

20 YEARS
OF INTERNATIONAL
COOPERATION
FOR CONSERVATION
AND SUSTAINABLE
DEVELOPMENT

INTERNATIONAL COORDINATING COMMITTEE FOR THE SAFEGUARDING AND DEVELOPMENT
OF THE HISTORIC SITE OF ANGKOR (ICC-ANGKOR)



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Ta Reach - Angkor Wat



PREFACES



IRINA BOKOVA
DIRECTOR-GENERAL
OF UNESCO

Angkor is at the heart of an extraordinary human and scientific adventure where the activity to safeguard and develop this outstanding cultural site will remain as a spectacular example of international solidarity.

Following the Tokyo Declaration and the appeal of the late King Father NORODOM Sihanouk, the international Programme for Angkor was implemented twenty years ago and has featured an innovative approach closely associating the safeguarding operations with sustainable development endeavours.

The wealth of Cambodia's heritage highlights the role played by culture for the identity of the people of this country, for the knowledge of their history and for their ability to control their fate. The affection displayed by Cambodians for these thousand-year old temples have played a decisive role towards the reconciliation and reconstruction of the country.

Concomitantly with the past two decades of activity towards the protection of the site, the region has developed, as have vocational training and job creation. These developments have supported and sometimes sped up the country's economic and social progress. This strategy reached its pinnacle in 2003 at the Paris Conference on sustainable development with the establishment of a group of experts on this topic.

Angkor has then become a laboratory spurred by the relationships between culture and sustainable development, by then evidencing the potential of sustainable tourism, of handicrafts and the full mobilization of the local communities towards the harmony and construction of a whole society. Other World heritage sites throughout the world have taken inspirations from the experiments carried out in Angkor, and UNESCO, using Angkor

as an example, has been advocating the recognition of culture as a booster for sustainable development.

The International Programme for Angkor is not only unique in its approach but also in its operation, with the establishment of the International Co-ordinating Committee for the Safeguarding and Development of the historic site of Angkor (ICC-Angkor) with UNESCO in charge of its standing Secretariat. This gives me the opportunity to acknowledge the countries that backed its establishment (Cambodia, France and Japan) and all associated members which commitment has been a strong symbol of UNESCO's highly valued moral and intellectual solidarity.

Safeguarding any historic site requires a global approach reaching all aspects of heritage, of built structures, of documentation and of the traditions which bring them to life. Since the inscription of the site on the World Heritage List in 1992, UNESCO has been promoting this broadened vision of heritage at Angkor, based on the preservation and the improvement of the site while respecting its environment and promoting local community-supported development.

UNESCO sees to the international community's activities for the development of our common heritage and will unrelentingly continue to mobilise for the protection and promotion of this universal and outstanding site. This scientific publication commemorates an anniversary and we would like by then to pay tribute to all of those who have spearheaded this project and whose determination still inspires us.



H.E. DR. SOK AN
CHAIRMAN OF THE 37TH SESSION
OF THE WORLD HERITAGE
COMMITTEE AND OF THE APSARA
NATIONAL AUTHORITY

The sustainable protection of Angkor is the collective task and individual duty of all Cambodians. This is the meaning of the silhouette of Angkor Wat on our national flag (beyond the reference to the identity and the demonstration of our national pride).

It also explains the constant solicitude that the prestigious site has been enjoying from the highest bodies of the State for the past two decades. The late King-Father, NORODOM Sihanouk, took, as early as in 1991, the initiative to propose the nomination of Angkor on the UNESCO World Heritage List. His successor, His Majesty NORODOM Sihamoni deigned, the day after his enthronement, to become the Honorary President of the International Co-ordinating Committee (ICC) for Angkor and is regularly briefed on the site works.

The Royal Government, spearheaded by His Excellency the Prime Minister, Samdech Techo Hun Sen, has unwaveringly supported the conservation and sustainable development programmes in Angkor and its region, with a priority on Siem Reap.

As for the international community, a partner of the APSARA National Authority (managing the World Heritage site), it has continued to fully commit in the field and the developed projects have reached, as of today, the impressive number of 58 plus, concerning 15 countries. And this is far from being over. In Angkor the heritage is complex and to manage it brings together multiple approaches, techniques, state-of-the-art technologies and broad and varied skills.

The area of the inscribed site is huge: 401Km² (approximately 40,000ha). Flagship of the aforementioned List, this site is unique in its complexity: Simultaneously an archaeological site, a complex of historic monuments, a forest, a cultural landscape, an

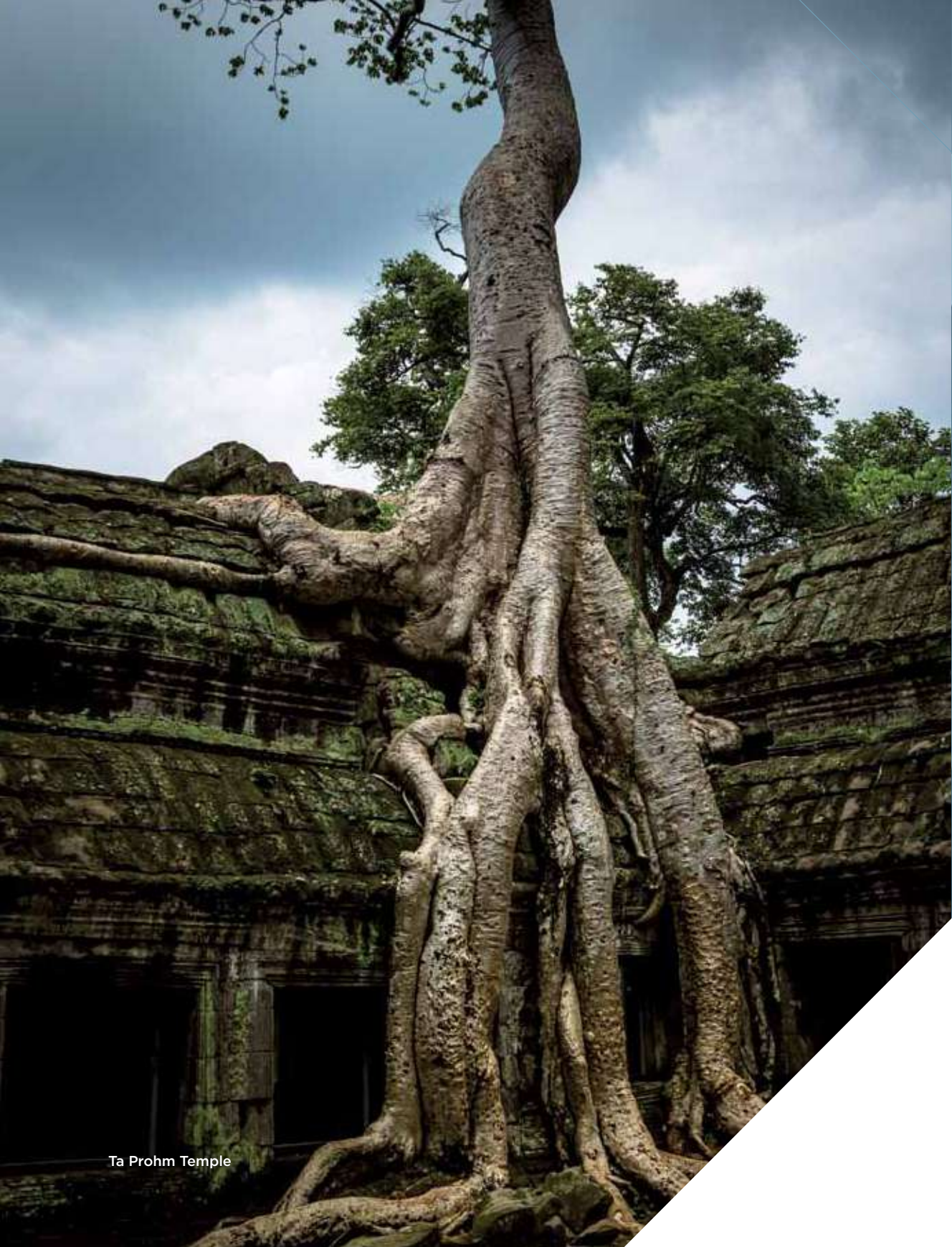
ancient hydraulic system, a genuine landscape of living and rural activities, it is rich with intangible heritage and is a globalised tourism destination.

