GEORGIA Natural Disaster and Heritage

Due to the peculiarities of its geographical location, Georgia faces a permanent risk of diverse natural disasters (earthquakes, avalanches, floods). However, the scale of these disasters had never been catastrophic for the country, because traditional risk management proved able to handle the problem and keep the situation under control. Well known socio-political changes in the region, however, have also affected Georgia and created many breaches, including those in the conservation field. That is why, at present, any natural disaster is far more harmful and painful than it used to be in the past. This equally applies to a lack of preparedness, and to a stagnation in ordinary preservation activities — both are preconditions for vaster destruction as a result of natural disasters, than it might have been under different conditions.

Case Study 1: Tbilisi Historic District

Earthquake Results

On 25 April 2002 a level-6 earthquake hit Tbilisi, capital of Georgia. The results of the earthquake were tragic – 6 persons died, and around 60 persons were injured. The earthquake caused serious damage to a large number of buildings in the city. Tbilisi Historic District, nominated for inclusion on the World Heritage List, also suffered greatly from the disaster. As shown in *Heritage at Risk* 2001/2002, the urban fabric within Tbilisi Historic District lacked regular maintenance for several decades and, as a result, was already seriously endangered before the earthquake. This was again confirmed by the decision of the Bureau of the World Heritage Committee, which recognised the Outstanding Universal Value of the site but recommended the deferral of the nomination, subject to the establishment of an appropriate legal framework, management structures and guidelines for rehabilitation (ref.: WHC-01/CONF.207/INF.3).

It is noteworthy that not a single building within the boundaries of the Historic District collapsed. However, the vulnerability of the buildings increased, and a large part of the residential houses became unsafe for living. The situation was aggravated by unceasing after-shocks and continuous heavy rains, which had a negative impact on the state of the cracks and the damaged roofing. This resulted in the collapse of two buildings and the failure of separate parts of several buildings within the Historic District, over a fortnight after the earthquake. In general, the character of damages can be classified as follows:

- · uneven subsidence of the foundations;
- subsidence of the floors in the basements; in fact, already damaged outdated underground water-supply pipelines received additional damage as a result of the earthquake, causing flooding of already damp basements;
- cracking of the brick arches in the basements, creating a danger of their further collapse;
- cracking and tilting of the supporting walls,
- disintegration of the structural unity of the buildings;
- collapse of separate parts of the buildings;
- · collapse of the parapets;
- loss of façade decoration elements mouldings, cornices, stucco decoration elements, wooden open-work decoration details, metalwork elements, etc.;
- damage to the roofing.



Earthquake damage in Tbilisi Historic district
Residential house in Kvemo Kala micro-quarter after the earthquake

Parapet of a residential house (in Sololaki quarter) damaged by the earth-



Emergency Response

Immediately after the earthquake, an Extraordinary Committee for Resolving Disaster Results was formed at the State Minister's office. The Extraordinary Committee at the City Municipality had established the 'Tbilisi Revival Foundation' in order to accumulate funds for emergency response. Apart from this, Georgian businessmen launched their own emergency assistance programmes to provide aid to the population. An Extraordinary Committee formed at the Ministry of Urbanisation and Construction mobilised professionals for damage assessment in the city. However, lack of an overall disaster preparedness plan and, particularly, absence of a risk preparedness plan for cultural heritage, caused a serious failure in the co-ordination of actions, leading to spontaneous activity and the creation of tensions between conservation agencies, public organisations and the State authorities. The tension was preconditioned by irresponsible statements and actions made by the city authorities in regard to the rapid-needs response, ignoring the interests of cultural heritage. The danger of uncontrolled and inappropriate interventions (improper cleansing, demolition, etc.) became obvious.

The local conservation community had to expend serious efforts to prevent uncontrolled and harmful development in the post-disaster response. The processes were considerably influenced by an active public movement to safeguard the Tbilisi Historic District. During this period, a public Supervisory Council was formed uniting several NGOs: ICOMOS Georgia, Old Tbilisi Union, Laboratory for the Inter-disciplinary Art Research, Georgian Art Nouveau Group, Centre for Urban Development. The Council is focused on monitoring disaster response actions.

More than one appeal was drafted and sent to both the local authorities and to the international conservation community. As a result, the State Minister of Georgia issued a special decree stipulating a moratorium on any demolition within the Historic District,



Damaged listed building on the Liberty Square destined for demolition by the city authorities

Exterior decoration of residential house (in Sololaki quarter) damaged by the earthquake.



