

ARCHAEOLOGY
WORLDWIDE
SPECIAL EDITION



WORLD HERITAGE

SCIENCE AND BASIC RESEARCH



++ Global +++ World Heritage List ++++
+++ Capacity Building +++ Tourism ++++
Dialogue +++ World Heritage Convention



CONTENT



Today the temples are one of the most important tourist attractions of Egypt.
Photo: Wikimedia Commons



Photo: Kuckertz

DEAR READERS,

1.007 monuments in 161 countries of the world enjoy special protection. They form part of the heritage of humankind, as recorded on the UNESCO World Heritage List. As such they are also part of a grand idea that is shared and supported by nearly every state in the world.

Many of these sites would literally never have seen the light of day nor taken a place in public consciousness if archaeologists had not excavated and investigated them. It was only thanks to this that their significance was recognized – their significance for the culture they came from, but also as globally shared heritage, a common legacy, and a common imperative to respect the achievements of others, whoever they may be.

The German Archaeological Institute (DAI) is an internationally active scientific institute which contributes – through research on already known and as yet undiscovered world heritage – to the safeguarding and protection of that heritage. On the occasion of the 39th Session of the UNESCO World Heritage Committee from 28 June to 8 July 2015 in Bonn, we would like to highlight the far-reaching connections between archaeological research and the work of the World Heritage Committee. Citing specific DAI projects at archaeological sites, we will briefly describe the various steps from initial investigation to ultimate inscription on the World Heritage List – and the obligations that ensue from it.

Prof. Dr. Dr. h.c. Friederike Fless

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INTRODUCTION



Piece by piece the temples of Abu Simbel are moved to higher ground.
Photo: Olow, Wikimedia Commons

THE LEGACY OF ABU SIMBEL AND THE BIRTH OF AN IDEA



UNESCO headquarters in Paris
Photo: Lancaster



It was a last-minute rescue operation. The UNESCO appealed to the world for help. The monumental temple at Abu Simbel, more than 3,000 years old, was going to be submerged by the newly created Aswan Dam and lost for ever. The temple of Pharaoh Ramses II had been cut into the rock on the west bank of the Nile, and extended nearly 60 metres deep into the sandstone.

Gamal Abdel Nasser, Egyptian president since 1952, had decided to dam the Nile south of Aswan to create a vast drinking water reservoir. In 1959, Egypt asked UNESCO for assistance, and one year later the UNESCO Director-General, Vittorino Veronese, uttered the words that ever since have formed the essence of the definition of what world heritage is: "These monuments [...] do not belong solely to the countries who hold them in trust. The whole world has the right to see them endure."

In a passionately worded appeal, Veronese called on the governments of the world, as well as institutions and foundations and all people of good will, to join in the task of saving the ancient Egyptian complex.

The two temples at Abu Simbel were then moved to a new site in a multinational collaborative project involving 50 countries. The project lasted from November 1963 to September 1968 and by the end the costs had amounted to about 80 million dollars.

UNESCO's salvage plan envisaged moving the temple of Ramses II to a safe location. An international consortium under the direction of the German construction company Hochtief was charged with the technical realization of the project. In the end a Swedish scheme was selected, which proposed that the temples should be cut into blocks, dismantled and then reassembled piece by piece – 64 metres higher up and 180 metres further inland. In this way 1,036 blocks weighing up to 30 tons were moved. Italian specialists with experience in marble working were engaged for the dissection of the Ramses statues. 2,000 workers, craftsmen, engineers, archaeologists and other experts from all round the world worked together to rescue what was viewed, for the first time, as the shared heritage of humankind.



Photo: NASA

The lesson had been learnt, from the experience of the Second World War, that “a peace based exclusively upon the political and economic arrangements of governments would not be a peace which could secure the unanimous, lasting and sincere support of the people of the world, and that the peace must therefore be founded, if it is not to fail, upon the intellectual and moral solidarity of mankind” – as the UNESCO Constitution, signed on 16 November 1945, declares. The newly founded organization had the mission of contributing to peace and security by promoting international collaboration through education, science, culture and communication. The Federal Republic of Germany joined the organization on 11 July 1951, the German Democratic Republic in 1972. On 16 November 1972, UNESCO adopted the Convention concerning the Protection of the World Cultural and Natural Heritage. The central idea of the World Heritage Convention is that “parts of the cultural or natural heritage are of outstanding interest and therefore need to be preserved as part of the world heritage of mankind as a whole”. It is the most significant instrument created by the international community for the purpose of protecting its cultural and natural heritage. To date, the convention has been ratified by 190 states. The UNESCO World Heritage List was established in 1978, and the Abu Simbel temples were inscribed as the very first world cultural heritage site in 1979. As of 2014, the list includes 1,007 cultural and natural monuments in 161 states that are party to the convention.

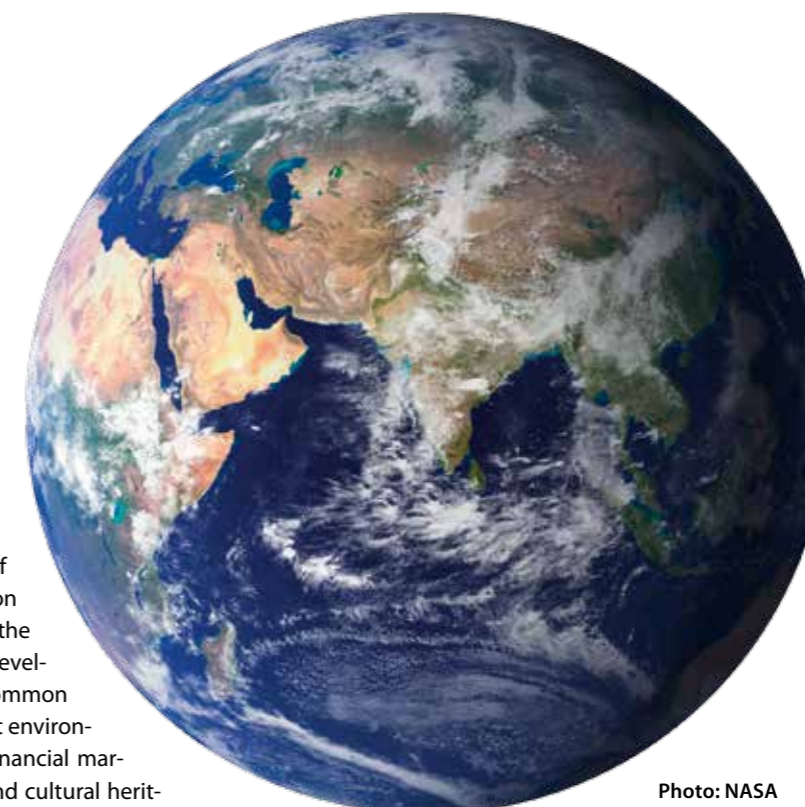


Photo: NASA

GLOBAL COMMON GOODS

The world heritage idea is part of the concept of “global common goods” that was introduced in the 1960s by the United Nations Development Programme. These common goods include a clean and intact environment, a stable climate, stable financial markets, peace, security, health – and cultural heritage.

The protection of cultural and natural treasures as “world heritage” had the aim of creating a global knowledge reservoir of all cultural accomplishments and all life on Earth and making this knowledge available to everybody as a resource.



The questions and hence the methods of archaeology are so complex that they can only be answered if multiple disciplines work together. The humanities, the social and the natural sciences collectively examine human objects and ideas from the past, and reconstruct ancient cultural landscapes and their climate to arrive at a detailed picture of the societies of the ancient world, their cultural heritage and diverse narratives.

Photos: DAI



Photo: Köhler/photothek.net

THE SCIENCE THAT DEALS WITH MANKIND'S CULTURAL HERITAGE

The cultural knowledge of the ancient world, as one of the foundations of the world we live in today, manifests itself in countless traces and signs, in material and intangible remains, in cultural landscapes and interventions in the natural environment, in written documents and in narratives that have been carried on over centuries or even millennia. Discovering all this, reading and interpreting it, is the task of archaeology.

The questions and consequently the methods of archaeology have become so complex in the course of time that most of them can only be answered if a number of different disciplines work on them together. The humanities, the social and the natural sciences collaborate in the investigation of what humans have left behind in the way of objects and ideas; and in reconstructing ancient cultural landscapes and their climate they arrive at a detailed picture of the societies of the ancient world, their cultural heritage and the diverse narrative strands that, despite some discontinuities or later superimpositions, continue to have an influence, either open or unseen, in the present day.

“Cultural heritage protection that is truly contemporary also means making that heritage available for use once again in the countries where it originated, and doing so by means of joint research, joint cultural education programmes and joint museum work.

In these areas, the German Archaeological Institute, as the Federal Foreign Office's research facility, is setting standards internationally and has outstanding partners such as the Prussian Cultural Heritage Foundation and other German museums. Together we are going to set up an Archaeological Heritage Network that pools this expertise and puts it to use in addressing current issues such as the sustainable use of natural resources – via cultural education, joint excavation and restoration projects as well as scientific evaluation – and moreover ensures one thing above all: access to the world's cultural heritage here in Berlin and collaboration in enhancing global knowledge.”