The task is, however, complicated by the dual pressure exercised on the integrity of the Angkor site:

- a. One is endogenous, with the local population reaching more than 100,000 across 112 villages and hamlets scattered all over the site. These inhabitants continuously try to extend their living space, which may threaten the archaeological site.
- b. The other is exogenous and is related to the neighbouring city of Siem Reap, the provincial seat, where tourists sojourn and which creeping urban sprawl may extend towards the demarcated areas of the eco-historical site.

We are aware of the challenges and so is the ICC co-chairmanship, valiantly carried out by France and Japan. In the well-augured forthcoming decade, all of us will ensure that the global situation of the protected zones remains satisfying, whilst according the necessary importance to tourism development pressure and guaranteeing at its best the sustainable management of the site. We do not forget that the key values that gained the inscription of Angkor on the World Heritage List are mainly based on the authenticity of the monuments and the integrity of the site.

Our common endeavour aims at preserving this authenticity and safeguarding this integrity.



Ta Prohm Temple

FOREWORD BY THE CO-CHAIRMEN
OF THE ICC-ANGKOR



SERGE MOSTURA
CO-CHAIRMAN OF THE ICC-ANGKOR
FRENCH AMBASSADOR
TO CAMBODIA

This publication celebrates 20 years of the ICC-Angkor and of the inscription of the Angkor site on the World Heritage List. It underlines the historic and cultural wealth of this globally acclaimed site and highlights the drive of all of those who have been entrusted with the management and development of the site in the fields of research, archaeological restoration and tourism enhancement.

The anniversary of the end of the second decade of the International Co-ordination Committee for the Safeguarding and Development of the historic site of Angkor (ICC-Angkor) gives us the opportunity to take stock. For the past 20 years, the ICC-Angkor, with UNESCO support, has successfully accomplished its role. This publication is the place to acknowledge all of those, who, through their expertise and conviction, have forged the success of the ICC-Angkor throughout the years.

The commitment of the Royal Government of Cambodia and the daily efforts of the APSARA National Authority presently represent the best guarantors for the sustainability of the activities undertaken, and the partners of Cambodia should be proud of their work.

Beyond this 20 years anniversary, it is also time to once again ponder on new developments.

The continuum of the internationally-based supporting structure seems relevant as Cambodia has many challenges yet to face. It is also necessary to redouble the efforts that assist in strengthening the skills and empowerment of the APSARA National Authority in the management and development of the site. This is the future.

The ICC-Angkor, supported by the passionate engagement of a community of international researchers for this outstanding site, will continue to bring its essential expertise, but it is on Cambodia and Cambodians that eventually the responsibility for Angkor is bestowed.



KUMAMARU YUJI
 CO-CHAIRMAN OF THE ICC-ANGKOR
 JAPANESE AMBASSADOR
 TO CAMBODIA

This year, 2013, marks the 60th anniversary of the establishment of diplomatic relations between Japan and Cambodia. Over these long years, the two countries have nurtured friendly and cooperative relations at various levels. In particular, after the restoration of peace in Cambodia, Japan became the leading donor to the country. We have supported Cambodia's development politically, economically, socially and in many other ways in order to ensure that Cambodia continues its steady progression from reconstruction to development.

The protection of cultural heritage is at the heart of Japan's cooperation with Cambodia. In an effort to preserve the Angkor monuments, which are one of the most outstanding cultural treasures in Cambodia, and to help restore the pride and solidarity of the people of Cambodia, Japan hosted the Tokyo Conference for the Preservation of Angkor Monuments, where the Tokyo Declaration was adopted, in 1993. Subsequently, the International Coordinating Committee for the Safeguarding and Development of the Historic Site of Angkor (ICC-Angkor) was established and, since its inception, Japan and France have been enjoying the privilege of co-chairing the committee.

Since then the ICC-Angkor has met twice a year to bring together representatives of the Royal Government of Cambodia, including the APSARA Authority, and representatives from other partner countries, as well as Cambodian and international experts who have been, or are, engaged in the activities to rescue and preserve the historical monuments of Angkor. Indeed, one of the ICC-Angkor's greatest achievements was the removal of the Angkor site from the UNESCO List of World Heritage in Danger in 2004.

The ICC-Angkor's twentieth anniversary provides us with an opportune moment to take stock of the outcomes so far achieved and reflect on how we should address the remaining, and new, challenges that we will face in the decade to come. Better harmony between the safeguarding of the site and sustainable development, the main theme of the ICC-Angkor, is gaining more relevance than ever. Managing the impact of the dramatic increase in the number of tourists and the need for effective water management to prevent damage caused by climate change will also present us with tremendous challenges. Other topics, such as encouraging community involvement and the upgrading of conservation skills and techniques (including the use of innovative technology, enhanced training and capacity building), are still to be fully addressed, too.

In addressing these challenges, collectively and internationally, the ICC-Angkor should continue to take an important and leading role and seek to enhance its coordinating functions. Japan, together with other partners, is prepared to continue to work ardently at the ICC-Angkor to manage the long-term conservation and sustainable development of the area in, and around, the Angkor site.

We sincerely hope the preservation and development work we have undertaken can secure the Angkor site as a spiritual pillar for a developing Cambodia and that it will continue to attract people from all over the world.



Southern gate of Angkor Thom



INTRODUCTION

B About the ICC-Angkor

Will we ever be able to talk about happiness like people who love Angkor talk about it? The myth, the mystery of a universally fascinating site are words that spring to mind. But how to understand the solicitude, if not affection the site has been given for 20 years. The countries, numerous, rushed to its bedside, at a time when the area was mined, the forest under threat and its monuments almost abandoned.

They came, they are still here and others, uninterruptedly, have joined them. The International Co-ordinating Committee for Angkor (ICC-Angkor) has played a role in the extraordinary success of this tremendous undertaking. I have been attending since the founding Tokyo Conference and I must speak the truth, if the Committee has been strengthened from the beginning, and that early on it undertook decisive achievements for its future and that the past two decades have not altered its dynamic, it is because it has had the opportunity to be constantly, efficiently and dedicatedly supported.



AZEDINE BESCHAOUCH
MEMBER OF THE *INSTITUT DE FRANCE*
PERMANENT SCIENTIFIC SECRETARY
OF THE ICC-ANGKOR

On the French side, two personalities, one from the Ministry of Foreign Affairs, the other that of Culture and Communication, committed fully from the onset for Angkor and fortunately continue to do so. At the ICC we all know their names (Francine d'Orgeval and Bruno Favel); may they continue for long to exude, as they have been, a positive image of France.

On the Japanese side, two other characters have also shown decisive action. On the one hand, His Excellency Mr. Yukio Imagawa, Co-chairman of the ICC who has, if I can say so, been a precursor of the ICC. On the other hand His Excellency Mr. Katsuhiko Shinohara who, and this is a first, chaired the Technical Sessions between 2001 and 2003 and the Plenary Sessions of the ICC from 2007 until 2009.

Obviously, the list of the ICC benefactors is long and these are just remarkable examples.

**Long Live
our ICC-Angkor !**



Bruno Favel, Mounir Bouchenaki and Francine d'Orgeval decorated by H.E. Dr. Sok An



M. Yukio Imagawa



M. Katsuhiko Shinohara



ANNE LEMAISTRE
UNESCO REPRESENTATIVE
IN CAMBODIA

A The ICC-Angkor and UNESCO

To celebrate 20 years since the establishment of the International Co-ordinating Committee for Angkor, André Malraux's words still echo in our memories. Words he declared at UNESCO on 8 March 1960 on the occasion of the first international campaign for the safeguarding of the Nubian monuments and which later fed major international safeguarding programmes spearheaded by UNESCO.

“For the first time humanity has discovered a universal language, art. We clearly feel its power though we are not familiar with its nature. This power would probably like this master piece of art, which humanity is for the first time becoming aware of, bring to us the most stunning victory of human achievements over death...If UNESCO tries to save the Nubian monuments it is because they are under immediate threat. It would obviously do the same with other major remains such as Angkor or Nara if they were similarly threatened.”

The Nubian momentum has inspired our determination and this premonitory text marked the moment to take action for Angkor.

Before the establishment of the ICC-Angkor, several readiness activities were carried out by the Angkor-engaged stakeholders: Technical field visits by experts, the drafting of a nomination file to the World Heritage List, an zoning and environmental management plan, etc. On 1 September 1989 at a meeting at the UNESCO

head office in Paris with the Director General, Mr. Federico Mayor, His Majesty, the Prince NORODOM Sihanouk, as head of State, addressed an official request calling on UNESCO to see to the international coordination endeavour for the safeguarding of the Angkor monuments.

