

CROATIA

War Damage to Cultural Monuments in Croatia

Between 1991 and 1995, paramilitary Chetnik units and the Yugoslav Army destroyed Croatian historical buildings of all types – not even graveyards were spared. This destruction was undertaken without military necessity, but rather with the aim of destroying a culture, a people and their continuity in a large segment of the territory of the Republic of Croatia. During 1991 and 1992 the historical centres of towns and villages, which had no military units or strategic assets or targets, were shelled or mined over many months.

From the beginning of aggression, the Institute for the Protection of Cultural Monuments of the Ministry of Education and Culture undertook measures laid-out in the *Hague Convention of 1954 for the Protection of Cultural Assets in the Event of Armed Conflict*. In line with the Convention and the directives of the Minister of Education and Culture, the technical protection of the most valuable monuments in threatened areas was carried out. Protective scaffolding, boards and sandbags were successfully used in many cases to protect richly decorated façades of historical buildings. A large part of the moveable historical and cultural heritage from churches, monasteries, museums, galleries and private collections was evacuated and stored in safe locations.

Appeals to commanders of the Yugoslav Army, to treat cultural monuments in accordance with the provisions of the Hague Convention of 1954, fell on deaf ears. What is more, the actions of Serb paramilitary forces and the Yugoslav Army intensified towards the end of 1991 and resulted in the siege of Dubrovnik and the tragedy of Vukovar.

Monument Registration & the Determination of War Damage

Due to the increasing scope of damage, the Service for the Protection of Cultural Monuments began to systematically register monuments in the summer of 1991. Reports of damage were sent to respective ministries, information services and daily papers. Translated into English, they were forwarded to numerous bodies, including UNESCO, the Council of Europe and other international institutions and organisations. The Minister of Education and Culture and a number of cultural and public figures sent appeals to Federic Mayor, the UNESCO Director-General.

In autumn 1991 the Ministry of Finance had already begun to prepare the legal and professional foundations for the determination of war damage. As a result of timely co-operation with those concerned with the protection of cultural monuments, regulations for the methods and procedures to determine war damage included a number of provisions important for future work on registering and estimating war damage to cultural monuments. These included the formation of the Special Central Commission for Registering and Estimating War Damage to Cultural Monuments; the possibility to elaborate the specific typology of architectural elements and complexes; and provisions that excluded depreciation from the calculation of war damage to cultural monuments.

A Group of Experts was formed in January 1992 at the Institute for the Protection of Cultural Monuments. In line with the new regulations concerning the determination of war damage, the Group was charged with elaborating a method to register and estimate war damage to cultural monuments. The starting point was an already established process, developed and used in the registra-



Čilipi, damaged sculpture of the Mother of God

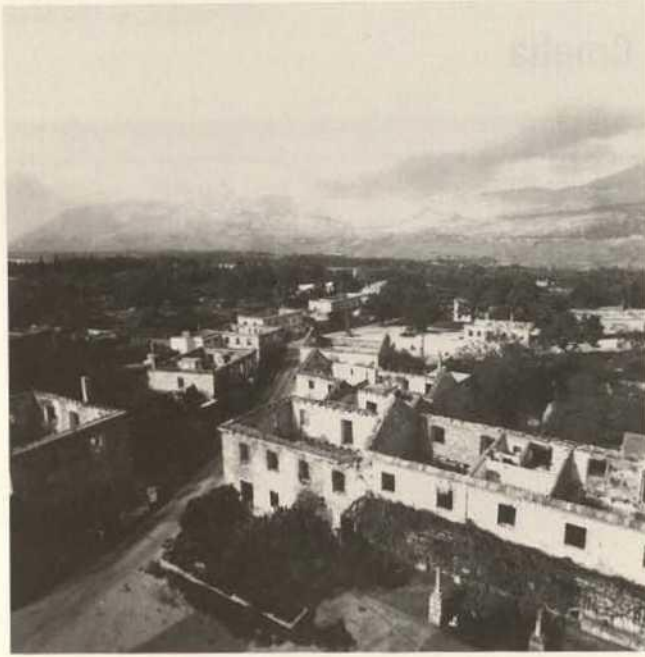
tion and estimation of earthquake damage to cultural monuments between 1979 and 1986. Guided by the Directions for the Implementation of the Act Concerning the Determination of War Damage, certain terms were defined and a determination was made to implement documents mandated in the Directions. In addition, objective parameters for determining the actual amount of war damage were identified, relating to the cost of repair or reconstruction of individual damaged parts of cultural monuments or whole monuments. Special consideration was given to the definition of the amount of war damage as the cost required to return a cultural monument to the condition it was in prior to damage.