Foreign Minister Dr. Frank-Walter Steinmeier in the Frankfurter Allgemeine Zeitung, 15 May 2015

This basic research is the foundation for the preservation of humanity's cultural heritage as a common good, and in the spirit of the UNESCO convention and in the framework of the UN development programme it is the precondition for trust in international collaborative work.

The scientific and cultural expertise of the staff of the German Archaeological Institute, with their many years of experience gained on sites around the world and with excellent partnerships in the Institute's host countries, contributes towards that in over 300 research projects worldwide.

THE LONG LINES

“Only when we know and acknowledge the dreams - and above all, the traumas! - that determine how others think and feel, when we know which historic narratives influence today's answers, only then do we learn how to see through the eyes of the other. And often it is only then that we are able to see more clearly through our own eyes,” said Foreign Minister Frank-Walter Steinmeier in a speech at the Goethe-Institut conference Dialogue and the Experience of the Other, held in February 2015.

Nubia, the ancient Kingdom of Kush, lies on both sides of the Nile. It was and remains the interface between Egypt and thus the Mediterranean world on the one hand and the African continent on the other. It has often been fought over and exposed to conflicting political influences.

Today Lower Nubia, between the 1st and 2nd Nile cataract, belongs to Egypt; Upper Nubia, to the south, lies in Sudan. When the high dam was built, the inhabitants of Lower Nubia were resettled. They are a minority in Egypt, and their ancient cultural region has been completely submerged. Archaeologists today don't only investigate the material remains of Pharaonic Egypt, like the temples of Abu Simbel or the pyramids of the Kingdom of Kush in Meroe. They also look at the social developments and processes of transformation that occur over very long periods and in some cases are still ongoing today – for example at the border of Egypt and Nubia. For the Nubians the question of identity is very important. Archaeology can go some way towards answering that question.

“This is why we should develop what one might call cultural intelligence, the ability to understand mindsets, conceptions of history and hopes for the future,” Foreign Minister Steinmeier went on to say. “This perception includes the perspective of the other and thus goes further.”



“Is that Nubian?” – a question that archaeologists of the DAI Cairo Department occasionally get asked while working in Aswan, in the border region between two ancient kingdoms.
Photos: DAI Cairo

DEFINITIONS



The temple city of Angkor, on the UNESCO world cultural heritage list since 1992, is an extraordinary monument to the ancient culture of the Khmer, who lived on the territory of modern-day Cambodia. In 2013, the German Archaeological Institute initiated the founding of the German-Cambodian Conservation School in partnership with the Cologne Institute of Conservation Sciences (CICS) at the Cologne University of Applied Sciences. The Foreign Office supports the restoration and conservation work at Angkor Wat through its Cultural Preservation Programme. Photos: Borgis, HuS

WORLD HERITAGE – FACTS AND FIGURES



UNESCO adopted the Convention concerning the Protection of the World Cultural and Natural Heritage on 16 November 1972. It entered into force in 1975, and the first inscriptions on the World Heritage List followed in 1978. The convention defines cultural and natural heritage in a way that views in its entirety, in its overall context; and it states that it is incumbent on the international community as a whole to take part in protecting world heritage and transmitting it to future generations. In 1982 the Old City of Jerusalem, “in view of the special political situation”, was the first cultural heritage site to be entered on a list of World Heritage in Danger.

To date, the convention has been ratified by 190 states. Each state that is party to the convention recognizes the duty of ensuring protection of world heritage sites within their frontiers and of conserving them for future generations.

On the adoption of the Global Strategy in 1994, the concept of cultural heritage was enlarged, with “cultural landscape” being added as a subcategory of “cultural site”. The UNESCO attaches priority to nominations from countries that don’t yet figure on the World Heritage List. This is because more than half of all world heritage sites formerly lay in Europe and North America. The definition of cultural heritage in Article 1 of the convention reflected the western world’s own definition of itself with reference to cultural heritage in the 1960s. In 1994 the Nara Document on Authenticity, adopted in Nara, Japan, opened the way for the recognition of non-western concepts and techniques of conservation.

The further development of the world heritage idea is also reflected in the membership of the World Heritage Committee. On this body, members from the southern hemisphere are gradually replacing and outnumbering members from the north.

2014: 1.000 SITES UNDER UNESCO PROTECTION

Over 1.000 cultural and natural heritage sites representing all the continents are registered on the UNESCO World Heritage List. Of the 190 States Parties to the UNESCO convention on the protection of cultural and natural heritage, 161 have properties on the World Heritage List. The list of World Heritage in Danger currently numbers 46 world heritage sites, including Everglades National Park in the USA, the tropical rainforests of Sumatra in Indonesia, and the minaret and ruins of Jam in Afghanistan. The UNESCO World Heritage Committee checks every year whether the sites are still in danger.

The World Heritage Committee meets once a year to decide, among other things, on inscriptions on the World Heritage List. Proposals for inscription may only be submitted by member states, which, by doing so, accept responsibility for preservation of the site.

RESPECT FOR SHARED HERITAGE

INTERVIEW WITH MARIA BÖHMER, MINISTER OF STATE AT THE FOREIGN OFFICE



Photo: Blanke, Bundestag

Prof. Dr. Maria Böhmer is Minister of State at the Foreign Office as well as president of the World Heritage Committee and chair of the 39th Session.

On 30 January the Minister of State at the Federal Foreign Office, Maria Böhmer, as President of the UNESCO World Heritage Committee, presented the logo for the committee's forthcoming session. Minister of State Böhmer was elected chairperson of the 39th session of the UNESCO World Heritage Committee during its 38th session, held in Doha (Qatar). She succeeds H.E. Sheika Al Mayassa Bint Hamad Al Thani, who chaired the Doha session.

"The world heritage convention is the best-known UNESCO programme here and throughout the world," the Minister of State said in Doha. "As chairperson of the World Heritage Committee, I will concentrate in particular on sustainable management of world heritage sites and the protection of monuments in danger, with a special focus on Africa."

The next session of the World Heritage Committee will take place in Bonn from 28 June to 8 July. Some 1,200 delegates from all over the world are expected to attend. Germany has hosted a session of the World Heritage Committee once before, 20 years ago. The German UNESCO Commission (DUK) is a cooperation partner of the Foreign Office in the conception, preparation and implementation of the session.

Prior to the World Heritage Committee session a Young Experts Forum will be held. The theme of the 2015 forum is "Towards a Sustainable Management of World Heritage Sites". Young heritage experts from 33 countries from all regions of the world will participate in workshops, a role-playing scenario and practical hands-on preservation work, and in the process deal with world heritage issues that go beyond the scope of their own national and regional experience.

At the coming session, the World Heritage Committee will decide on the inscription of new properties on the UNESCO World Heritage List, review the status of already inscribed sites and of world heritage sites in danger. About 40 properties from all regions of the world have been nominated for the World Heritage List.

The UNESCO World Heritage Committee is the most important body responsible for implementing the world heritage convention. It comprises 21 members, one third of which are newly elected every two years by the General Assembly of the 190 States Parties to the convention. Germany's four-year membership of the World Heritage Committee comes to an end in 2015.



GERMANY 2015
39TH SESSION OF THE WORLD HERITAGE COMMITTEE
39E SESSION DU COMITE DU PATRIMOINE MONDIAL
ALLEMAGNE 2015

World heritage as the „property“ of all of humanity is a fine idea, and one that requires ideal cooperation between the nations. How is this idea of joint ownership to be realized?

The idea is the core of the World Heritage Convention. The convention combines culture and nature protection based on the principle of equality of all cultures, and it declares the world's outstanding sites, irrespective of state borders, to be the heritage of all mankind and of generations to come. The World Heritage Convention has become one of UNESCO's most important instruments. Signed by over 191 states, this programme makes UNESCO's goals particularly visible and helps achieve the organization's purpose „to contribute to peace and security by promoting collaboration among the nations through education, science and culture“. On the 70th anniversary of the foundation of UNESCO, this mission is more relevant than ever and remains a daily challenge in view of crises like those in Iraq and Syria, and natural catastrophes such as in Nepal.

How can international cooperation be made to work in practice given the immense cultural, linguistic, political and religious diversity in the world?

The World Heritage Convention is based on an excellent idea for promoting international cooperation: protecting, preserving and managing cultural assets is not a restrictive requirement imposed by the World Heritage Convention, but rather something that is honoured and made visible for all the world. The World Heritage List has a central function in this. It's the key to the treasure chamber of the planet, to our common resources. When a site is inscribed on the World Heritage List, it becomes part of the heritage of humanity. Everywhere in the world the processes of inheriting and bequeathing are two sides of the same coin, representing an intergenerational contract. An heirloom can only be passed on if it has been well protected, well preserved and well looked after. Awareness of the meaning and value of safe-keeping is what matters most, regardless of scientific approaches and theoretical concepts.

The Foreign Office promotes and calls for cultural preservation as an instrument of foreign cultural and educational policy. How powerful is this „soft“ instrument in the overall context of German foreign policy?