The Kingdom of Cambodia, France and Japan, the latter two being deeply committed to the safeguarding of the site, and UNESCO worked out an innovative scheme bringing together all the Angkor-stakeholders to better serve the Kingdom of Cambodia and to secure the transfer of knowledge to younger generations of Cambodian professionals.

Together with Professor Azedine Beschouch, to whom I express my deepest admiration, I have had the honour and privilege to serve the International Co-ordinating Committee for Angkor since its establishment and I may draw from this experience that a joint, clear and ethical vision and an unrelenting political will of all parties, a collegial implementation, as well as a human solidarity driven by the same passion for Angkor have been the required conditions for the success of this model of international cooperation which ultimately works for peace.



© Role and Operations of the ICC-Angkor

Role

The ICC-Angkor is an international coordinating mechanism for the assistance provided by different countries and organisations for the safeguarding and development of the historic site of Angkor.

In order to fulfil its role, the ICC-Angkor is kept informed about scientific projects or development operations undertaken on the site and in the Siem Reap-Angkor region. It sees to the consistency of the various projects and defines the technical and financial standards required when necessary. It highlights, when needed, any points requiring the attention of concerned parties.

The ICC-Angkor implements procedures to undertake assessments and follow-up of scientific, conservation and development projects for the Angkor site.

The ICC-Angkor is coordinating the preparation of a methodological document on the ethics and practice of conservation at Angkor (conservation, showcasing and development): the Charter for Angkor.



PHILIPPE DELANGHE
UNESCO CULTURE
PROGRAMME SPECIALIST



CHAU SUN KERYA
SPOKESWOMAN AND ADVISOR
TO THE APSARA NATIONAL
AUTHORITY

Operations

The ICC-Angkor holds two sessions a year, one at the plenary level and one at the technical level.

The Plenary Session of the ICC-Angkor examines general policy matters, determines central priorities and approves new project proposals. It normally holds one meeting per year at the level of Ambassadors. The Technical Session of the ICC-Angkor also meets once a year and is responsible for the follow-up of the different projects, activities and research carried out by operators intervening at the site of Angkor.

In addition, **two ad hoc group of experts** (for conservation and sustainable development) are operational. The mandates of these groups are to examine any technical question and to give guidance using recommendations on the implementation of projects. Composed of four experts in conservation and three in sustainable development, the groups of experts are independent of each other. Finally, so-called **Quadripartite Meetings** are organized periodically between France, Japan, the Royal Government of Cambodia and UNESCO in order to examine technical matters concerned with the functioning of the ICC-Angkor.



Meeting of the ICC-Angkor, 2009

D List of the Ad hoc Experts

The **ad hoc expert group for conservation** has been active since the early years of the ICC-Angkor, leading a very open debate process among the archaeological and architectural teams of the different countries. Legitimized by visiting the sites frequently, asking questions and offering suggestions, this group has enabled the ICC-Angkor to achieve, with the support of the APSARA National Authority, a genuine consensus on the philosophy and conservation methods prevailing at Angkor. The **ad hoc expert group for sustainable development** has been operational since 2006. The group makes available its members' expertise in the broad field of development, from tourism management and urban planning to agriculture.

Former members of the ad hoc experts group:

Hiroyuki SUZUKI
Tetsuji GOTO
Pierre GRARD
François HOULLIER

THE AD HOC EXPERT GROUP FOR CONSERVATION



MOUNIR BOUCHENAKI holds Ph.D. in Archaeology and Ancient History. He was elected Director-General of ICCROM (International Centre for the Study of the Preservation and Restoration of Cultural Property) in November 2005 and until 2011. He has a long career record with UNESCO (from 1982 to 2005), where he served as Director of the Division of Cultural Heritage, Director of the World Heritage Centre and Assistant Director-General for Culture. From 1974 to 1982, he also served as Director of Fine Arts, Monuments and Sites under the Algerian Ministry of Information and Culture. Since 2005, he has been a member of the ICC-Angkor ad hoc expert group for conservation.



GIORGIO CROCI is a Professor of Structural Engineering at La Sapienza University in Rome, where he graduated with a degree in Civil Engineering in 1960. He has been a member of the UNESCO ad hoc expert group since 1994. As a coordinator of an international group of experts, he prepared a document entitled *Recommendations for the Conservation and Preservation of Angkor Monuments*, which became the *Charter for Angkor*. From 1995 to 2005 he was Chairman of the International Scientific Committee for Analysis and Restoration of Structures of Architectural Heritage at ICOMOS (International Council of Monuments and Sites). Presently, he serves as its Honorary Chairman. He is also a UNESCO international expert for sites, such as the Pyramid Plateau, Leaning Tower of Pisa, Aksum, etc. In March 2000, he was awarded by the *Académie d'Architecture* (Paris) with the silver grand medal as the individual who has the most contributed globally to the safeguarding of world's heritage. In 2008, he was awarded by the Italian President Giorgio Napolitano the national gold medal for Cultural and Historic merits.



PIERRE-ANDRÉ LABLAUDE is a Government Architect. He received his degree at the *Centre d'études supérieures d'histoire et de conservation des monuments anciens*. He is Chief Architect and Inspector General of Historical Monuments. Over the years, Pierre-André Lablaude has developed a rare heritage specialization focusing in the conservation and restoration of historic gardens and landscapes. As a member of the National Commission for Historic Monuments, he has authored a number of publications, while holding specialized heritage teaching posts in France and abroad. Since 1995, he has also participated in numerous expert missions for the French Ministry of Foreign Affairs and UNESCO and is regularly involved in this capacity at the international level on various World Heritage monuments and sites.

THE AD HOC EXPERT GROUP FOR SUSTAINABLE DEVELOPMENT



KENICHIRO HIDAKA is a Professor of Architectural History in the Ph.D. programme of World Cultural Studies, at the University of Tsukuba (Japan), where he also serves as the Director. He holds a Ph.D. in Architecture from the University of Tokyo. Since 1990, he has been directing the Surveying Project of Hagia Sophia, Istanbul, the partial results of which were published and received the Architectural Historians of Japan Annual Prize. He is active in ICOMOS-Japan as a voting member for Japan on the International Scientific Committee for the Analysis and Restoration of Structures of Architectural Heritage (ISCARSAH). In 2009, succeeding Professor Hiroyuki Suzuki, he became a UNESCO ad hoc expert group member for the ICC-Angkor.



JEAN-MARIE FURT completed a training in both Law and Management, culminating in a PhD and aggregation. He is an academic career while simultaneously exercising advisory functions in tourism development. In this context he published extensively on the relationship between heritage and tourism, while participating, at the request of the territories, in the creation of development patterns, management plans and various studies on the tourism economy and sustainable territorial management. He is a member of many scientific advisory organisms working for the protection of natural areas and cultural development. He has served as an ad hoc sustainable development expert for the ICC-Angkor since 2007.



BERNARD HUBERT is an Emeritus senior scientist at the National Institute for Agricultural Research (INRA) and Professor at the Advanced School for the Social Sciences (EHESS), he originally trained as an ecologist, but his work has since broadened as he has questioned the role of human activities in this setting, seeking to understand the contribution of the social sciences to issues in the life sciences. This wide-ranging experience led him to become Director of the Agrarian Systems and Development Department at INRA from 1994 to 2003 and the Scientific Director at INRA for Social Sciences and Applied Mathematics and Informatics from 2003 to 2007. From mid-2007 to mid-2010 he was in charge of a joint venture between INRA and CIRAD, the French Initiative for International Agricultural Research (FI4IAR). Since April 2009, he has served as the President of Agropolis International in Montpellier, France. He has participated in the ICC-Angkor as a sustainable development expert since 2010, representing France.



SHINJI TSUKAWAKI is a Professor of Geoscience at the Institute of Nature and Environmental Technology, Kanazawa University, Japan. He has worked for the geological development of Japanese Islands as a marine and sedimentary geologist. He has also worked in Cambodia since 1992 leading scientific researches on both the geo-environmental development and biodiversity sustainability of the Tonle Sap Lake and the environmental pollution and deterioration of the Angkor Archaeological Park. His goal is to realize sustainable and harmonized environment between cultural heritage, natural environment and local society. Shinji Tsukawaki holds a Doctor of Science Degree in Geology and Palaeontology from Tohoku University, Japan. In 2012, he became a UNESCO ad hoc expert for the ICC-Angkor.

