and the national 'Pro-Memoria' Foundation, which are the two bodies responsible for the conservation of sites on the List.

As its population has grown, the town of Ouro Preto has been faced with complex problems stemming from its position, its topography, the characteristics of its subsoil and the actual system of land organization and occupation. Although the entire urban area has been provided with increased legal protection since it was included in the List, it is impossible to prevent certain alterations to the character of the town. SPHAN is constantly striving to conserve and preserve not only outstanding architectural and artistic monuments, but also the whole urban complex in which constant supervision and guidance is provided for new buildings being put up.

In comparison with the buffer zone, as was noted in the previous paragraph, the town is expanding, especially in its outlying areas. A large number of new districts and housing estates have been established, demanding excavation works, the opening of thoroughfares and work on the urban infrastructure, entailing intense occupation of the area. The resulting changes are of course affecting the environment.

Since Ouro Preto was placed on the List, a great deal of conservation and restoration work has been done on it. Most of this work has been completed, in particular the architectural and artistic repairs on religious and civil monuments, including the churches of 'Sao José', 'Nossa Senhora de Rosario do Padre Faria', 'Nossa Senhora do Rosario', 'Nossa Senhora das Mercês e Misericórdia', 'Nossa Senhora da Conceicao de Antonio Dias' and 'Santa Efigenia', the chapels of 'Nossa Senhora das Dores e de Sant'Ana', the museums of 'Inconfidencia', the church of 'Nossa Senhora do Carmo', the 'Case dos Contos' and the 'Casa da Baronesa', and the botanical garden. Work has also been done to shore up the slopes of the hills which, because of heavy rainfall, were in danger of causing landslides and hence the destruction of certain parts of the town and monuments. Mention should also be made of the continual efforts of the town-dwellers themselves to conserve the whole of the urban architectural complex. Additional work is still required, however, particularly in respect of the urban infrastructure: electric system, drains, improvements in traffic flow, drainage of run-off water and enhancement of the environment through the creation of green areas.

While the 1988 ICCROM report gives a favourable view of the conservation of the historic part of the town, it unfortunately records the uncontrolled development of buildings on the hillsides, despite the risks of a landslide. It should be noted that so far there exists no comprehensive conservation plan. It would be useful for the Committee to remind the competent authorities of the urgent need for such a plan.

11. The city of Quito (Ecuador)

This site, placed on the World Heritage List in 1978 under criteria (ii) and (iv), was very affected by the earthquake that occurred in March 1987.

Thanks to emergency assistance amounting to US \$30,000 from the World Heritage Fund, an expert carried out an on-the-spot mission in November 1988 to assist the national and local authorities in assessing the damage caused by the earthquake and ascertaining what restoration and consolidation work was urgently required, particularly on the churches and monasteries of Santa Clara, San Augustin, Santo Domingo, El Tejar, Guapulo, El Sagrario and San Francisco. The mission enabled the total cost of the work to restore the Quito monuments to be set at about \$6,000,000.

At its eleventh session the World Heritage Committee approved additional emergency assistance in an amount of \$70,000 for the most urgent consolidation operations.

At the same time, UNDP released \$130,000 for the work to be undertaken on San Augustin and El Sagrario, the World Heritage Fund allocation being intended to be used for the restoration of the convent of Santa Clara and the churches of Santo Domingo and Guapulo.

At the present time several restoration operations are in progress, under the responsibility of various institutions. The National Cultural Heritage Institute (INPC) is in charge of the restoration of El Sagrario, Santo Domingo, San Augustin, Santa Clara, San Francisco and Guapulo. The Central Bank of Ecuador has assumed responsibility for the Merced, the 'Compania de Jesus', the Municipality of Quito, the cathedral and various parish churches in the historic centre. All the restoration work is being carried out in close conjunction with the UNDP/Unesco project (ECU/88/001) 'Restoration of the historic monuments affected by the March 1987 earthquake'. Other work is also being carried out with the help of funds resulting from bilateral co-operation (Italy, Spain, Belgium).

In 1989 the Chairman of the World Heritage Committee approved \$15,000 for the organization of a seminar on the rehabilitation of the historic centre of Quito. The fact is that, in addition to isolated restoration operations, a coherent rehabilitation plan is needed, the historic centre of Quito being subjected to the adverse effects of overpopulation and heavy traffic. The principal expert assigned to the UNDP/Unesco regional project for the safeguarding and development of the cultural heritage in Latin America helped to organize the seminar whose purpose was to:

- (i) work out a comprehensive strategy for short- and medium-term rehabilitation;
- (ii) draw up a technical and financial assistance programme to be submitted to international sponsors;
- (iii) work out an institutional framework; and
- (iv) give an opinion regarding the plan proposed by the Municipality of Quito, the identification of the funds required and their management.

The conclusions of the seminar highlight the problem that will be entailed by the financing of conservation and socio-economic rehabilitation projects. The establishment in 1987 of a Safeguarding Fund (FONSAL), the setting up in 1988 of the Caspicara Foundation (Ecuadorian foundation for the dissemination of the country's historical and cultural values) and the decision to prepare a master plan were considered to be means of attracting public or private international funds.