Since 1981, Germany has been supporting the preservation of cultural heritage all round the globe through the Cultural Preservation Programme of the Federal Foreign Office, with the objective of strengthening a sense of national identity in the partner countries and promoting cultural dialogue in a spirit of partnership. In particular, the contribution cultural preservation projects make towards stabilization in crisis states and towards crisis prevention has come to be seen as much more important in recent years. This is because cultural heritage is a key element in societies' historic and cultural image of themselves, and is crucial to a country's national identity. The destruction of cultural assets is the equivalent of the destruction a people's cultural identity. We're in the process of adapting the Cultural Preservation Programme on this point, moving from the „pure“ preservation of cultural assets to preventing, intervening, offering assistance, and sharing responsibility in crisis situations. For this more active role in cultural preservation, an example of best practice is the digital register of cultural assets for Syria. This is being compiled by the German Archaeological Institute together with the Museum of Islamic Art as part of the Cultural Preservation Programme of the Federal Foreign Office. Before this we took on an active role when we saved the Islamic manuscripts of Timbuktu, with the aid of the Cultural Preservation Programme. The valuable manuscripts nearly all fell victim to vandalism by radical Islamist terrorists in Mali in 2012. With generous support from the Gerda Henkel Foundation, we were able to make a decisive contribution to the preservation of this significant cultural heritage through a large-scale rescue operation and an international donors conference hosted by the Foreign Office in June 2014.

The Cultural Preservation Programme of the Federal Foreign Office

Since 1981, the Federal Republic of Germany has, within the scope of the Cultural Preservation Programme of the Federal Foreign Office, been committed to preserving cultural heritage all over the world. The programme thus makes a major contribution to the cultural dialogue between equal partners that is the Federal Republic of Germany's goal. The measures sponsored are intended above all to enhance awareness among the people of the host country of their historical and cultural identity. In this way they can help to develop and preserve historical traditions and cultural values. The programme focuses in particular on the restoration and conservation of historic buildings or objects, the collection and documentation of oral musical and literary traditions and the conservation and digitization of ancient manuscripts. In addition, it provides basic and further training for restorers, archivists and museum experts, as well as machinery and pieces of equipment.

Source: World of Culture – The Cultural Preservation Programme of the Federal Foreign Office

In your view, what role is played by science and research in identifying and defining, and also preserving, world heritage?

Without science and research, many historic sites wouldn't be known to us in the first place. A good example of this is Göbekli Tepe in Turkey. It's only thanks to research over the past 25 years that the 12,000 year old site from the Stone Age has become known among the public at large. The site is older than Stonehenge and the Pyramids of Giza. Dating of the beginning of human civilization now needs to be revised backwards by thousands of years. It is part of mankind's global heritage without any doubt, and the site definitely has a good chance of being added to the World Heritage List. Identification, excavation and research are what reveal historical significance; and scientific expertise is as indispensable for that as it is for the conservation of sites and their presentation in the historically correct context.

The German Archaeological Institute is a scientific institution operating within the area of responsibility of the Foreign Office and is active in a research capacity at a number of world heritage sites. What in your opinion is the place of archaeological research, specifically, in the context of the „fine idea“ of world heritage and its preservation?

In the framework of our foreign cultural and educational policy, the DAI has the advantage of being scientifically focused on the investigation of world heritage sites. This fact gives it the logical credibility to advocate the preserva-

tion of those sites. Particularly when what we're talking about is tangible, ancient world heritage, then it's the work archaeologists do that provides the very basis for our being able to appreciate the importance of the sites. And for that reason I'm so pleased that the DAI is devoting attention increasingly to the question of how archaeological sites with ongoing research projects can be preserved for the future and made accessible to the public in an appropriate manner. Here archaeologists not only have the role of independent researchers but also take on responsibility through their projects. We shouldn't forget that, in assigning archaeological sites, host countries are making a great demonstration of trust.

What specific projects can be cited in this regard?

Apart from Göbekli Tepe there is Pergamon, another of the DAI's long-term excavation projects. The DAI, being a research facility aware of its responsibilities, possesses a wealth of knowledge about these two sites and last summer it made use of its experience and succeeded, in cooperation with Turkish institutions, in getting Pergamon added to the UNESCO list of world cultural heritage sites. In the case of Göbekli Tepe, a similar project is currently under way and here too, of course, DAI personnel are supporting the application procedure with their expertise. Further examples are the sites of Karakorum and Karabalgasun in Mongolia. There the Mongolian government has entrusted the DAI with a research site that is of central importance to the Mongolian identity and has been on the UNESCO list of world cultural heritage since 1994. Last year the DAI carried out a special project to secure the palace complex there, hence combining further investigation work with questions of preservation.

How can you make people in this country aware that world heritage in far-flung regions of the globe or that the endangerment and destruction of cultural assets in Syria or Iraq is also our concern?

Cultural and natural heritage connects people with the place where they have their roots, with their history, their land and the world. Only those who respect their own heritage are capable of valuing and appreciating the heritage of others. That is a fundamental prerequisite of the peaceful coexistence of nations. With over 1,000 world heritage sites, it is possible for very, very many people to imagine what it would mean if one of their „own“, i.e. their own country's world heritage sites were to be destroyed. This equally applies to heritage from foreign cultures: when cities like Hatra or Aleppo are destroyed, then we can all readily appreciate what anguish that causes to people, how grave the cultural loss is and what has been irretrievably lost.

In the conflict zones of the present time, the violence is directed primarily at people, who are experiencing appalling suffering. In these circumstances, why is it important to protect „old stones“?

„Old stones“ are not dead material. Architectural and archaeological heritage bears witness to the past; it tells us about our ancestors and gives us the coordinates – spatial, historical and cultural – by which we can locate our own position in the world. Violence against cultural heritage is barbarism, it destroys our roots. Archaeological sites are moreover an important economic factor for many countries, a principal source of tourism revenue. Protecting them means safeguarding a motor of economic development for those countries. That's especially true of countries in conflict zones.

Cultural assets from unauthorized excavations are a major source of funding for terrorism. The federal government is planning to overhaul cultural asset protection in Germany in order to put a stop to illegal trafficking. How can this be achieved?

Yes, it's an alarming development. The trade in cultural assets from looting and unauthorized excavations now shares first place with the arms and drugs trade globally, according to international crime statistics. The terrorist organization ISIS destroys cultural and religious sites and incites people to unauthorized excavation; the proceeds go towards financing the war they are waging on human values. The Director-General of UNESCO, Irina Bokova, has spoken of „cultural cleansing“. For this reason it's all the more important that the international community not only takes a united stand against ISIS and terrorism, but also takes action against unauthorized excavations and the illegal trade in cultural assets. I therefore support the UNESCO proposal for a worldwide ban on trafficking. On a German initiative the EU introduced – in late 2013 – a ban on the import, export and trade in cultural assets from Syria. A similar regulatory arrangement has existed for Iraq since 2003. In addition to that, Germany is in the process of overhauling its national legislation to make legal provisions on cultural asset protection more effective and to bring about a long-overdue paradigm change.

What hopes does the president of the UNESCO World Heritage Committee and chairperson of the 39th session have regarding the outcome of the conference?

As chairperson of the World Heritage Committee my goals are to strengthen the spirit of cooperativeness among member states, to champion the preservation of our common cultural and natural heritage, and thereby to send out a strong signal against terror and destruction. Apart from that I will make a point of increasing the transparency of decision-making and of getting civil society even more closely involved. Another thing that's important is for the

idea of preservation to occupy a more central place, having been occasionally neglected in the past in comparison with the nominations. I am confident that in this way we shall contribute to a strengthening of the World Heritage Convention.