LIST OF
THE ICC-ANGKOR
CO-CHAIRMEN

FOR FRANCE

Ambassadors

(Co-chairmen at Plenary Sessions)

1. Philippe COSTE (1991-1994)
2. Gildas LE LIDEC (1994-1998)
3. André LIBOUREL (1998-2003)
4. Yvon ROÉ D'ALBERT (2003-2007)
5. Jean-François DESMAZIÈRES (2007-2010)
6. Christian CONNAN (2010-2012)
7. Serge MOSTURA (2012-)

Counsellor for Cooperation and Cultural Affairs

(Co-chairmen at Technical Sessions)

1. Gilles CARASSO (1994-1998)
2. Jacques GÉRARD (1998-2002)
3. Dominique DORDAIN (2002-2006)
4. Dominique FRESLON (2006-2010)
5. Catherine MANCIP (2010-2012)
6. Romain LOUVET (2012-)

FOR JAPAN

Ambassadors

(Co-chairmen at Plenary Sessions)

1. Yukio IMAGAWA (1991-1996)
2. Shohei NAITO (1996-1997)
3. Masaki SAITO (1997-2000)
4. Gotaro OGAWA (2000-2003)
5. Fumiaki TAKAHASHI (2003-2007)
6. Katsuhiko SHINOHARA (2007-2009)
7. Masafumi KUROKI (2009-2013)
8. Yuji KUMAMARU (2013-)

Ministers

(Co-chairmen at Technical Sessions)

1. Kenji YAMAMOTO (1997-1999)
2. Eiji YAMAMOTO (1999-2001)
3. Katsuhiko SHINOHARA (2001-2004)
4. Susumu INOUE (2004-2006)
5. Norio MARUYAMA (2006-2009)
6. Hiroshi KAWAMURA (2009-2012)
7. Yoshihiro HIGUCHI (2012-)



Faces Tower - Bayon

THE APSARA NATIONAL AUTHORITY



Aerial view of Pre Rup Temple



Ride on elephants - Southern door of Angkor Thom

The establishment of the APSARA National Authority

Cambodia's future rests mostly with Angkor: a geographical area, an archaeological site and a cultural place. Some of the main components essential for the survival of the nation interact at these crossroads of ancient and modern civilisations. The Angkorian heritage is rich in first class economic and human potential, which may lay the foundations for and provide the necessary protection of Khmer heritage for future generations.

Thereby, it is only within the framework of sustainable development that cultural heritage can be efficiently protected and developed. The main challenge that the Royal Government is facing consists in turning diverging, when not clashing, interests into sustainable resources that will serve the needs of the Angkor region and in turn those of the nation. This is the reason the Government established the APSARA in 1995, which was put in charge of protecting the site and developing the Angkor region.

The establishment of the Authority was the first concrete step taken by the Government towards sustainable development, along with the protection and promotion of cultural heritage. Beyond Siem Reap and Angkor, the establishment of the Authority has served as an example of a fundamental reform. The APSARA National Authority is a body adapted to modern management and originates from Khmer cultural funds. It operates within a Government framework with an inter-ministerial structure based on the willingness to bring administrative practises towards a fruitful and efficient partnership with the international community.

This Authority has since then been in charge at Angkor of the drafting and implementation of conservation, rehabilitation and development planning and of the coordination of activities at the national and international levels. This legal and institutional framework has changed the picture. Cambodia now plays an active role in the management of Angkor, a national and global heritage for future generations. It has answered the call of the Cambodian people, voiced through its King and the international community.

At the outset, the APSARA National Authority consisted of six departments, of which five were managed by a Deputy Director general: The Department of Central Administration, the Department of Archaeology and Monuments, the Department of Tourism Development in Angkor, the Department of Economic and Social Development in the Siem Reap/Angkor area and the Department of Urban Planning and Development in the Siem Reap/Angkor area. The sixth Department placed under the direct supervision of the Director general was the Department for Research and Khmer Culture. The Centralised administration was directly controlled by the Director General.

Another main objective has been to comprehensively train Cambodians in all fields of research, conception and management under the Authority's responsibility. There was at the time a real lack of qualified human resources in Cambodia, emphasising the necessity of such an effort for the management of Angkor and of all Khmer heritage. The APSARA National Authority committed to include provisions for training programmes in each of its projects from design to implementation. On-going field operations of international co-operation have respected this framework by including this indispensable aspect. Within the Authority, the structures and methodologies have been designed so that they allow for the gradual transfer of skills to Cambodians.

This training endeavour will provide for a generation of young Cambodian professionals who will be able to perform all current specialised tasks and overcome any forthcoming challenges.



VANN MOLYVANN
FORMER PRESIDENT OF THE APSARA
NATIONAL AUTHORITY





Archaeological excavation - Phnom Kulen (ADF)

CHAPTER 1
TEN YEARS OF SAFEGUARDING
(1993-2003)

A Research Projects

From a **scientific point of view**, the restoration programmes were accompanied by the strong desire to enhance our knowledge of the history of the restored monuments. This is particularly evident in the programmes conducted by the **École française d'Extrême-Orient** (EFEO) on the **Terrace of the Leper King**, the **Northern Perron of the Elephant Terrace** and the **Bapuon**, which have fine-tuned appreciably the chronology of these three monuments. This is also true at the Bayon where the **Japanese Government Team for Safeguarding Angkor** (JSA) has conducted many archaeological excavations and given particular attention to studying the meaning of the faces sculpted on the towers.

An extension of this work was found in an event that became annual between 1996 and 2004 -the International Symposium for the Safeguarding of the Bayon. Along with other initiatives, such as the "Angkor and Water" colloquium in 1995, the creation of the **International Documentation Centre on Angkor** in 1997 and the **Centre for Khmer Studies** in 1999, the symposium series helped give rise to a genuine scientific forum of exchange, enabling the sharing of experiences among experts representing diverse fields of specialization.

From the **standpoint of safeguarding and development**, a great deal of effort has been put into cataloguing the Khmer archaeological heritage. The EFEO has conducted a comprehensive inventory of the 6,000 artefacts in the Angkor Conservancy Office collections. It has also conducted a systematic inventory of the archaeological sites in the southern zone of Angkor.

Other operations open new perspectives with regard to **developing and showcasing the site for tourists**, on a multi-tiered scale - monument, site and territory:

- With regard to the monuments, for example, the findings of archaeological excavations on the Tani pottery site conducted by the **Nara Institute**, **Sophia University** and the **APSARA National Authority**, are expected to lead to the implementation of a specific development project to enable visitors to discover the ceramics industry at Angkor;
- With regard to **Angkor Thom's** monuments, research work carried out by the **EFEO** and complemented by the findings of archaeological work by the **JSA** team at **Prasat Suor Prat**, are radically changing our understanding of the ancient urban layout of Angkor Thom City;
- At the scale of the whole Angkor territory, studies led by the **University of Sydney** on territory organization and layout are focusing for the first time on the urban development of this vast area. This provides a fresh look at the ancient settlements and lifestyles of those who once lived in this region.

Restoration of the Northern Library - Bayon Temple (JASA)



B Programme for the Preservation, Restoration and Enhancement of the Monuments

The Angkor monuments were left in a state of total abandon for nearly twenty years. From 1972 to 1991, with the exception of work done on Angkor Wat by the **Archaeological Survey of India** (1986- 1991) and on the Bayon by a technical team from Poland (1987-1991), there was no international team operating on the site. As for the Angkor Conservancy Office, it had no means whatsoever to resume safeguarding operations. Nevertheless, in 1991, a number of international appraising missions led to the identification of emergency situations and prepared for start-up operations on the first restoration work sites.

The programme for the preservation, restoration and enhancement of the Angkor monument site that the Cambodian authorities tabled at the Tokyo intergovernmental conference was a proposal for action in response to this exceptional situation which has been met quickly with considerable and long-term success.

Safeguarding Monuments of Exceptional Value

Over a ten-year period, the international community has maintained its firm commitment to the Cambodian authorities to provide funding assistance for monument restoration, preservation and enhancement programmes. Eleven different countries took on fourteen of the principal monuments, making Angkor the most extensive archaeological work site in operation in the world.

The **World Monuments Fund** returned back to Angkor in 1991. It undertook a non-invasive conservation programme on the **Preah Khan** temple and has since extended its operations to include similar programmes for **Ta Som** and **Neak Poan**.