It was also necessary to determine the way in which the register and estimate of war damage to cultural monuments differed from the estimate of war damage to other structures, and to precisely define these differences. This was achieved by:

- adapting existing nomenclature of assets and goods to the demands of the *classification of cultural monuments*;
- defining the *categories of cultural monuments*;
- adapting the *categorisation (degree) of damage*;
- adapting the implementation of the '*Standard calculations in construction work*';
- determining the parameters for the *estimate of damage of architectural decorative elements*;
- adapting the *methods of estimates* set out in the Directions.

Process & Organisation

During the registration and estimation of war damage to cultural monuments, the expert commissions applied all three methods set-out in the Directions decreed by the Minister of Finance: the *cost estimate* (elaborating the cost estimate description of the required



Čilipi, burned-out houses

work with amount and prices); *the calculation of complex elements* (using a specially developed modelling of basic construction elements of historical buildings that had, with the approval of the State Commission for Determining War Damage, replaced the 'Standard calculations in construction work'); and *global calculation*, which was used in calculating damage to totally destroyed cultural monuments. However, the listing and estimate of war damage to immovable cultural monuments were mainly carried out using the calculation of complex elements. This was because the cost estimate, which would have been more precise, could not be used due to the multitude of damaged buildings and the large territory that had to be covered.

The listing and the estimates of war damage to cultural monuments were recorded on forms authorised under the Directions for the Implementation of the Act Concerning the Determination of War Damage: forms Š-05 and Š-06 for immovable cultural monuments and movable monuments respectively. Form Š-05 was also used for archaeological sites. The documentation consisted of the basic form (an adapted form Š-01, obligatory for the registering and estimate of war damage on all buildings) and an additional set of forms for a more detailed recording of a historical building or a moveable cultural monument. The more extensive documentation included a scale drawing, photographs, a list of identifying data, a description of the damage and a proposed programme or methods and procedures for restoration.

In order to organise the work to register and estimate war damage, the territory of the Republic of Croatia was divided into seven historical regions with centres in Osijek, Daruvar, Zagreb, Senj, Zadar, Split and Dubrovnik. This was done so as to equally distribute the work by commissions and to ensure the best possible seats for registration areas with respect to institutions responsible for the protection of cultural monuments. These institutions were obliged to ensure the necessary organisational and professional conditions for the task.

The registration and estimation of war damage was undertaken by professional commissions consisting of three members, mainly conservation professionals – employees of institutes for the protection of cultural monuments. As a rule the team included an architect, a construction engineer and an art historian. These com-

missions brought together 120 professionals who, along with their regular work in their home institutions, carried out an exceptionally hard and frequently dangerous task of surveying damaged and destroyed remains. All the professional and organisational preparations for registering and estimating war damage to cultural monuments, including the control of the methods used, were completed during spring 1993. However, the systematic and continued work to achieve the task began in late 1993 or early 1994, after all the material and organisational conditions for the expert commissions were put in place.

Those parts of the Republic of Croatia that were accessible before June or August 1995 were covered by 30 June 1994, and the final treatment and verification were completed by December 1995. The areas involved were the Zagreb, Bjelovar-Bilogora, Lika-Senj, Virovitica-Podravina, Požega-Slavonia and the Dubrovnik-Neretva counties, as well as the accessible parts of the Sisak-Moslavina, Karlovac, Brod-Posavina, Zadar-Knin, Osijek-Baranja, Šibenik, Vukovar-Srijem and the Split-Dalmatian counties. More than 2000 historical buildings were surveyed, and war damage was assessed on 1862 immovable cultural monuments. War damage totalling 935,316,000 kunas (259,810,000 DEM) was determined across a total area of 1,535,173 square metres of cultural monuments that had been either damaged or destroyed.

The areas liberated in the police and military operations 'Lightning' and 'Storm' (the temporarily occupied areas of the Republic of Croatia – parts of the Sisak-Moslavina, Karlovac, Brod-Posavina, Zadar-Knin and Šibenik counties) were surveyed in autumn 1995 and during 1996, while the final treatment and verification of data was completed at the end of May 1997. More than 500 historical buildings were surveyed in these areas and war damage was determined on 398 immovable cultural monuments. The total area of cultural monuments that were either damaged or destroyed was found to be 181,485 square metres, and the damage amounted to 445,812,686 kunas (123,836,857.14 DEM).

A preliminary survey of the Podunavlje region was undertaken by conservation experts in July 1997, after many months of negotiations with the UNTAES authorities. However, because of difficulties in obtaining permits for the movement of expert commissions, the registration and estimation of war damage to cultural monuments in this region were carried out as late as October and November the same year. The processing of the data was finalised during December 1997 and early 1998. More than 300 historical buildings were surveyed in this region and war damage was determined on 201 immovable cultural monuments. The effects of devastation during war operations were determined on a total area of 142,511 square metres of cultural monuments that were either damaged or destroyed. The war damage was estimated to amount to 523,271,829 kunas (145,353,285.71 DEM).