Several feasibility studies were outlined during the seminar for which international financing has been identified (UNDP/IDB) concerning:

- (i) the development and management of tourism in the historic centre of Quito (\$160,000), on the understanding that tourism remains compatible with the master plan;
- (ii) the urban rehabilitation of the historic centre (\$250,000);
- (iii) strengthening of the municipality's planning service (\$150,000).

Since it was included in the List, \$185,000 has been allocated from the World Heritage Fund to the historic centre of Quito.

12. The Old City of Sana'a (Yemen)

Placed on the World Heritage List in 1986 under criteria (iv), (v) and (vi), Sana'a has since 1984 been the subject of an international safeguarding campaign, the boundaries of the area on the List being the same as those of the area for which the campaign is being conducted.

The campaign is a good example of the catalytic role that can be played by Unesco in developing international co-operation in respect of the preservation of the cultural heritage. The Government of Yemen has set up a committee specially responsible for helping to conduct the campaign and has prepared in collaboration with Unesco, a detailed action plan making it possible to schedule over a period of time the restoration and promotion activities.

At the time when the site was included in the List, and when a large number of buildings were in need of restoration, the main problems were connected with the increasing unsuitability of the facilities and architecture for living conditions in a modern capital and with the need to exercise supervision over new buildings. When it conducted an evaluation, ICOMOS raised the question of the effectiveness of including the site in the World Heritage List in view of the dangers to which it was exposed. Furthermore, in 1989 information gathered by various Unesco missions led it to be believed that a scheme for the development of the Salla Wadi was being launched and might impair the integrity of the site. The Heritage Committee expressed concern in this regard and the Yemeni authorities stated that no scheme of this kind was in progress.

The work carried out in the context of the campaign is being financed mostly through bilateral co-operation and is in addition to the national effort. Thus for 1990 US \$16,200,000 and 2,000,000 Swiss francs have been collected and will in principle be used as follows:

- . Italy
 - Technical studies of historic centre \$ 1,200,000
 - Restoration of 'Italian quarter' \$ 6,400,000
- . Republic of Korea
 - Equipment of executive office of the international campaign \$ 230,000
- . Democratic People's Republic of Korea
 - Technical studies \$ 240,000
- . Norway
 - Restoration of Samsarat al-Nahas and installation of a traditional crafts centre \$ 330,000
- . Netherlands
 - Street paving \$ 700,000
 - Restoration of Samsarat al Gumruk \$ 700,000

. France

- Restoration of city wall, waterproofing house roofs \$ 100,000

. German Federal Republic

- Restoration of Samsarat al Mansouria as an art gallery \$ 300,000
- Reconstruction of Souq Al-Bajer hospital \$ 2,000,000

. United States of America

- Restoration of Samsarat Muhammad bin Hassan bin Qassim \$ 4,000,000

. Switzerland

- Restoration of two historical houses and production of films and books on history, crafts, arts, and architecture of the Old City of Sana'a S.F. 2,000,000

The national authorities for their part are planning several nationally funded operations:

- . The 5th pavement project in the areas of Bahar Rejraj and Bustan Shaareb;
- . Wadi Al-Saila technical study project which will be completely finished at the end of August;
- . Three technical studies on rain water drainage and pavement projects for the areas of Bustan Sultan, Al-Dafa'ai street, Al-A'alami, Al-Felchi and Al-Quzali:
 - (i) general plan for public services for the Old City of Sana'a;
 - (ii) technical study for al-Majjah caravanserai;
 - (iii) restoration of two historical houses.

Of the projects in progress, four should be completed this year:

1. Ibn Al-Amir school will be finished in September this year, co-financed by Yemen Government and the Federal Republic of Germany.
2. The 4th pavement project, financed locally.
3. The southern part of the city wall, co-financed by Yemen Government and France.
4. Three public baths. They will be finished in September, financed locally.

A UNDP/Unesco project (YEM/88/006) for a cost of \$374,800 has been under way since May 1988 in support of local staff training activities and fund-raising. A detailed list of activities undertaken in the context of the campaign can be consulted in the Secretariat.

A request for international assistance amounting to \$13,000 from the World Heritage Fund was approved in 1990 by the Chairman of the World Heritage Committee to enable the local authorities to benefit from the advice of a specialist in Islamic religious architecture for the protection and enhancement of the Great Mosque of Sana'a.

13. Tipasa (Algeria)

Placed on the World Heritage List in 1982 under criteria (iii) and (iv), Tipasa became the chief town of Willaya in 1984. This decision created a need for new services and facilities and resulted in considerable urban growth and the development of tourism. Although they have been erected outside the precincts of the Old City, the new buildings have impaired the unity of the site. A Unesco expert, financed by the World Heritage Fund, visited the area from 8 to 13 July 1989 in order to evaluate the urban development programme and its effects on the site. It is to be noted that, in the conclusions to his report, which can be consulted in the Secretariat, the expert advised against the building of a hotel on the archaeological site. The site was affected by a violent earthquake in October 1989. In December 1989 a Secretariat mission enabled the Algerian authorities to make a request to the World Heritage Fund for the dispatch of a diagnosis mission, the purpose being to indicate the possibilities for using the buildings affected.