Keenly interested in resuming work on the site for historical reasons, the **École française d'Extrême-Orient** focused its efforts on finishing the work sites that it had been forced to abandon in 1972

due to the political situation. Restoration of the **Terrace of the Leper King** began in 1993 and concluded in 1996, while that of the **Northern Perron of the Elephant Terrace** concluded in 1999. The immense **Bapuon** work site that opened between 1993 and 1994 was completed in 2011.

The **Japanese Government for the Safeguarding of Angkor** (JSA) commenced its intervention programme in November 1995. It focused on the restoration of the northern library of **Bayon** (brought to a successful conclusion in 1999); formulation of a master plan for the safeguarding of this monument (finalized in 2005); restoration of Tower N1 of the **Prasat Suor Prat** group; and restoration of the northern library of Angkor Wat (started in 1999 and completed in 2005).

Backed by Italian funds-in-trust with UNESCO, an engineering and design office in Rome, Italy-*Ingegneria Geotecnica e strutturale* began working on the **Pre Rup** temple in 1996. The APSARA National Authority contributed USD 60,000 to this project.

The Royal Angkor Foundation of **Hungary** carried out intervention work on the **Preah Ko** temple from 1994 to 1996 with funding assistance from the **German Government**.

The **German Apsara Conservation Project** has worked to restore the sandstone platform, perform stone conservation operations, conduct research on the polychromy, and consolidate another tower.

Between 1995 and 1999, the Indonesian Team for Safeguarding Angkor (Indonesia) took on the restoration of three gates of the **Royal Palace**, working first on the southeast gate, then the northeast gate, and finally the east gate.

Restoration work on the **Chau Say Tevoda** temple started in 1998 and was achieved in 2008, under the direction of the Chinese Team for Safeguarding Angkor (**China**).



Neak Poan Temple

The year 2001 was marked by the start of the **Bantey Srei** Conservation Project implemented by a team from **Switzerland**. Its main focus was on protection and presentation of the Banteay Srei temple and its perimeter area and gaining greater insight into it.

The **Archaeological Survey of India** (India) signed a memorandum of understanding with the APSARA National Authority in 2002, providing for a cooperation arrangement on the conservation of an emblematic temple: **Ta Prohm**.

The temple that has remained the centrepiece of attention is **Angkor Wat**. The complex has evolved over the years into a truly international work site with five different teams now working on it:

- The first intervention made in the framework of the international safeguarding programme dates back to 1993 when the *Institut géographique national* (**France**) set up a topometric surveillance system on the central block. In 1996, the INDELEC Company (**France**) installed lightning rods on each of the five central towers.
- Since 1997, the German team from the **Cologne Facchochschule** (**Germany**) has worked on the conservation of thousands of apsara images and outstanding bas-reliefs in Angkor Wat.
- Restoration work on the northern library of Angkor Wat by the **JSA** team (**Japan**) began in 1999.
- The southern lane of the Angkor Wat western causeway-dike was restored by the EFEO in 1969. In 1994, Sophia University (Japan) offered to complete restoration work by caring for the northern lane of the same causeway. The project started in 2000 with private funding from Japan, and was achieved in 2007.
- In 2001, the **World Monuments Fund** began a scientific investigation of the structural stability of the “Churning of the Sea of Milk” gallery.



- The **Ingegneria Geotecnica e Strutturale team** (**Italy**) took on the restoration of the embankment steps on the western moat of Angkor Wat of which a 60-meter section had collapsed in 1997. The work started in 2002, with co-funding provided by UNESCO (World Heritage Fund) and the APSARA National Authority.

In its capacity as “project owner”, the **APSARA National Authority** organized the first scientific and research coordinating seminar on the Angkor Wat temple in June of 2003.

Bas-reliefs
restoration
(APSARA/SCU/
GIZ)



Road renovation - Ta Prohm

⑥ Maintenance Programmes

The Angkor site includes forty or so major monuments and many other points of significant interest. Preserving a monument complex such as this cannot be achieved merely by implementing large-scale restoration programmes, even though these measures are obviously necessary due to the poor state of conservation in which many of the monuments were found. There must be a preliminary effort to diagnose their state of conservation and plans must be made for maintenance interventions.

At the start of the international programme, emphasis was placed on the need to develop a master plan for monument preservation and carry out a maintenance programme. A maintenance unit was established in 1997 to perform non-invasive operations on the monuments, such as emergency propping and uprooting vegetation.

Beginning in 2000, an archaeology survey unit was brought into being with responsibility for the following types of intervention:

- Archaeological appraisals;
- Rescue archaeology; and
- Implementation of heritage safeguarding background files for large-scale land management projects involving the subaquatic environment (Western Baray and Phnom Krom port) as well as mounds and reservoirs (airport).

D Training

The international community has been unwavering in its will, as clearly expressed in the Tokyo Declaration, to help the sovereign Cambodian people take over the safeguarding and development of the Angkor site. This has been fleshed out by the following achievements:

1. The creation of a **training component in all bilateral or multilateral operations** conducted at Angkor over the last ten years.
2. The awarding of **training fellowships** has enabled Cambodian management staff from the APSARA National Authority and conservation teams to take short training courses overseas (Germany, Indonesia, France, Japan, etc.) or with international organizations (such as ICCROM and SPAFA).
3. A reform of **university education** at the Faculties of Archaeology and Architecture of the Royal University of Fine Arts (URBA) was launched in 1993 and completed in 2007 by the Cambodian Ministry of Culture and Fine Arts and UNESCO, thanks to the UNESCO/Japan funds-in-trust.
4. The awarding of studentships has enabled many archaeology and architecture students to obtain a master's or postgraduate degree overseas (in places such as the French-speaking University of Alexandria - Egypt, United States, France, Japan, etc.).



Training on architectural measurement



Field visit - Preah Enkosei pagoda

As a means of recruiting qualified staff, the APSARA National Authority started the Ta Nei work site training school in 1999, in collaboration with ICCROM/UNESCO and SPAFA. This interdisciplinary programme spanned over five months and provided twenty participants with higher education qualifications. The most promising students have been recruited by the APSARA National Authority to strengthen its teams; subsequent Ta Nei programmes have been implemented by the Authority.

Since 2000, the APSARA National Authority has also had on secondment a specialized architect from France and an archaeologist from the *Institut national de recherches archéologiques préventives* (INRAP). One of their key missions is to deliver high calibre field-based training to young architects, archaeologists and engineers from the Department of Monuments and Archaeology.

E Community Participation

Angkor is a living site. In 1993, the five-year emergency plan formulated by the Cambodian authorities already mentioned provisions to involve the local communities living in the Archaeological Park of Angkor in the safeguarding of their cultural and natural environment. This was reaffirmed in 1994, when the province was classified as a socio-economic and cultural development zone.

There are many challenges including the following:

- Improve the standard of living of the communities;
- Control demographic pressure and the consequences thereof in terms of deforestation and urbanisation of the site;
- Provide schooling for the children; and
- Address the factors contributing to acculturation that are often exacerbated by rapid economic development.

The first project involving the inhabitants of the park began in 1995 and was carried out until 2000 by a team of United Nations Volunteers. A local NGO was then created in order to carry on this work.

Starting in 1999, the APSARA National Authority put in place a unit responsible for carrying out sociological and ethnological studies of the Angkor Archaeological Park communities.

In 2003, UNESCO, in cooperation with the APSARA National Authority and the Cambodian National Tourism Authority, undertook a pilot project for educator training. The mission of the educators is to prepare the communities within the park for the social, cultural and economic changes that accelerated tourism growth will bring, as well as to raise heritage protection awareness among the general population, tourists and tourism professionals. The French association AIDéTouS has been entrusted with implementation of the project.



Religious Ceremony - Angkor Wat

- 1/ Ride on oxcarts (APSARA)
- 2/ Health Program, Phnom Kulen (ADF)





Aerial view of the flooded forest - Tonle Sap

CHAPTER 2
A DECADE OF SUSTAINABLE DEVELOPMENT
(2003-2013)



BERNARD HUBERT AND JEAN-MARIE FURT
ICC-ANGKOR AD HOC EXPERTS ON SUSTAINABLE
DEVELOPMENT

The notion of sustainable development should be regarded as a moment in the history of the.... economic school of thought.

At the crossroads between reflections on societies and environmental concerns, the sustainable development notion was put forth by the United Nations in 1987 and since then has been included in the history of economic thinking. Based on three pillars—economic viability, ecological sustainability and social equity—one does not need to consider what is good for future generations but instead must prevent the creation of situations that may become irreversible and binding. This normative notion of sustainable development considers that limited natural resources are not found in nature, but in the techniques and social organisation patterns used to generate these resources.