Damage Categories

As part of the estimation process, buildings were identified and classified in terms of damage categories.

Category 1

The building was not directly hit by an explosive missile. The fronts have been damaged superficially by shrapnel or light weapons bullets. Window-panes have been broken up to 50% of the total surface. The coverings have been partially damaged and scattered. The primary elements' joinery has sustained some minor damage. The building equipment has been only slightly damaged.

Both the building and its equipment may continue to be used with some minor essential repairs.

Category 2

The building roof or wall was hit by a small calibre explosive missile, whereas several explosive devices exploded in the surroundings. There is considerable damage of the fronts, all the window-panes were broken and the primary elements' joinery is partially damaged. There is light damage of the roof structure, the covering is considerably damaged, as well as the chimneys. There is local damage of the ceiling structure (penetration) or of the front (hole) that may easily be repaired. Interior ceiling and wall plaster has been damaged to a smaller extent or has fallen off. Partitions have been more severely damaged in some places. There has been more considerable damage of the building's ornamental elements, as well as of its equipment. The building's load-bearing structure system has not been damaged i.e. has been damaged only slightly and superficially. The building may be used after primary and secondary elements' repairs. Restoration works may be performed based on the works' description.

Category 3

The building was hit by a larger calibre missile or by several hits, or has been partially put out of use by mining. The roof structure has been partially caved in, whereas the covering has been destroyed almost completely. Fronts, ceilings and vaults have been penetrated in several places, but there are no major permanent deformations of the load-bearing structure. Partitions have been partially demolished or heavily damaged. The building's equipment has been partially destroyed. The building's load-bearing structure has sustained some lighter damage; there are small crevices in the monolithic ceilings, vaults, arches and walls in the vicinity of the penetration spot. Approximately 70% of primary elements have been preserved. The primary elements' joinery has been severely damaged, with door-posts and window frames partially knocked out. Both interior and exterior architectural features have been severely damaged. There was no fire. Before starting the remedial works, structural remedial designs and restoration work designs must be elaborated.

Category 4

The building was hit by a larger calibre missile or by several hits, or has been put out of use by mining. The fire was brought under control and put out on time. The roof has been demolished and the covering destroyed. Fronts and ceilings are severely damaged in several places, with the appearance of deformations that do not

threaten the stability of the whole yet. A part of the wooden ceilings has caved in. Partitions have been demolished. The building's equipment has been destroyed almost entirely. The primary elements' joinery has been destroyed. Parts of architectural features on the fronts have been severely damaged, whereas, inside, all kinds of wall finishes and ornaments have been destroyed. The building's structural system has sustained severe damage that may still be repaired. About 50% of the building's primary elements have been preserved. In order to perform the remedial works, it is necessary to elaborate the entire design documentation, including the restoration works' design, based on the existing state assessment.

Category 5

The building was hit by one or more large calibre missiles or was mined. The load-bearing structure has sustained severe damage that may still be repaired, but parts of demolished structure need to be replaced or rebuilt. The fire was not put under control on time and the roof covering burnt down, whereas a part of the ceiling has sustained severe damage. The fire has not severely damaged the load-bearing walls, however. Fronts, load-bearing walls, ceilings, vaults and arches have been damaged in several spots, with deformations occurring that do not threaten the stability of the whole. Partitions have been demolished. The building's equipment has been destroyed. About 30% of the primary elements have been preserved. The building may be reconstructed according to the project documentation to be elaborated on the basis of the existing state assessment or according to the reconstruction designs to be elaborated based on investigative work.

Category 6

The building was hit by a large calibre missile, demolished by several hits or destroyed by mining. The fire was not put under control on time and the wooden structures burnt down. The entire equipment was destroyed. Less than 10% of the primary elements have been preserved. The building facsimile may either be reconstructed on the substructure, according to designs to be elaborated based on documentation preserved, or there is no possibility for the building to be reconstructed.

Results

An estimate of war damage to cultural monuments across the Republic of Croatia (listed by type of monument and category of damage) is summarised in the table below.

Type of monument	Number of damaged monuments/category of damage						Σ	Area sq. m	War damage in kunas
	1	2	3	4	5	6			
Historical-memorial	4	4	3	0	1	3	15	32,501	12,888,514.28
Civilian	405	564	458	117	176	39	1759	1,342,325	1,099,481,142.85
Military/defensive	12	23	20	4	1	0	60	161,120	69,453,771.44
Economic	6	14	11	13	8	9	61	42,701	35,980,457.14
Religious	88	78	101	64	83	81	495	259,060	680,666,914.28
Graveyards, graves	3	3	2	3	2	2	15	1,376	4,377,085.72
Urban elements	6	4	5	0	1	2	18	20,086	1,552,628.57
TOTAL	524	690	600	201	272	136	2423	1,859,169	1,904,400,514.28



Karlovac-Kamensko, sanctuary of the church of St Mary of the Snow

Most of the damaged cultural monuments are located in the Dubrovnik-Neretva County (683 cultural monuments, most of them in the area of the historical urban site of the City of Dubrovnik, which is inscribed on the World Heritage List) and in the region of the Osijek-Baranja County (356 cultural monuments, most of them in the historical urban sites in Osijek: Tvrdá, The Lower and Upper Town). However, with respect to the severity of the damage (most category 4 and category 5 damage), the number of destroyed historical buildings (21 completely destroyed and 50 partly demolished) and the amount of war damage, the historical centre of Vukovar (see also *H@R Report 2000*) tragically appears at the top of the list.