Emergency assistance amounting to US \$18,900 enabled a mission to be sent out in March-April 1990 with the object of examining the stability of the structure of certain buildings and to suggest, in collaboration with the local authorities, the measures needed to ensure the safety of persons and the conservation of buildings belonging to the listed site and, in particular, the archaeological study centre serving the museum and the archaeological reserves of Tipasa. The mission noted that the building housing the museum did not show any visible signs of having been seriously damaged by the earthquake. Some work appeared necessary, but stability was not affected.

The small objects discovered on the ancient site of Tipasa, which are not on show in the museum, are stored in a building dating from 1942 which has become dangerous. As the building has no historical value, its demolition can be contemplated. However, as it is essential to protect the objects in storage, they need to be transferred to a less dilapidated building. Measures were recommended as a matter of urgency by the expert.

When the expert visited the Maghreb Centre he identified a large amount of damage to the main building caused by the earthquake. It proved possible to recover the building housing the Maghreb Centre by taking serious measures to consolidate the walls.

Parallel to the mission by the structural specialist, an architect was sent to the site to examine a programme for the restructuring of the present village of Tipasa (located within the boundaries of the area placed on the World Heritage List) and to make recommendations concerning future improvements that might be made to it.

The consultant had at his disposal the Tipasa urban restructuring scheme and made comments thereon, referring in particular to the need for a precise topographic plan before any proposals could be made for the introduction of new buildings, the size and height of which would require further study. The experts' technical report can be consulted in the Secretariat.

14. The Great Wall of China

Following the donation to the World Heritage Fund of 885,000 French francs (approximately \$146,000) made by the International Committee for the Safeguarding of Venice and the Great Wall of China in November 1988, the Chinese authorities communicated to the Secretariat a plan for the restructuring of Mutianyu pass. The work will mainly concern the platforms, several of them having partially collapsed, and should be completed in 1992. A contract for the execution of this work has recently been proposed to the Chinese authorities.

15. Secretariat's proposals

Uneven though they are, the replies to the questionnaire have proved to be a source of useful information, as was noted by the Bureau at its 14th session. For this reason, the Secretariat considers that it would be desirable to undertake a systematic analysis of the replies received (copies of which have been received by ICOMOS). Up to now this has not been able to be done owing to delays in establishing the posts provided for to increase the staff responsible for the implementation of the Convention.

If the replies were systematically analysed it would become possible, at a first stage, in the light of any shortcomings noted, to draw the attention of the States Parties to the importance of having a maximum of precise information which should serve as the basis for the technical file discussed at the Bureau's meeting. The file should not be limited to purely descriptive information. It should be able to be supplemented by material deriving from technical assistance operations, undertaken with financing from the World Heritage Fund, and equally from the implementation of action plans for ongoing international safeguarding campaigns (as illustrated by paragraphs 4, 7, 8 and 13 of this document), or from the implementation of restoration projects, undertaking with financing from extra-budgetary sources (UNDP, funds-in-trust, etc.) within the framework of the Division's operational activities.

Were the Committee so to decide, it would be desirable to delay sending off the third series of questionnaires. Thought might be given first to analysing the 42 replies already received; a sample of the cards prepared in this way will be submitted to the Bureau. Letters might also be sent to States Parties whose replies are felt to fall short of allowing an assessment to be made of the state of the properties included in the List. The aforementioned procedure would make it possible to identify the critical situations on which a report will be made to the Committee, for consideration, on the pattern of the procedure followed by the International Union for Conservation of Nature and Natural Resources in the case of natural properties. As part of its efforts to step up its information and documentation activities, the Division of Cultural Heritage has envisaged setting up a data base on legislation for the protection of the immovable cultural heritage. As soon as the measures decided for the strengthening of the staff responsible for the implementation of the Convention concerning the world heritage have become effective, a survey will be conducted among States Parties whose replies might serve to supplement the aforementioned technical file.

Parallel to this effort and as an experimental measure, systematic diagnosis of the sites included in the List could be envisaged on a regional basis. The Latin America and Caribbean region, which benefits from a UNDP regional project on the cultural heritage, might be chosen, it being understood that the necessary financing should be covered by an allocation from the Fund.

On comparing the results achieved by the two methods of action, the Committee would then decide on the approach to be adopted. The Secretariat wishes to point out however that the second approach would be likely to meet

with difficulties of implementation in regions where there does not exist a structure similar to the aforementioned UNDP/Unesco project, as the dispatch of systematic missions would represent a substantial investment for the Fund and an additional and not inconsiderable work-load for the Secretariat.