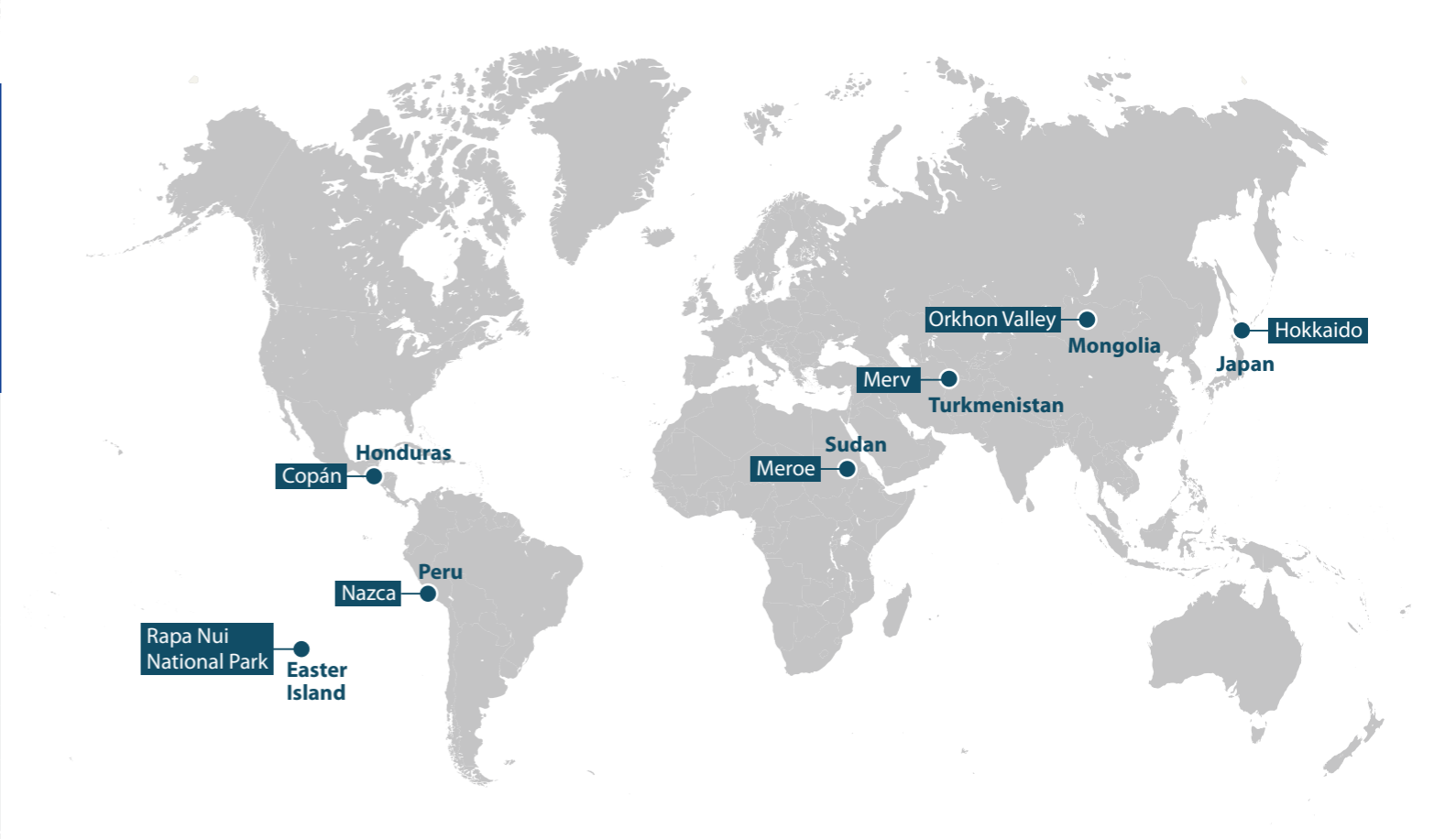


„Langer Eugen“ was formerly an office building for members of the German Federal Parliament in Bonn. Since 2006 it has been the registered office of several United Nations institutions and headquarters of the UN Campus.

Photo: Wolf, Wikimedia Commons

YOU CAN ONLY PROTECT WHAT YOU KNOW

DAI'S ACTIVITIES AT WORLD HERITAGE SITES



LOCATION	WORLD HERITAGE	DAI-PROJECTS
Chile		
Easter Island	Rapa Nui National Park	Pre-European Water Use on Easter Island
Egypt		
1 Abu Mena	Early Christian Ruins of Abu Mena	Abu Mena
2 Cairo	The Islamic City Centre	Historic Cairo
3 Memphis	Memphis and its Necropolis – the Pyramid Fields of Giza, Abusir, Saqqara and Dahshur	Dahshur
4 Thebes	Ancient Thebes with its Necropolis	Dra' Abu el-Naga (necropolis) Deir el-Bachit (late antique monastery) Temple of Amenophis III ("Kom el-Heitân")
Germany		
1 Trier		Roman Monuments, Cathedral and the Church of Our Lady in Trier, Porta Nigra as Part of the World Heritage Site
2 The Upper German–Raetian Limes	The Upper German–Raetian Limes: German part of the transnational World Heritage Site "Frontiers of the Roman Empire",	The Upper German–Raetian Limes
Greece		
1 Mycenae, Tiryns	Archaeological Sites of Mycenae and Tiryns	Mycenae, Tiryns
2 Olympia	Ruins of Olympia	Olympia, Leonideion
3 Samos	Pythagoreion and Heraion of Samos	Samos incl. Heraion
Honduras		
Copán	Maya Site of Copan	MayaArch3D – Web-based 3D GIS for the Analysis of the Archaeology of Copan
Iran		
Takht-e Sulaiman	Archaeological Site of Takht-e Sulaiman	Takht-e Sulaiman
Iraq		
Uruk	Tentative List	Uruk
Israel/Palestine		
Jerusalem	The Old City of Jerusalem and its Walls	Jerusalem: Muristan District (on the Red List since 1982)
Italy		
1 Rome	Historic Centre of Rome	The Late Antique Destruction of the Basilica Aemilia Colosseum The Imperial Residence of the Domus Aurea Forum Romanum Imperial Palaces on the Palatine
2 Pompeii		Pompeii, consultative activity
Japan		
Hokkaido	Tentative List	Hokkaido
Lebanon		
Baalbek	Ruins of Baalbek	Baalbek
Morocco		
1 Marrakesh	Medina of Marrakesh	Marrakesh
2 Essaouira	Medina of Essaouira (formerly Mogador)	Mogador (Essaouira)
Mongolia		
Orkhon Valley	Orkhon Valley Cultural Landscape	Kharakhorum and Kharbalgas
Northern Iraq		
Erbil	Erbil Citadel	Ottoman Trade Buildings in the Bazaar of Erbil

LOCATION	WORLD HERITAGE	DAI-PROJECTS
Peru		
Nazca	Geoglyphs of Nazca and Pampas de Jumana	Andes Transect and Palpa
Portugal		
Coimbra	Universidade de Coimbra - Alta y Sofia	Coimbra
Serbia		
Gamzigrad	Palace of Galerius at Gamzigrad Romuliana	Felix Romuliana
Spain		
1 Altamira	Cueva de Altamira y arte rupestre paleolítico del norte de España	Image Archive on the Cave of Altamira
2 Aragon	Arquitectura mudéjar de Aragón	Aragón
3 Cáceres	Ciudad vieja de Cáceres	Cáceres
4 Córdoba	Centro histórico de Córdoba	Islamic Villas of Córdoba
5 Evora	Centro histórico de Évora	Evora
6 Iberian Peninsula	Arte rupestre del arco mediterráneo de la Península Ibérica	Rock Carvings of the Iberian Peninsula
7 Ibiza	Ibiza	Biodiversidad y cultura, Galena Mining on Ibiza
8 Mérida	Conjunto arqueológico de Mérida	Mérida
9 Oviedo	Monumentos de Oviedo y del reino de Asturias	Early Christian Monuments of Oviedo
10 Santiago de Compostela	Ciudad vieja de Santiago de Compostela	Santiago de Compostela
11 Segovia	Ciudad vieja y acueducto de Segovia	Building Inscriptions of the Aqueduct of Segovia
12 Sevilla	Catedral, Alcázar y Archivo de Indias de Sevilla	Archaeological Commentary on Isidore of Seville
13 Tarragona	Conjunto arqueológico de Tarragona	Inscriptions from the Roman City of Tarraco
14 Toledo	Ciudad histórica de Toledo	Toledo
15 Torre de Hércules (near La Coruña)	Torre de Hércules	Torre de Hércules
Sudan		
(45 km north-east of Shendi)	Archaeological Sites of the Island of Meroe	Meroe Royal Baths; Hinkel Archive
Syria		
1 Ar-Raqqa/ar-Rafiq	Tentative List	Ar-Raqqa/ar-Rafiq
2 Bosra	Amphitheatre and Ancient City of Bosra	Bosra
3 Crac des Chevaliers	Crac des Chevaliers and Qal'at Salah El-Din	Crac des Chevaliers
4 Damascus	Ancient City of Damascus	Damascus
5 Palmyra	Ruins of Palmyra	Palmyra
Tunisia		
1 Simitthus/Chimtu	Tentative List	Simitthus/Chimtu
2 Tartus	Ruins of Carthage	Carthage
3 Thugga/Dougga	Ruins of the Ancient City of Dougga/Thugga	Thugga/Dougga
Turkey		
1 Aizanoi	Tentative List	Inscriptions of Aizanoi
2 Bergama	Pergamon and its Cultural Landscape	Pergamon
3 Göbekli Tepe	Tentative List	Göbekli Tepe
4 Hattusha-Boğazköy	Hattusha: the Hittite Capital	Boğazköy-Hattusha
5 Istanbul	Historic Areas of Istanbul	Byzantine and Ottoman Urban Topography – Wooden Houses
6 Kekova	Tentative List	Inscriptions of Kekova
7 Lycia	Tentative List	Inscriptions of Central Lycia
Turkmenistan		
Merv, Gonur	State Historical and Cultural Park "Ancient Merv"	Merv and Gonur

ARCHAEOLOGY WORLDWIDE

The fundamentals of ensuring the lasting survival of important vestiges of past civilizations are identifying, then exposing and carefully documenting them, preserving them in a scientifically well-founded manner and, no less importantly, incorporating them in tourism value chains.