Sustainable development at the ICC-Angkor, why?

In Cambodia and especially at Angkor, sustainable development has been clearly illustrated with the recent boom of the tourism industry. By bringing changes, tourism is at the core of underlying contradictions. This industry is often considered as “a necessary evil” which hinders or destroys traditional activities, although it also generates financial incomes accruing to the development and preservation of the sites. Hence it is necessary to reach a “more sustainable tourism”, although its morals or ethics leave little leeway for practical implementation.

As no ideal solutions have been found to solve these contradictions, case-by-case and technical solutions may consequently be used: tourism flow management, temporary closure of parts of the site, establishment of new tours or pricing regulations. But the main objective is to continue substantive work articulating three courses of action:

1. Support for the ICC-Angkor’s role in ensuring that all projects are presented upstream and are followed up on;
2. Inclusion of activities and all stakeholders within a project and avoid any direct opposition; and
3. Conception of a development within a larger vision of space and time, with the view that some projects develop slowly but methodically, and requires thinking in terms of tourism territories (site, city, lake, etc.) rather than in terms of the overall site.



Devatas - Southern gate of Angkor Thom



PROJECTS
IMPLEMENTED FROM
2003 TO 2013

SUSTAINABLE DEVELOPMENT PROJECTS

PAGE	TEAM	PROJECT	CONTACT
54		Khmer Habitat Interpretation Center	
55		Education on Heritage	Mr. KHUON Khun-Neay kaqc2004@yahoo.com
56		Design of land use and Registration plans	
57	• APSARA National Authority (Cambodia)	Improvement project of the North Baray (Jayatataka)	
58		Improvement project of the West Baray	Dr. HANG Peou hangpeou@yahoo.com
59		Improvement project of the Angkorian Hydraulic System	
60	• APSARA National Authority (Cambodia) • <i>Association des Amis d'Angkor</i> (France)	Water Development and Management in Angkor and Siem Reap	Mr. Pierre CLEMENT p.clement@arte-charpentier.com Dr. HANG Peou hangpeou@yahoo.com
61	• APSARA National Authority (Cambodia) • Heritage Training Center (Cambodia) • French Embassy in Cambodia (France) • <i>École de Chaillot</i> (France)	Heritage Training Centre: Regional Training in Heritage Skills (Cambodia, Laos and Vietnam)	Ms. SISOWATH MEN Chandevy smchandevy@gmail.com Mr. Sylvain ULISSE sylvain.ulisse@gmail.com
62	• APSARA National Authority (Cambodia) • New Zealand Ministry of Foreign Affairs and Trade (New Zealand)	Angkor Participatory Natural Resource Management and Livelihoods Programme (APNRM&L)	Mr. KHUON Khun-Neay kaqc2004@yahoo.com Mr. Brent RAPSON brent.rapson@mfat.govt.nz

63	<ul style="list-style-type: none"> • APSARA National Authority (Cambodia) • UNESCO/Australia Funds-in-Trust (Australia) • Godden Mackay Logan - GML (Australia) 	Angkor Heritage Management Framework (Angkor HMF)	<p>Dr. HANG Peou hangpeou@yahoo.com</p> <p>Dr. Georgina LLOYD georgina.lloyd@sydney.edu.au</p> <p>Mr. Blaise KILIAN b.kilian@unesco.org</p>
64	<ul style="list-style-type: none"> • APSARA National Authority (Cambodia) • Kanazawa University (Japan) 	Environmental Research in Angkor Region and its Surroundings (ERDAC Programme)	<p>Dr. Shinji TSUKAWAKI shinji@se.kanazawa-u.ac.jp</p> <p>Dr. HANG Peou hangpeou@yahoo.com</p>
65		Evaluation of Mechanisms Sustaining the Biodiversity in the Tonle Sap Lake (EMSB Programme)	
66	<ul style="list-style-type: none"> • International Center for the Study of the Preservation and Restoration of Cultural Property (ICCROM) 	Archaeological Training at Ta Nei Temple	<p>Ms. Pilar HOUSE ph@iccrom.org</p> <p>Mr. Simon WARRACK swarrack@gmail.com</p>
67		Research and Conservation Project for World Heritage Sites	
68	<ul style="list-style-type: none"> • Siem Reap Water Supply Authority (Cambodia) • Japan International Cooperation Agency - JICA (Japan) 	Siem Reap Water Supply Expansion Project	<p>Mr. SEAK Pengkeang seakpengkeang.cm@jica.go.jp</p> <p>Mr. Uchida TOGO uchida.togo@jica.go.jp</p>
69	<ul style="list-style-type: none"> • University of Palermo (Italy) 	Training International Action for Conservation and Restoration of Iconographic Assets	<p>Pr. Giovanni RIZZO giovanni.rizzo@unipa.it</p> <p>Lorella PELLEGRINO pelegelino@gmail.com</p> <p>CHAU SUN Kérya cshkapsara@gmail.com</p>

RESEARCH, RESTORATION AND CONSERVATION PROJECTS

PAGE	TEAM	PROJECT	CONTACT
72	<ul style="list-style-type: none"> Archaeological Survey of India - ASI (India) 	Conservation and Restoration of Ta Prohm Temple Complex	Mr. D. S. SOOD dssood2006@gmail.com
73	<ul style="list-style-type: none"> APSARA National Authority (Cambodia) 	Research on Iron and Iron Smelting Sites	Mr. KHIEU Chan khieuchan@gmail.com
74		Research on Rock Art in the Greater Angkor	Mr. HENG Than hengthan10@gmail.org
75	<ul style="list-style-type: none"> APSARA National Authority (Cambodia) Swiss Agency for Development and Cooperation - SDC (Switzerland) 	Conservation of Banteay Srei Temple	Ms. CHAU SUN Kerya cskacacya@gmail.com
76	<ul style="list-style-type: none"> APSARA National Authority (Cambodia) Deutsche Gesellschaft für Internationale Zusammenarbeit - GIZ (Germany) 	APSARA Stone Conservation Unit and Training Programme (SCU)	Mr. LONG Nary longnary@hotmail.com Ms. Josephin ROESLER josephin.roesler@giz.de
77	<ul style="list-style-type: none"> APSARA National Authority (Cambodia) Ecole française d'Extrême-Orient - EFEO (France) 	Restoration of the Western Mebon Temple	Mr. HANG Peou hangpeou@yahoo.com Mr. Pascal ROYERE pascal.royere@efeo.net

78	<ul style="list-style-type: none"> • APSARA National Authority • École française d'Extrême-Orient - EFEO • University of Sydney, Robert Christie Research Centre - USYD • <i>Société Concessionnaire d'Aéroport</i> - SCA • Hungarian Indochina Company - HUNINCO • Archaeology and Development Foundation - ADF • Japan-APSARA Safeguarding Angkor - JASA • World Monuments Fund - WMF 	Khmer Archaeology LiDAR Consortium (KALC)	<p>Mr. IM Sokrithy imsokrithy@hotmail.com Dr. Damian EVANS damian.evans@sydney.edu.au</p>
79	<ul style="list-style-type: none"> • APSARA National Authority (Cambodia) • <i>Ingegneria Geotecnica e Strutturale</i> (Italy) 	Restoration of Angkor Wat Temple	Mr. Valter Maria SANTORO iges@igessnc.com
80	<ul style="list-style-type: none"> • UNESCO/Italy Funds-in-Trust 	Restoration of Pre Rup Temple	Mr. Philippe DELANGHE p.delanghe@unesco.org
81	<ul style="list-style-type: none"> • APSARA National Authority (Cambodia) • Nara National Research Institute for Cultural Properties (Japan) 	Conservation of the Western Prasat Top	<p>Dr. Hiroshi SUGIYAMA sugiyama@nabunken.go.jp Dr. Tomo ISHIMURA tomoishi@nabunken.go.jp Ms. Yuni SATO yuni@nabunken.go.jp</p>
82	<ul style="list-style-type: none"> • APSARA National Authority (Cambodia) • National Research Institute for Cultural Properties, Tokyo (Japan) 	Joint Research Project on Conservation of Ta Nei Temple	<p>Ms. FUTAGAMI Yoko futa@tobunken.go.jp Ms. SATO Katsura katsuras@tobunken.go.jp</p>
83	<ul style="list-style-type: none"> • APSARA National Authority (Cambodia) • <i>Institut National de Recherches Archéologiques Préventives</i> - INRAP (France) • Cambodia Airports (Cambodia) 	Preventive Archaeology at Siem Reap Airport Area	<p>Mr. Pierre BÂTY pierre.baty@inrap.fr Mr. KHEK Norinda norinda.khek@cambodia-airports.aero</p>
84	<ul style="list-style-type: none"> • APSARA National Authority (Cambodia) • Institute of Southeast Asian Studies (Singapore) 	The Excavation of a Brown Glazed Stoneware Kiln Site at Torp Chey	<p>Dr. EA Darith eadarith@yahoo.com Dr. John MIKSIC seajnm@nus.edu.sg</p>