Civilian buildings that are cultural monuments suffered the greatest amount of damage in this war: of the total number of damaged buildings (1759), most are located in historical urban centres, and war damage on cultural monuments in these centres amounts to almost three-quarters of the total war damage on immovable cultural monuments (72.59%).

Religious cultural monuments (churches and monasteries) are second on the list of damaged cultural monuments (one-fifth of the total number of damaged/destroyed cultural monuments), and those most frequently targeted by mining and arson were buildings associated with the Roman Catholic community. Greatest damage was done to those on occupied territories, where almost all religious buildings of the Roman Catholic community suffered heavy damage or were completely destroyed. In most cases damage was caused by explosives or fire. We should note that these areas (primarily parts of the Zadar-Knin and the Šibenik counties) hold the greatest number of mediaeval early Romanesque and Romanesque buildings characteristic of the earliest period of Croatian history.

Since the total number of registered and protected immovable cultural monuments in the Republic of Croatia amounts to 5926 monuments, we can conclude that some 37% of the total number

of monuments suffered at least some damage. When we consider the fact that the buildings in categories 5 and 6 were heavily damaged or destroyed, and consequently now lack architectural integrity, this means that almost 7% of the total number of immovable cultural monuments in the Republic of Croatia was destroyed during the Patriotic War between 1991 and 1995.

Movable Cultural Property

The registration and estimation of war damage to immovable cultural monuments were carried out using a method that was entirely adapted to the types of material, as well as conforming to the Directions Concerning the Act on Determining War Damage to Cultural Monuments in the Republic of Croatia. However, in order to adhere to the priorities determined for registering and estimating war damage on immovable cultural monuments, and with respect to both the great number of items that had to be covered and the lack of professional staff, the registration of damage to movable cultural monuments could not be undertaken at the same time as work on immovable cultural monuments. For this reason, at the time of writing this report, we still have no complete data with respect to the war damage inflicted on movable cultural monuments.

Any approach to movable cultural monuments needs to keep in mind the great number of evacuated monuments and works of art that were already in poor condition before the war, while some were damaged during and after evacuation because of inadequate conditions in improvised storerooms (over 3000 objects, not counting archives and library holdings in north-west Croatia and a part of Slavonia). In addition, there was the major task of estimating numerous objects on the inventories of religious buildings that



Vukovar, the Etlz manor

were plundered or destroyed, a fate also suffered by the buildings in which they were kept. Because only a small number of these inventories are kept in official records, their 'reconstruction' requires comprehensive research. Finally, the registration and estimation of war damage to museum, archives and library holdings also needs to be undertaken.

The special commission for registering and estimating war damage to cultural monuments left the registration of museum, archives and library holdings to corresponding central institutions (the Museum Documentation Centre, the Croatian State Archives and the National and University Library). The registering and estimating of war damage to evacuated movable cultural monuments and those that went missing or were destroyed in the occupied territories were tasks given to expert commissions, in co-operation with the relevant institutions for the protection of cultural monuments.

At the time of writing this report, the fieldwork to collect data on the damage has been completed. The documentation of the region of Banovina (in the Sisak-Moslavina County) has been completely processed, and work has started to process the docu-

mentation for the region of the Zadar-Knin Šibenik and Dubrovnik-Neretva counties. Expert commissions have also registered and estimated war damage to evacuated holdings that were stored under the supervision of the Administration for the Protection of the Cultural Heritage, and we expect corresponding reports from conservation departments around the country.

War damage to archives and registry holdings has also been listed (402 archive holdings with a total length of over 37,000 metres have been destroyed).

We also know the damage done to museum holdings, but it has not yet been estimated: according to data collected by the Museum Documentation Centre, museum holdings in 45 museums and museum collections have been damaged, 6551 museum objects are missing, 1410 objects have been destroyed and 728 objects have been damaged.

Numerous library buildings have been destroyed and their holdings burned. In monasteries, such as the Franciscan monasteries in Karin, Hrvatska Kostajnica, Hrvatski Čuntič and the Pauline monastery in Kamensko near Karlovac, library holdings have been destroyed or damaged.

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