What might sound so simple at first - identifying ancient cultural resources - is in point of fact often a more than complex challenge. In our mind's eye we picture ruins that are visible from far off and immediately recognizable as ancient buildings; or artistically wrought artefacts from the distant past that are displayed in museums, neatly categorized and sorted. Even in these relatively straightforward cases, the dating and cultural classification of the remains are preceded by a huge amount of scientific effort. When the remains are less spectacular at first sight, identification of the respective place of origin often requires meticulous analysis. Such analysis not infrequently leads to surprising results. Many invaluable cultural resources are not immediately apparent; not all are recognized straight away as being what they actually are. Many structures of important buildings or building ensembles still lie hidden under ground. Entire cultural landscapes of the ancient world are overlain by modern urban development and obscured by modern modes of use, to the extent that they can only be identified by means of large-scale surveys. Here, different disciplines of the humanities, the social and the natural sciences have to work together so that cultural assets can be recognized as such, examined and classified in their proper context.

Today, the study of ancient cultures embraces a wide spectrum of separate branches that comprises the archaeological sciences and philologies, ancient history, and scientific disciplines like archaeobiology, archaeozoology and computational archaeology. The methods used include text-based and art historical studies, analyses of very different sorts of material such as bone, sherds or statues, as well as large-scale regional investigations that employ modern excavation, survey and remote sensing technologies. Under the umbrella of remote sensing methods and geo-information systems (GIS), which have long since been adopted as "classical" documentation methods, there are new possibilities of wide-range terrain documentation and analysis. Furthermore 3D reconstructions permit the visualization of objects and buildings in great precision.

From the beginning, the archaeological sciences and the study of ancient cultures have been especially dependent on the careful documentation and the illustration of their research objects and results. The contexts the objects come from is sometimes lost in the moment of excavation. In the past, documentation was carried out using analogue techniques and materials, i.e. handwritten and printed publications, plaster casts, squeeze copies, drawings and photographs; today research results are digitally recorded predominantly in the form of databases, geographic information systems (GIS) or 3D reconstructions.

Only data acquired in this way and in combination with exact architectural records and field surveys, which are aimed at determining the overall context, can sensible and sustainable plans for the preservation of cultural assets be developed. Included in this is communication with the public at large, the implementation of sustainable tourism plans, exhibitions and presentations in order to raise awareness among the population of the need to preserve culture.

The German Archaeological Institute has been active at nearly 70 world heritage sites in more than 20 countries, in cooperation with the local authorities in those host countries. The archaeological remains of past cultures date from six millennia of world history and are to be found in all corners of the globe. They hold traces and stories of ancient civilizations whose influence persists in various forms in the modern world, and which are essential to the sense of identity of those who are their descendants.

Different approaches and readings are required, depending on whether the object of investigation is a Neolithic sanctuary in Anatolia, a sacred cultural landscape in Oceania, a civilization of the Ancient Near East that communicates in gigantic monuments, fantastic ritual landscape art in South America, the ephemeral traces of merchants and mariners, world famous buildings in Rome or Athens, or a flourishing Islamic urban culture on the Iberian Peninsula. Though the approaches and readings differ so substantially, the importance of working in a careful, sustainable and cooperative way, and the obligation to adhere to the highest scientific and legal standards are always the same.



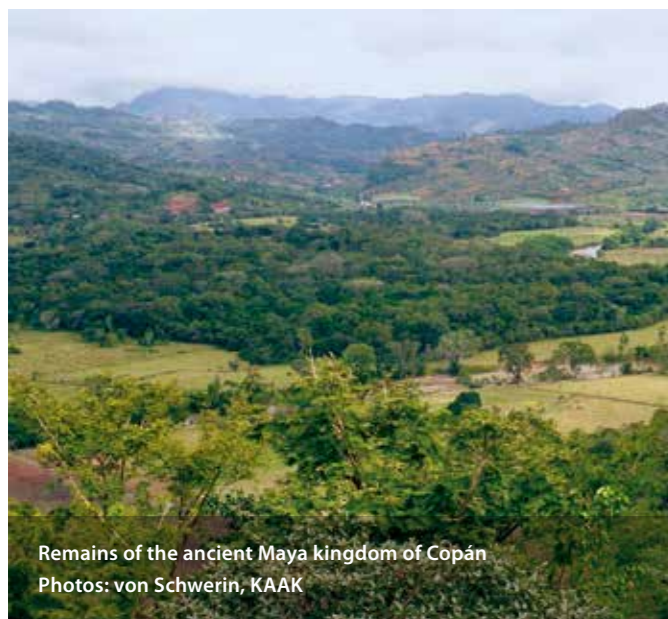
Restoration work in Bergama/Pergamon. The reconstruction of the Egyptian goddess Sekhmet in the Red Hall was supported by the Studiosus Foundation.
Photo: DAI Istanbul

ARCHAEOLOGICAL RESEARCH AND ITS METHODS

PROSPECTION

Every excavation begins with thorough survey work, carried out with the aid of the most modern prospecting methods. This allows structures that are under the earth to be rendered visible in their larger context.

On the basis of these surveys, targeted excavations can take place and intrusion can be kept to a minimum in order to protect the cultural assets – whether they are the remains of buildings or individual finds.



Remains of the ancient Maya kingdom of Copán
Photos: von Schwerin, KAAK

MayaArch3D

3D models – of sculptures and buildings, whole landscapes and cities – are an important instrument in the work of modern scholars of antiquity, and afford valuable new insights into ancient societies. For example the project MayaArch3D, a collaboration between the DAI and Heidelberg University with funding provided by the German Ministry of Education and Research (BMBF), is creating new research tools for use in archaeology, art history and heritage conservation. Archaeological sites, widely scattered information and objects are being brought together virtually on an internet platform, documented according to international standards, geo-referenced, and analysed. One of the focuses of this project is Copán, one of 60 Maya kingdoms, and its complex infrastructure.



The "garden stadium" on the Palatine, Rome's seat of government. The reconstruction of the stadium is embedded in Google Earth and so shows how it related spatially to the imperial palaces in the vicinity
Fig.: DAI Division of Building Archaeology / @GoogleEarth

STRUCTURAL DOCUMENTATION

In archaeology today, the scientific documentation of building structures makes use of a wide variety of technologies, including measurement via water level gauge and folding rule, tachymetry, photogrammetry, laser scanning as well as GIS, GPS and aerial photography and satellite imagery analysis. In this way, questions about the original appearance of ancient buildings and their position in the surrounding landscape can be answered – a prerequisite for conserving and/or restoring them and for deciding about suitable preservation measures.

Palatine

The Roman imperial palace complex on the Palatine Hill is one of the ancient monuments that still defines perceptions of the city of Rome today. Yet in spite of the impressiveness of this ensemble of imperial buildings, their architectural history has barely been studied. Now an interdisciplinary project has been launched to study the imperial palace complex on the Palatine in Rome. Funded by the DFG (German Research Foundation), the project is investigating the relationship between the palace complex and the city, the architectural reconstructions, and the different utilization scenarios in the context of social and court structures. (Cooperation partners: Soprintendenza Archeologica di Roma, the work groups for construction history and surveying at Brandenburg Technical University in Cottbus [BTU]).



The documentation of building structures is today carried out using a variety of technologies
Photos: DAI Division of Building Archaeology





Photo: Niemeier, DAI Athens

THE CULTURAL CONTEXT

In modern archaeology, questions of cultural context are becoming more and more important. It is vital that cultural remains like buildings or settlements should be seen in their wider spatial context. This is the only way to discern cultural landscapes that may be worth protecting but whose existence is not apparent at first sight. They can be identified by mapping during a survey, by analysing satellite imagery as well as by systematic field-walking.

Water cults in Peru

In the world famous geoglyphs in Peru, also known as the Nazca Lines after the nearby town, everything revolves around water. Dead straight lines up to 20 kilometres long, triangles and trapezoid shapes, large even gigantic figures representing humans, monkeys, birds and whales are scored into the earth a few centimetres deep. They date from the period of the Paracas Culture and were created between 800 and 200 BC – much earlier than originally supposed. Their meaning could not have been ascertained without their cultural context. The geoglyphs are being investigated and documented as part of the BMBF and DFG funded collaborative project “Andes Transect”, which is exploring pre-Spanish environmental and cultural developments with the aid of the latest natural science and archaeological science technologies. (Cooperation partner: Swiss Federal Institute of Technology in Zurich, [ETH])



Geoglyph from a mountain slope near Palpa. Because of the similarity to textile motifs, they can be ascribed to the Paracas Culture. (800–200 BC)
Photos: Reindel, KAAK

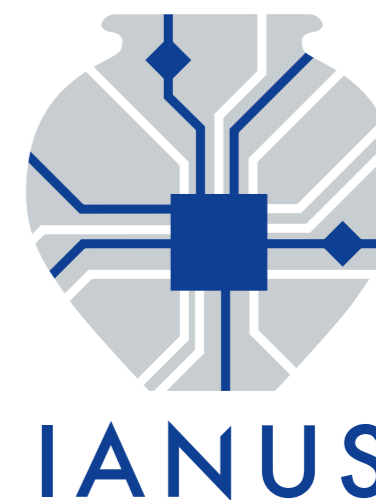
DOCUMENTATION

Meticulous documentation of excavation work is paramount because the process of excavation is irreversible, and it changes the overall context of an archaeological site. For this reason it is particularly important to maintain efficiently functioning archives where data can be digitally stored in a sustainable, enduring way, and which respond to growing international scientific cooperation by being openly accessible for scholars all round the globe. To this end the DAI, in association with its partners, is constructing the research data centre IANUS for the archaeological sciences and classical studies in a project funded by the DFG.