Entrance of residential house (in Sololaki quarter) after the earthquake





Residental buildings after the earthquake



Residential house in Kvemo Kala micro-quarter. Emergency stabilisation after the earthquake





until the damage assessment is done and a comprehensive disaster response plan is elaborated.

The Extraordinary Committee established soon after the disaster within the Cultural Heritage Protection Department mobilised all available volunteer human resources in the field, created an emergency response action plan and started damage assessment and photo-recording within the Historic District. After the elaboration of a questionnaire for damage assessment and agreement on the criteria, methodological principles and so on, several groups started field work on 28 April 2002. To date 823 buildings have been assessed and recorded; among them 765 are residential houses, 6 schools, 2 kindergartens, 9 religious structures, 48 public buildings, 3 health care facilities. Based on the analysis of the data, entire assessed buildings were classified according to the character and extent of damages. A total of 457 buildings face imminent danger of collapse or falling down of separate parts.

At present the situation is critical and, without undertaking emergency stabilisation actions, it will accelerate and cause irreversible losses.

To date, despite all efforts, funds raised locally for the emergency response do not exceed approximately 5 million GEL (US\$2.5 million), while the Earthquake Response State Programme, which was presented to the donor community in Tbilisi on 13 June, estimates US\$120 million as the total amount needed to cover earthquake response actions. Against this background, the Cultural Heritage Protection Department managed to obtain limited funding from the Ministry of Culture of Georgia totalling 6,000.00 GEL (US\$3,000.00) for the emergency stabilisation works. The four most endangered buildings, needing small-scale interventions, were selected for the works to be covered by this limited funding.

International Response

Apart from the efforts on the local level, considerable impact on the development of the situation was provided by a rapid international response.

The Cultural Heritage Protection Department appealed to the World Heritage Centre and ICCROM for assistance. In response to these appeals, Mr. Ray Bondin, a member of the ICCROM Council and ICOMOS Executive Council, visited Georgia with an expert mission on 16–19 May 2002 to evaluate the scale of damage and identify priorities for assistance. The World Heritage Centre suggested that the State Party submit a request for Emergency Assistance. A proposal was sent to the World Heritage Centre, focusing on remedial measures identified in accordance with the character and extent of damages. It was decided to concentrate emergency response in two major directions: 1. immediate emergency stabilisation; 2. preparation of an emergency management plan, which will be further developed as a long-term programme for the elaboration of an adequate master plan and management structure of the Tbilisi Historic District.

ICOMOS Georgia appealed to ICOMOS International and the UNESCO Cultural Heritage Division for assistance.

On 5–7 June 2002, Mr. Jose Maria Balester, Head of the Cultural Heritage Division of the Council of Europe visited Tbilisi with a mission to evaluate the situation and identify possible CoE involvement.

ICOMOS Georgia and the UNESCO Cultural Heritage Division held a regional workshop 'Cultural Heritage Preservation: Risk Preparedness and Disaster Response' in Tbilisi on 2–10 July 2002. This workshop focused on skills building and elaboration of a proper methodology for post-disaster stabilisation works.

Apart from the technical assistance provided through such wide international intervention, of utmost significance is the political aspect of the international response as a means of putting pressure on the government and an effective way of achieving an adequate State policy. But in order to keep the policy implemented, it is necessary to continue international monitoring of the situation in the Tbilisi Historic District. All the more so as the situation is still critical and needs joint comprehensive efforts of the local and international community to solve extant problems.

ICOMOS Georgia would like to use this opportunity to express its deep gratitude and great appreciation to the ICOMOS community, all international organisations and individuals for their response, support and assistance after the earthquake.

Case Study 2: Kanchaeti Kabeni Church

The church is dated to the 9th–13th centuries and is located in Akhalgori district, village Kanchaeti. In Spring 2002, a series of earthquakes and persistent rains caused severe damage to Kanchaeti Kabeni church – one of the significant domed churches ascribed to the transitional period of mediaeval Georgian architecture and listed as a monument of national significance.

Cultural-historic significance

The 9th-century Kanchaeti Kabeni domed church is one of the most interesting and noteworthy examples of Georgian cultural heritage. Due to its stylistic peculiarities, it is closely linked with monuments of the transitional period in mediaeval Georgian architecture. Literary sources and an inscription on the south exterior

wall of the church provide evidence that erection of this monastery was connected with significant historic and political events.