85	<ul style="list-style-type: none"> • APSARA National Authority (Cambodia) • Silpakorn University, Thai Fine Arts Department (Thailand) • Chulachomklao Royal Military Academy (Thailand) 	Living Angkor Road Project (LARP)	<p>Mr. IM Sokrithy imsokrithy@hotmail.com Dr. SURAT Lertlum suratbrb@gmail.com</p>
86	<ul style="list-style-type: none"> • APSARA National Authority (Cambodia) • University of Sydney (Australia) • <i>École Française d'Extrême Orient</i> (France) 	Archaeological Research on Greater Angkor	Prof. Roland FLETCHER roland.fletcher@sydney.edu.au
87	<ul style="list-style-type: none"> • Chinese Academy of Cultural Heritage (China) 	Conservation and Restoration at Chau Say Tevoda Temple	Mr. LIU Jianhui 446936871@qq.com
88	<ul style="list-style-type: none"> • Chinese Government Team for Safeguarding Angkor - CSA (China) 	Conservation and Restoration at Ta Keo Temple	Mr. JIN Zhaoyu 382634790@qq.com
89		Sculpture Conservation-Restoration Workshop of the National Museum of Cambodia	Mr. Bertrand PORTE bertrandporte@yahoo.fr
90		From Yaçodharapura to Angkor Thom, Archaeology of the Capital Angkor: Research in Urban Archeology	Mr. Jacques GAUCHER jacques_gaucher@yahoo.com
91		Archaeological mission at Koh Ker	Mr. Eric BOURDONNEAU eric.bourdonneau@efeo.net
92	<ul style="list-style-type: none"> • <i>École française d'Extrême-Orient</i> - EFEO (France) 	Franco-Khmer Archaeological Mission on the Angkorian Territory Development (MAFKATA)	Mr. Christophe POTTIER christophe.pottier@efeo.net
93		Yaçodharâçrama Project: Archaeological and epigraphic studies on the Âçrama of Yaçovarman the 1st	Mr. Dominique SOUTIF dominique.soutif@gmail.com Ms. Julia ESTEVE estev.julia@yahoo.fr Mr. Alan KOLATA a-kolata@uchicago.edu
94		Restauration du temple du Bapuon	Mr. Pascal ROYERE pascal.royere@efeo.net
95	<ul style="list-style-type: none"> • National Federation of UNESCO Associations in Japan - NFUAJ (Japan) 	Angkor Community Learning Centre Project	Mr. NONG Vutha vutha@unesco.or.jp
96		Restoration Project of <i>Naga</i> and <i>Shingha</i> Images at the Causeway and Outer Gallery of Bayon	

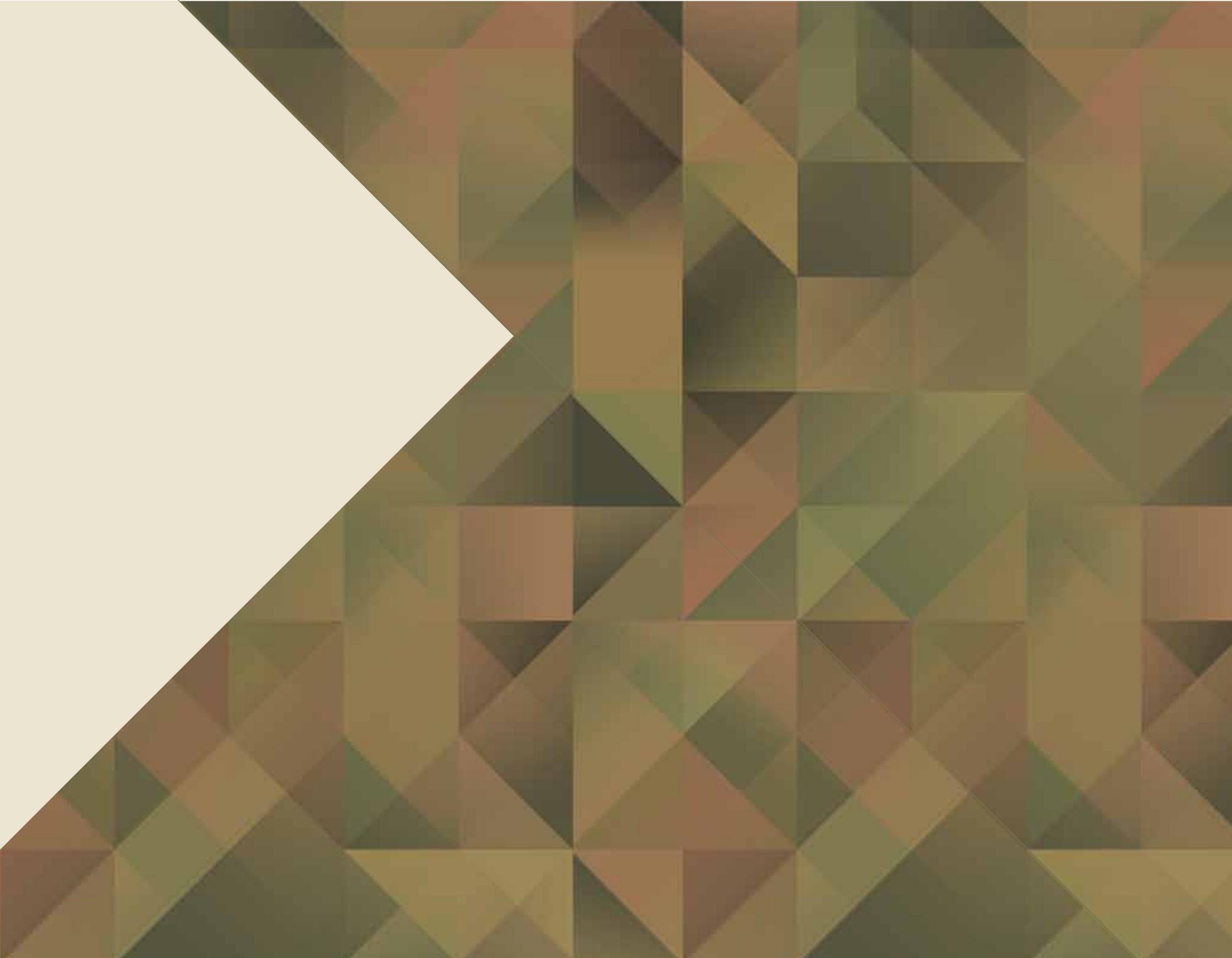
97	<ul style="list-style-type: none"> • German Apsara Conservation Project - GACP (Germany) 	<p>Conservation of Bas-reliefs at Angkor Wat</p> <hr/> <p>Conservation of Scattered Objects at Koh Ker and Beng Malea</p> <hr/> <p>Conservation of Stucco in Angkor</p> <hr/> <p>Investigation into and preservation of polychromy and wall paintings in brick temples in Angkor and Koh Ker</p> <hr/> <p>Investigation and Conservation of Srah Damrei Skulptures on Phnom Kulen</p> <hr/> <p>Bakong Conservation Project (brick towers)</p> <hr/> <p>Phnom Bok Lingam Conservation Project</p> <hr/> <p>Prasat Kravan Conservation Project (Sandstone reliefs, Inscriptions, Bas-reliefs inside, Polychromy)</p> <hr/> <p>Preah Ko Conservation and Restoration Project</p>	<p>Prof. Dr. Hans LEISEN, hans.leisen@fh-koeln.de</p>
98	<ul style="list-style-type: none"> • Japan/APSARA Safeguarding Angkor - JASA (Japan/Cambodia) • UNESCO/Japan Funds-in-Trust 	<p>Safeguarding of the Bayon Temple of Angkor Thom</p>	<p>Prof. Takeshi NAKAGAWA nakag@waseda.jp info@angkor-jsa.org Mr. Philippe DELANGHE p.delanghe@unesco.org</p>
99	<ul style="list-style-type: none"> • Laboratory of Physical and Environmental Geography - GEOLAB (France) • Blaise Pascal University (France) • <i>Centre National de la Recherche Scientifique</i> - CNRS (France) 	<p>Accelerated Sandstone Decay induced by Forest Clearance around Ta Keo Temple</p>	<p>Prof. Marie-Françoise ANDRÉ m-francoise.andre@univ-bpclermont.fr</p>
100 101	<ul style="list-style-type: none"> • Sophia University Angkor International Mission (Japan) 	<p>Research, Restoration and Conservation at Banteay Kdei</p> <hr/> <p>Research, Restoration and Conservation at Angkor Wat</p>	<p>Mr. Satoru MIWA satoru@online.com.kh sophia_center@online.com.kh</p>