Digital networks in international cooperation

The photographic and excavation archives on the many excavations undertaken since the 19th century are not necessarily directly accessible in the countries where the archaeological sites lie today. Consequently what needs to be done is to create multilingual research environments, to digitize and geo-reference the data and make these data archives available for research purposes independently of their physical location – as well as to develop modalities for using them. These data archives – themselves a part of cultural heritage – are the prerequisite for research-based activities towards the preservation of world heritage. This way it will be possible to support the creation, on an international scale, of national records of sites and monuments such as exist in digital form already in many German federal states and were called for by Friedrich Schinkel 200 years ago as a necessary basis for heritage conservation in Germany.

The digitization of the Sudan archive of archaeologist Friedrich Hinkel can be cited as an example. The project is being carried out in cooperation with the Qatar Sudan Archaeological Project. Hinkel left behind the world's largest archive on the archaeology and construction history of ancient Sudan, and it has been taken over by the DAI.



The pyramids of Meroe in Sudan
Photo: Wolf, DAI Head Office

Digital networks in international cooperation

The photographic and excavation archives on many excavations undertaken since the 19th century are not necessarily directly accessible in the countries where the archaeological sites lie today. Digital archives can present new ways of using these data pools and are also a prerequisite for research-based activities towards the preservation of world heritage – like, for example, the project to digitize the Sudan archive of archaeologist Friedrich W. Hinkel. Cooperation: Qatar Sudan Archaeological Project



Notebook of the archaeologist Friedrich W. Hinkel

DIGITAL MONUMENTS RECORD

Digital monuments records are a vital instrument in the protection of world heritage. In Germany they have become a standard institution in most of the federal states. This is not the case, however, in many countries of the world. When it comes to planning procedure, infrastructure development and the extraction of natural resources, in many countries there is no information available in advance that would make it possible to ensure the protection of monuments or at least to document them before they are destroyed. This being so, the DAI has set up an easy-to-use rapid registration system for monuments (iDAI.search) and has designed its digital environment (iDAI.world) in such a way that data for compiling monuments records can be made available in host and partner countries. With the destruction of world heritage sites on the increase at the present time, digital monuments records and digitized research data are often the only means of ascertaining the extent of damage at world heritage sites after the conflicts have ended.

Cultural heritage record for Syria

In view of ongoing destruction and looting, the Syrian Heritage Archive Project, supported by the Foreign Office, has been launched with the objective of compiling a record of Syrian cultural heritage. The first step was to digitize the substantial analogue archives of the Damascus branch of the DAI and the Museum of Islamic Art in Berlin. At the present time work is focusing on developing modes of using and administering existing archival data. The cultural landscape of Syria is, archaeologically speaking, one of the most outstanding regions of the world. With archaeological and historical monuments surviving from all eras, from the first signs of human activity about one million years ago through to the Ottoman period, Syria possesses one of the world's most extensive, long-term cultural archives.

(cooperation partner: Museum für Islamische Kunst Berlin, SMB)



PROTECTION AND CONSERVATION

Archaeological monuments are old. No less self-evident is the statement that, for this very reason, they need continuous care and special conservation in order to withstand environmental influences, whether of a natural or – increasingly – anthropogenic kind. The protection of ruins has top priority. Beyond that, an archaeological site needs to be comprehensible, to “speak” to the people of the present day. It has the potential of becoming a visitor magnet – educational or cultural tourism is a not inconsiderable part of the Global Social Product (GSP) all over the world and in many countries archaeological sites are the main tourist attractions. If they have been declared world heritage, they possess particular significance for the region as a whole. Ancient centres can thus retain their magnetism in the modern world.

It goes without saying that this can only work successfully on the basis of scientific research, which first of all generates the knowledge and then transmits it.

The states that are party to the UNESCO Convention pledge to cooperate internationally and assist each other in fulfilling these tasks. This commitment is shared by the German Archaeological Institute, which, through its activities at important archaeological sites around the world, both supports the nomination procedure – as recently at Pergamon and Göbekli Tepe – and helps the nomination in a more indirect way, for instance through its research in the Citadel of Erbil (federal region of Kurdistan in Iraq), funded by the Cultural Preservation Programme of the Federal Foreign Office. Many DAI projects have decisively contributed to the inscription of globally significant archaeological sites on the UNESCO world heritage list, as a result of which they have been successfully incorporated in local value-added chains and have been at least partly saved from neglect, looting or destruction.

Carthage and Göbekli Tepe

Carthage, one of the most important big cities of the ancient Mediterranean world, was inscribed on the list of world cultural heritage sites in 1979. Research by the DAI in Carthage, in modern-day Tunisia, substantially contributed to the site being accorded this status. The Rome Department of the DAI has been active in research projects in Tunisia since the 1960s and has advocated from the start the cultural preservation of archaeological sites in the country – in recent years in the framework of the Foreign Office's Transformation Partnership. Apart from Carthage another focus of research is Chintou, which exemplifies Tunisia's rich cultural heritage with its Numidian, Roman, Christian and Islamic remains.

(cooperation partner: Institut National du Patrimoine INP, Tunis)

In a collaborative project involving the DAI, Turkish authorities, specialists from the BTU and the Global Heritage Fund, a protective roof is being erected and an integral site management plan developed for a very special archaeological site in south-eastern Anatolia. These are essential requirements for Turkey's application that Göbekli Tepe should be inscribed on the UNESCO World Heritage List.

6,000 years before Stonehenge was built and 7,000 years before the Egyptian pyramids, people created a monumental site consisting of 20 circles of standing stones up to 5.5 metres high and weighing up to 10 tonnes – pillars cut with incredible precision from blocks of quarried stone without the use of metal tools,



The ancient site of Carthage
Photo: Wikimedia Commons

and decorated with relief carvings of animals, including aurochs, boars and foxes, ibis, cranes and vultures, scorpions, spiders and snakes. Called Göbekli Tepe – “belly hill” – and located near the south-eastern Anatolian town of Şanlıurfa in Turkey, the site poses a raft of questions about the origins of what we understand today by the term civilization.

AWARENESS RAISING, CAPACITY BUILDING, TRAINING

State bodies, institutes or museums cannot guarantee the protection of cultural heritage by themselves. It's essential to get the population involved, since recognition of the need for protection must arise within society as a whole. This will not happen, of course, if a community is not aware of its own cultural heritage and its significance in the present day.

The DAI has a long tradition in the transmission of knowledge gained through research: a long tradition of training. Restorers, stonemasons and craftspeople are trained with the aim of securing the sustainable protection of monuments. Further education and training offered in courses, summer schools and universities, for instance in practical areas of archaeology, is one of the important components of capacity building.

Assistance in teaching and training the young generation of researchers, scientists and specialists in the DAI's host and partner countries helps to establish solid scientific networks as well as enduring ties. They are central to efforts to regard the protection of humanity's heritage as a joint responsibility, as defined in the UNESCO Convention.



Proposal for a protective roof



The excavation site of Göbekli Tepe
Photos: DAI Orient Department



Raising awareness among the civil population is a key factor in protecting cultural heritage. The Cairo Department of the DAI has developed teaching material that can be used in Egyptian schools to disseminate the necessary knowledge.

Illustration: DAI Cairo, Book design: Johanna Sigl

THE PATH TO WORLD HERITAGE

UNESCO requires the following commitment from states that have world heritage sites on their territory: "By signing the convention the States Parties undertake to protect the world heritage sites lying within their borders and to preserve them for future generations." There are ten criteria, one of which must be met, in order for a site, monument or feature to be designated world heritage. A cultural asset is deemed to be of "outstanding universal value" if, for example, it is a "masterpiece of human creative genius", is representative of a type of art, building or landscape or an architectural or technological ensemble which reflects an important phase in human history, or if it bears witness to a cultural tradition or to a civilization that has disappeared. A site is considered to be natural heritage if it contains "superlative natural phenomena or areas of exceptional natural beauty and aesthetic importance", if it illustrates a major phase in the earth's history, represents significant ecological and biological processes, or contains important natural habitats for in-situ conservation of biological diversity.

The phase from the nomination to the inscription of newly proposed properties lasts at least 18 months – from February of a given year until the World Heritage Committee session in June/July of the following year when a decision will be taken. The process begins with the UNESCO World Heritage Centre inviting member states to submit a tentative list of properties situated within their borders which they may consider proposing for nomination. Nominations are then submitted before the 1st February deadline for evaluation and decision-making the following year. Submissions are assessed on behalf of the UNESCO World Heritage Committee by the International Council on Monuments and Sites (ICOMOS) and the International Union for the Conservation of Nature (IUCN). On the basis of this expert evaluation the World

Heritage Committee then makes its final decision on whether or not nominated sites are to be inscribed on the world heritage list.

OBLIGATIONS

But what does it actually mean when a monument, area or landscape changes its status, is no longer simply a site in a particular country, no longer "belongs" solely to that country, but suddenly becomes the "property" of all mankind? With the altered status comes a change in the state's obligations, which now undertakes to protect and to preserve that portion of world heritage that is situated on its territory.