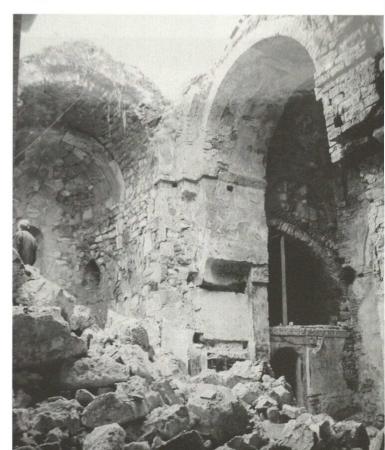
Initial scholarly research of the church was undertaken in 1935, which revealed the existence of stylistically differing building layers. The project report stated that the initial artistic physiognomy of the church was transformed by annexes and repairs dated to diverse periods. The study was unfortunately not completed, needing continuation and cleaning of the site.

In 1952 an in-depth study of the Kanchaeti Kabeni church was conducted by the Institute of History of Georgian Art, based on which stages of the transformations were identified: the initial church was dated to the early 9th century; in the 10th century it was enlarged and an annex was added; in the 12th–13th centuries the church underwent considerable transformation – a projecting new apse was built, cross arms were opened on three sides – thus a totally new inner space was shaped, which was terminated by a dome. Design of the present exterior walls is ascribed to this period proper. A bell-tower built to the north of the church and south annex of the church belong to the later (17th century) building period.

Based on the research, the plan and fragments of the initial domed church were distinctly identified. This made it possible to make a graphical reconstruction of the 9th-century church, displaying its high artistic value, the perfection of architectural forms and the striving for innovations characteristic of the epoch.

It is noteworthy that the interior of the church was adorned with mural painting. Murals and old inscriptions are preserved in fragments, being liable to conservation.

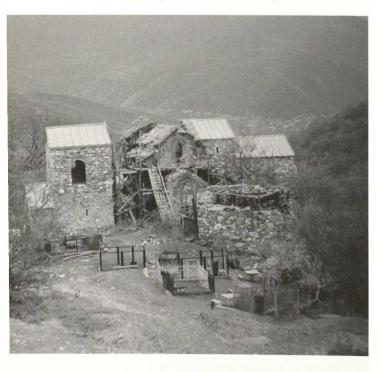
Kanchaeti Kabeni Church, general view of the church interior after the Earthquake





Kanchaeti Kabeni Church, general view before the earthquake

Kanchaeti Kabeni Church, general view after the earthquake



Damage of the Site

Kanchaeti Kabeni church was in an extremely endangered and vulnerable state, even before the earthquake.

In 1986-1988, conservation works were undertaken with State financing, but soon stopped due to economic difficulties. The most important stabilisation and conservation works were not carried out; as a result the endangered state of the site was exacerbated and the church faced the danger of collapse.

The north cross-arm of the church was extremely damaged: its vault and roofing constructions collapsed. As a result, the 13thcentury north wall was left without an adjusted wall. The site, left unmaintained for decades, was progressively deteriorating and heavy rainfalls preceding the earthquake caused the total collapse of its dome, which, in its own turn, caused destruction of the north wall. Fragments of the mural painting (13th century) in the dome vanished. At present the situation is as follows: the structural integrity of the site is violated; roofing is damaged; due to penetration of sediments, the south cross-arm is seriously endangered; fragments of the 13th-century murals still preserved in this part of the church are in danger of vanishing.

Similar to the case of the Tbilisi Historic District, although the Kanchaeti Kabeni church was ruined as a result of a natural disaster, it actually fell victim to the weakness of the institutional and administrative structure of the heritage preservation field in Georgia. Here again, lack of risk preparedness planning and a management network, and absence of everyday maintenance, resulted in the loss of one of the distinguished properties of Georgian cultural heritage. This background also creates problems in obtaining sufficient funds for the safeguarding and reconstruction of the site. Regretfully, similar cases may repeatedly occur in future, if institutional development of the entire field is not undertaken.

Emergency Response

As an emergency response, the Cultural Heritage Protection Department of Georgia has allocated US\$8,500 for immediate actions on the site - cleaning, sorting fallen stones, and arrangement of temporary wooden scaffolding in the preserved parts of the building (cross arms).

The Patriarchate of Georgia has allocated US\$4,000 for the safeguarding of mural painting fragments, which was directed towards cleaning and recording the fallen parts of murals, and cleaning and stabilisation of the fragments preserved on the walls.

At present the issue of further actions is under consideration whether to remove fragments of murals preserved in the most endangered south cross arm, in case no further funding is obtained to secure the roofing and ensure protection of the murals from the sediments, or to preserve and stabilise them in situ, if proper protection is secured.

> Nato Tsintsabadze, Dr. Marine Kenia, Maya Foty (US/ICOMOS Summer Intern to Georgia) ICOMOS Georgia