Article 4 of the UNESCO world heritage convention declares that each State Party recognizes that "the duty of ensuring the identification, protection, conservation, presentation and transmission to future generations of the cultural and natural heritage referred to in Articles 1 and 2 and situated on its territory, belongs primarily to that State. It will do all it can to this end, to the utmost of its own resources and, where appropriate, with any international assistance and cooperation, in particular, financial, artistic, scientific and technical, which it may be able to obtain".

This is followed by a list of political, legal, financial, and personnel and infrastructure related measures that are considered appropriate for the preservation of cultural heritage for later generations. The main requirements in this catalogue are "to develop scientific and technical studies and research, [...] to work out such operating methods as will make the State capable of counteracting the dangers that threaten its cultural or natural heritage [and] to foster the establishment or development of national or regional centres for training in the protection, conservation and presentation of cultural and natural heritage".

IN-DEPTH ANALYSIS

Archaeological research works at the very core of these definitions of world heritage and the catalogue of requirements for its preservation. Using the multi- and interdisciplinary methods described above, it investigates decisive changes in the course of human history: the introduction of agriculture and herding, the emergence of urban centres and complex systems of society, and the formation of symbolic order, which in many cases are the foundations of what still constitutes an important part of our implicit knowledge and thinking.

Traces of human activity can be found in spectacular objects like colossal statues or in tiny fragments of papyrus. Architecture presents us with evidence of the past, but the evidence is not always immediately apparent, sometimes only revealing itself in reconstructions. Layer by layer, archaeologists unearth material remains in excavations, and use pile core analyses to create vegetation and climate archives; bones, plant remains and wood yield as much information about people's way of life and mode of subsistence as ceramic and metal artefacts do. Texts, chiselled in stone, written on papyrus or imprinted in clay, allow all facets of past societies – whether state treaties, epic poetry or everyday accounting – to emerge into view. Research is concerned with understanding the overall context.



Photos: DAI/Freie Universität Berlin, Department of Earth Sciences



Photos: DAI Madrid



SITE MANAGEMENT

To ensure the excavated and vulnerable archaeological remains are preserved for future generations and to make both research and sustainable tourism viable at excavation sites, what is required is integral site management that encompasses an archaeological site or a cultural landscape in its entirety. How exactly should the historical remains be prepared for and displayed to tourists? And above all, how can the remains be protected in a way that is sustainable and complies with conservation practice?

Whatever the measures taken, research and scientific documentation are essential requirements. The German Archaeological Institute works towards the preservation and sustainable maintenance of cultural heritage in its host and partner countries in Europe and worldwide. In so doing it engages in active cultural policy and moreover is often able, through its archaeological work, to contribute towards regional economic development in those countries.



Meroe was the capital of the ancient kingdom of Kush, which was a significant international power between the 8th century BC and the 4th century AD. To save the world heritage site from deteriorating further, the DAI is working with the Qatari Mission for the Pyramids of Sudan (QMPS) in a large-scale project that was agreed in January 2015.

Photo: Kehrer, DAI Head Office

MEROE

Not far from Abu Simbel lay the ancient kingdom of Kush, with its capital Meroe in a semi-desert between the Nile and the Atbara rivers. Kush was a significant international power between the 8th century BC and the 4th century AD. Built as a grand royal residence in the narrow strip of fertile land of the Nile valley, Meroe possessed amply proportioned housing, temples and the unique Royal Baths on the right bank of the Nile between the 6th and 5th cataracts. East of the town, on the edge of the desert, are the royal cemeteries with their characteristic, steep-walled pyramids. In contrast to Meroe, the neighbouring, "ordinary" town of Hamadab offers insights into the living conditions of the population of that period. The Kushite Kingdom stretched from the Mediterranean deep into the African continent, and its remains provide unique testimony to the lively exchange of goods and ideas between these regions.

Meroe has been listed as a UNESCO world cultural heritage site since 2011.

One of the reasons why Meroe was designated a world heritage site was the good state of preservation of its buildings as an ensemble. This opens up the possibility of carrying out further archaeological research into links between the Mediterranean, the Arabian Peninsula and sub-Saharan Africa. In consequence Sudan has pledged support in terms of personnel, infrastructure and financing for measures to protect the site. In particular, a site management plan was to be implemented and new improved conservation strategies adopted.

Today the remarkable pyramids of the world heritage site Meroe are in grave danger. Since the 1940s soil erosion has advanced substantially, resulting in an increase in severe sandstorms which literally wear away the surface of the buildings. These unique relics of an ancient culture that linked together the Mediterranean, Arabian Peninsula and the African continent are at risk of further deterioration unless they are conserved and restored.

As part of the Qatari Mission for the Pyramids of Sudan, carried out by Qatar Museums, the German Archaeological Institute has been invited to take part in a big project to save the pyramids; a cooperation agreement was signed in January 2015.

Starting in 1960, the German construction history scholar and architect Friedrich W. Hinkel conducted ground-breaking research on the architecture and culture of the Middle Nile valley. In 2007 he died, leaving behind the world's biggest archive on the archaeology and construction history of ancient Sudan. This archive has been deposited with the German Archaeological Institute. In the form of drawings and photographs, it comprehensively documents the monuments and the changes they have undergone since the 1960s – caused mainly by changed environmental conditions. Without this information it would not be possible to protect the monuments.

INTERNATIONAL COOPERATION IN THE PROTECTION OF WORLD HERITAGE

To make this archive accessible to researchers from the entire world, but particularly to the Sudanese cooperation partner and authorities, the German Archaeological Institute has been working with the Qatar Sudan Archaeological Project since 2014 on the digitization of the Hinkel archive. The foundation for international cooperation in research projects had been laid by Qatar Museums and the Sudanese National Corporation for Antiquities & Museums with the Qatar Sudan Archaeological Project, in which the German Archaeological Institute is involved too.

Digitizing the Sudan archive will create a virtual research centre – with a physical presence in two locations, Berlin and Khartoum – which in Sudan will form the basis for further expanding the digitization of its cultural heritage, an essential step on the way towards comprehensive protection of cultural heritage and an indispensable tool for every historical monument authority.



The largely stone pyramids of Meroe are considerably smaller than their famous ancient Egyptian counterparts, and reach a height of less than 30 metres. They were used as the tombs of the kings and queens and high-ranking officials of the historical kingdom of Kush in Nubia. Their main period of construction was from about 300 BC to about AD 300. The first pyramid in Meroe that can be attributed with certainty to a particular monarch was built for Ergamenes, who reigned c. 280 BC.

Photo: Wolf, DAI Head Office



The acropolis of Pergamon
Photo: Pirson, DAI Istanbul

PERGAMON

Pergamon, capital of the Hellenistic kingdom of the Attalid dynasty and later metropolis of the Roman period, was one of the most prominent urban centres of the ancient world. In addition to its political significance, the city was a cultural and religious centre in the 3rd – 1st century BC with a notable library, impressive architecture and works of art, and the internationally frequented sanctuary of Asklepios. Pergamon and its surrounding area were not built over in modern times, a circumstance that allows us to gain a good understanding of Pergamon's genesis and function as a regional centre and capital of a territorial state. Pergamon and its Multi-Layered Cultural Landscape were inscribed on the World Heritage List in 2014.

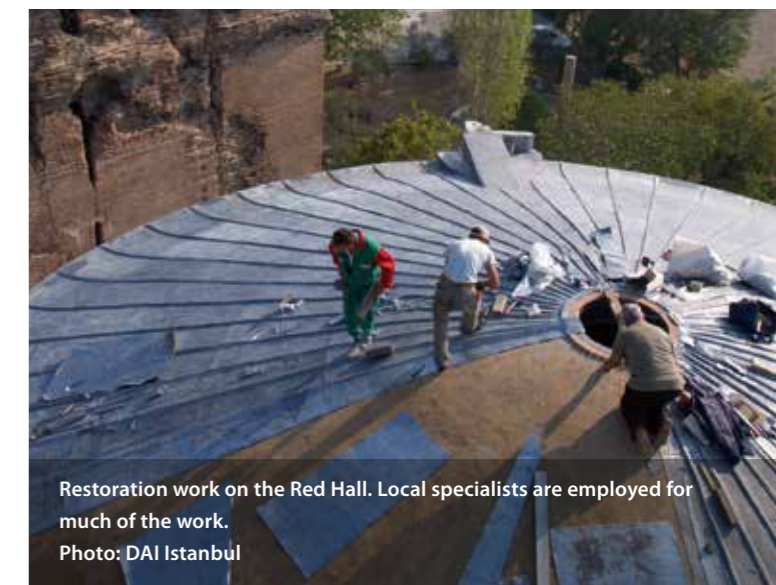
The Istanbul Department of the German Archaeological Institute has been entrusted, since its foundation in 1929, with the excavation of important sites in Turkey, among them Pergamon. In many projects, archaeologists have investigated the city as a complex urban entity, as well as the necropoleis and the surrounding landscape. A key element of the work is, furthermore, the preservation and presentation of the monuments. This includes projects targeting the preservation of architectural monuments, the conservation of constructed features, restoration projects including the restoration and partial reconstruction of buildings for educational purposes, and the erection of protective structures.

THE RED HALL AND THE PATH TO WORLD HERITAGE STATUS

The documentation of architectural structures, damage mapping and material analysis are essential requirements for monument preservation. Only on their basis is it possible to draw up a catalogue of preservation measures. In Bergama, master plans for safeguarding the archaeological sites and opening them up for tourism are additionally being developed in cooperation with the Turkish authorities. The reconstruction and restoration work at the Red Hall was an important step on the way towards achieving world heritage status.

A combination of research and heritage conservation, as practised by the German Archaeological Institute, has produced some exemplary results of lasting value. The urban and social context of monuments is an important consideration today, and the Red Hall has developed into a core project precisely because it has a pivotal function in the new tourism development scheme for Pergamon. The plan is for the old town of Bergama – modern Pergamon, as it were – with its numerous monuments of Ottoman and multi-ethnic architecture to be integrated into the sightseeing programme of the ancient city. As a result visitors will have the opportunity to experience 4,000 years of settlement and urban history in the eastern Aegean in and around a modern Turkish provincial town. The new plan thus encompasses not only all phases in the town's history but also its surrounding area. It was the basis for Bergama's bid to be added to the list of UNESCO world heritage sites.

The DAI project links together the past, present and future of the town in a way that benefits not only research but also the town itself. Since the 1970s, Turkish stonemasons have received training as part of the restoration project, and some of the local craftsmen and specialists have been working for the German Archaeological Institute for generations now.



Restoration work on the Red Hall. Local specialists are employed for much of the work.
Photo: DAI Istanbul



Scientifically well-founded restoration measures are indispensable for the preservation of cultural heritage.

Photos: DAI Istanbul

restoration of the Trajaneum, the temple to the Roman emperor on the highest point of the acropolis, the biggest and most complex restoration project carried out as part of the Pergamon Excavations, was completed in 1994. In 1995, construction of a protective shelter for the Roman mosaics of Building Z began, and it was opened to the public in 2004.

Finally, restoration of the Red Hall – situated at the junction between the ancient city of Pergamon and the Ottoman old town of Bergama – commenced in 2006.

The DAI research programme focusing on the Hellenistic city as an integral urban complex together with its hinterland began in 2005 and is one of the foundations on which the world heritage nomination rests, inasmuch as it has generated the knowledge that has provided the basis for, firstly, recognition of Pergamon's status as world cultural heritage and secondly for the elaboration of measures best suited to the preservation of that heritage.

The history of restoration in Pergamon reaches back almost as far as the history of archaeological research itself. Around 1900, the construction historian Wilhelm Dörpfeld developed heritage conservation guidelines that retain their validity today. They can be summed up as three basic principles: (1) clear differentiation between the original fabric and modern additions, (2) high-quality craftsmanship in restoration work, (3) subordination of all restoration to the ruins on the archaeological site. In Pergamon these aims have been accomplished, notably because of the exclusive use of locally sourced material and the employment of local craftsmen and specialists. This has resulted in the restoration measures undertaken in Pergamon over the years having a relatively uniform appearance.

In 1902, the Hellenistic barrel vault – important from the point of view of construction history – spanning the staircase leading to the middle terrace of the Gymnasium was restored. Work on the



GÖBEKLI TEPE

6.000 years before Stonehenge was built and 7.000 years before the Egyptian pyramids, people created a monumental site consisting of 20 circles of standing stones up to 5.5 metres high and weighing up to 10 tonnes – pillars cut with incredible precision from blocks of quarried stone without the use of metal tools, and decorated with relief carvings of animals. Göbekli Tepe – the “belly hill” – in the south-east of Turkey is one of the greatest archaeological sensations of recent times.

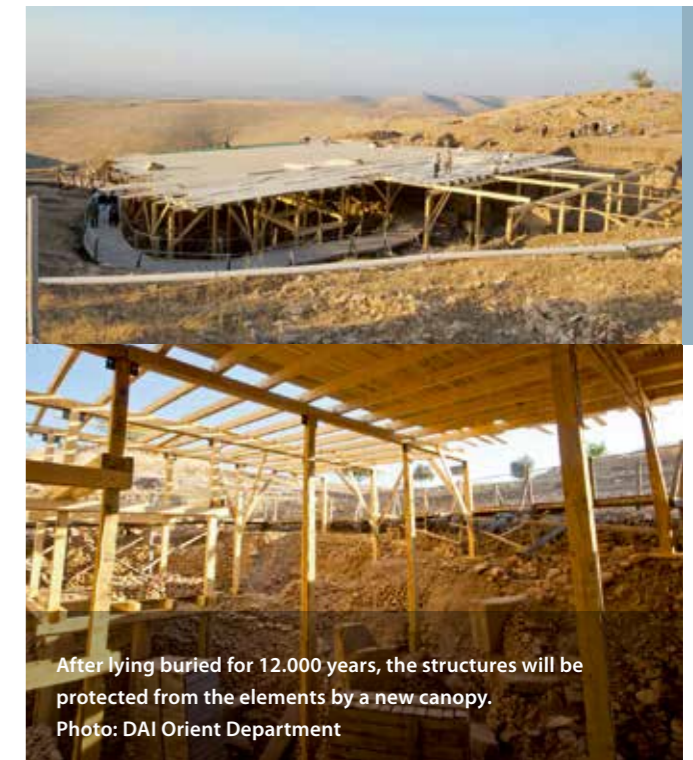
The hill was first surveyed in the 1960s but its significance was not appreciated. In 1994, archaeologist Klaus Schmidt was the first to recognize just how extraordinary the place was. Since then, excavations have been in progress at Göbekli Tepe, conducted by the German Archaeological Institute as part of a joint German-Turkish project. The monuments on Göbekli Tepe are unique in the world as a source of testimony on the history of the transition from hunting communities to agrarian societies, and throw an entirely new light on the process.



The pillars are covered with relief carvings of animals.
Photo: DAI Orient Department



Göbekli Tepe has become a visitor magnet, attracting a growing number of tourists every year.
Photo: Brandenburg University of Technology Cottbus–Senftenberg



After lying buried for 12.000 years, the structures will be protected from the elements by a new canopy.
Photo: DAI Orient Department



12.000 years of human history
Photo: DAI Orient Department

A PROTECTIVE CANOPY FOR GÖBEKLI TEPE

A convincing preservation plan is one of the criteria for a site's inscription on the UNESCO world heritage list. Conserving the site and opening it up for sustainable tourism has been central to the work carried out by the German Archaeological Institute at Göbekli Tepe. The activities range from cleaning and restoring the pillars and the stone-and-mud walls to the erection of protective shelters over the most important architectural features, and are being undertaken in support of Turkey's application to have Göbekli Tepe inscribed on the UNESCO world heritage list.

Since 2011, the Global Heritage Fund in cooperation with Brandenburg Technical University (BTU) in Cottbus and the DAI excavation team has been working on a comprehensive site management and conservation plan that will enable archaeological work to proceed unhindered as well as allowing visitors to the explore the unique site, offering 12.000 years of human history, in a way that prevents actual physical contact with the exposed remains. In 2013, a temporary protective shelter was erected over the principal excavation area – precursor of a durable membrane roof that will be constructed to protect the site against climatic conditions. This project will be implemented in 2016. Leading on from that, and following meticulous analysis, repair of the walls and monoliths can commence. The archaeological features will be left as far as possible in their original condition upon exposure. During the excavation phase, pillar re-erection has only taken place in exceptional circumstances – when, for instance, toppled or leaning monoliths obstructed further excavation work and hence prevented further discoveries about a unique phase in human history.

THE GERMAN ARCHAEOLOGICAL INSTITUTE



The German Archaeological Institute (DAI) is a federal agency operating within the area of responsibility of the Foreign Office. It has its origins in the Istituto di corrispondenza archeologica, founded in 1829, and today is active all round the world, with three commissions, seven departments, five branches and four research units as well as its head office in Berlin.

The goals and responsibilities of the DAI include conducting research worldwide in the archaeological sciences and classical studies, taking measures to conserve cultural heritage, and promoting the preservation and cultivation of cultural identity in its host and partner countries. Infrastructures serving this purpose (e.g. libraries, archives, image archives) are made available for researchers from around the world. In this way the DAI helps build relations within the international scientific community, fosters the young generation of researchers and is a key instrument of the Federal Republic of Germany's foreign cultural and educational policy and policy of promoting international cooperation in science.

The German Archaeological Institute contributes to a deeper understanding of early cultures in human history, the importance of which in many cases persists right into the present day. The Institute disseminates research findings in academic journals and popular publications – frequently in the national language of host countries – as well as in exhibitions, and it makes analogue and digital data archives accessible and available to international researchers.

Site management and cultural resource preservation belong as much to the DAI's mission as do stimulation of the regional economy by tourism development at ancient sites, and local capacity building in which the formation of networks of artisans provides the basis for autonomous cultural preservation activities. Beyond that the Institute is involved in educational programmes in Germany and abroad, with DAI personnel supervising bachelor and master's theses, and providing support for doctoral and postdoctoral projects; it also takes part in workshops and summer schools that offer further training in the host and partner countries. The DAI is active here in an advisory capacity, as it is in politics and for UNESCO.

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