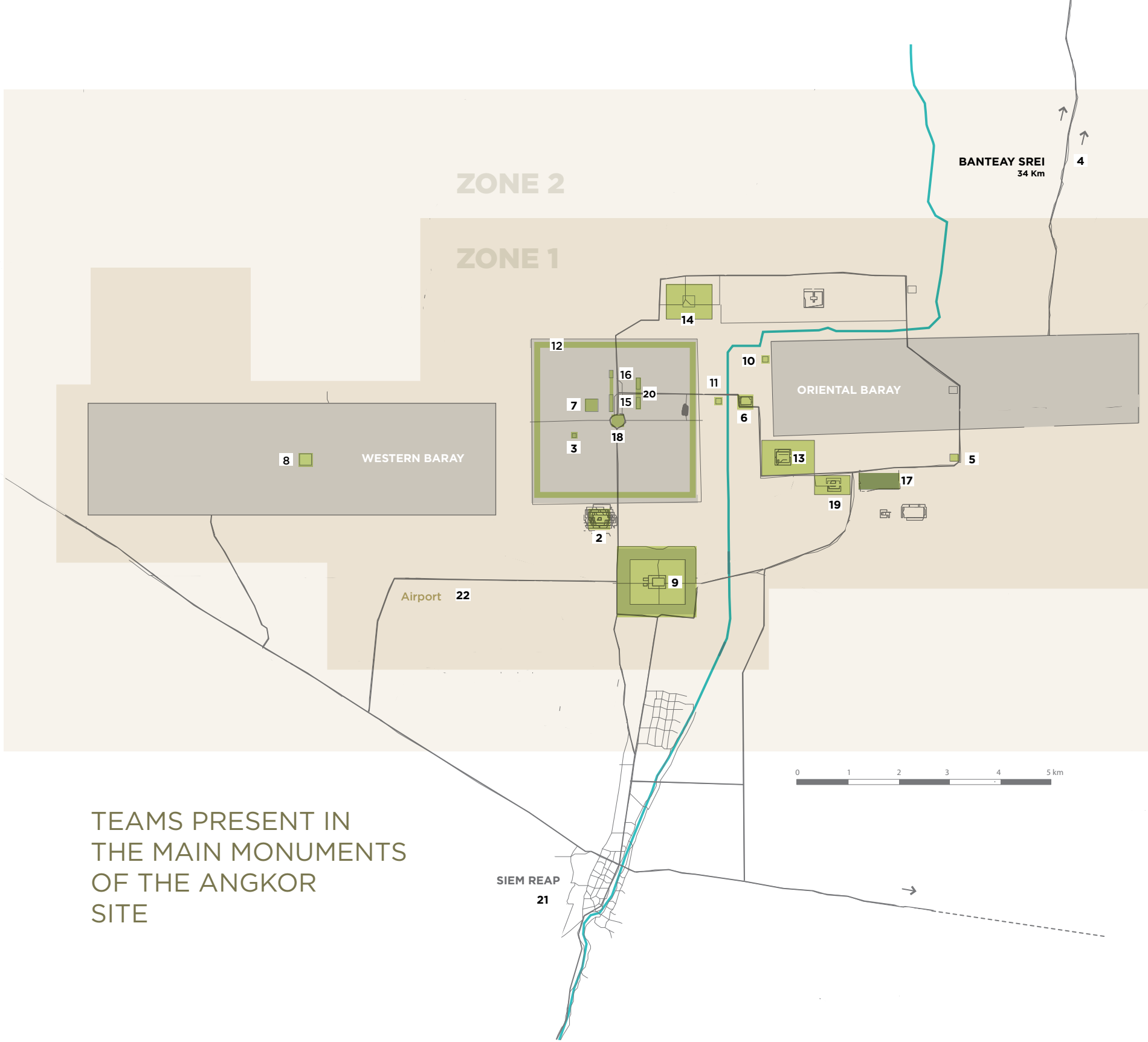
102	<ul style="list-style-type: none"> Royal Angkor Foundation - RAF (Hungary) 	Roluos Project	Mr. Janos JELEN jelenjanos@gmail.com
103	<ul style="list-style-type: none"> University of Bonn (Germany) 	Angkor Inscriptions Survey (AIS)	Prof. Dr. T.S. MAXWELL t.maxwell@web.de
104	<ul style="list-style-type: none"> University of Sydney (Australia) 	From Paddy to <i>pPura</i> : the Origins of Angkor Project	Dr. Dougald O'REILLY dougaldo@me.com
105		The Sculpture Workshops of Angkor Project: Roluos, Angkor Thom, Phnom Dei	Dr. Martin POLINGHORNE martinpolinghorne@gmail.com
106	<ul style="list-style-type: none"> World Monuments Fund - WMF (United States of America) 	Restoration at Angkor Wat, Phnom Bakheng and Preah Khan	Ms. CHEAM Phally cphally@wmf-cambodia.org Mr. Glenn BOORNAZIAN glennboornaz@me.com
108	<ul style="list-style-type: none"> International Co-ordination Committee for the Safeguarding and Development of the Historic Site of Angkor - ICC-Angkor 	The Charter for Angkor	Mr. LIM Bun Hok bh.lim@unesco.org



PROJECTS LINKING RESTORATION AND SUSTAINABLE DEVELOPMENT

PAGE	TEAM	PROJECT	CONTACT
112	<ul style="list-style-type: none"> Archaeology and Development Foundation - ADF (United Kingdom) 	Phnom Kulen Programme	Mr. Jean-Baptiste CHEVANCE info@adfken.org
113	<ul style="list-style-type: none"> APSARA National Authority (Cambodia) HOLCIM Group of Companies(Switzerland) 	Restoration of the Vihear of Wat Bakong and its Mural Paintings	Mr. KHUON Khun-Neay kaqc2004@yahoo.com Dr. Vittorio ROVEDA vittorio_roveda@yahoo.com
114	<ul style="list-style-type: none"> APSARA National Authority (Cambodia) UNESCO/Jet Tour Funds-in-Trust 	Strengthening and Restoration of the Srah Srang Complex	Mr. KHUON Khun-Neay kaqc2004@yahoo.com Mr. Philippe DELANGHE p.delanghe@unesco.org
115	<ul style="list-style-type: none"> Hungarian Indochina Company - HUNINCO (Hungary) 	Koh Ker Project	Dr. István ZELNIK izelnik@gmail.com Dr. Zsuzsanna RENNER renner.zsuzsanna@gmail.com
116	<ul style="list-style-type: none"> Czech Project GOPURA II 	Czech School of Restoration at Phimeanakas Temple	Mr. Michal BLAZEK gopura@centrum.cz
117	<ul style="list-style-type: none"> University of Sydney (Australia) 	Living With Heritage	Dr. Eleanor BRUCE eleanor.bruce@sydney.edu.au Dr. Ian JOHNSON ian.johnson@sydney.edu.au Prof. Roland FLETCHER roland.fletcher@sydney.edu.au

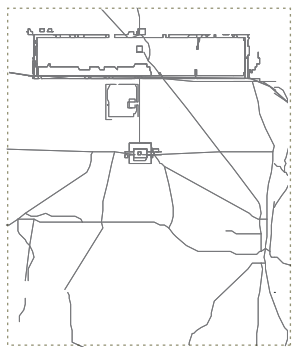




TEAMS PRESENT IN
THE MAIN MONUMENTS
OF THE ANGKOR
SITE

- 1 ROLUOS**
- APSARA National Authority (Cambodia)
 - German Apsara Conservation Project (Germany)
 - Royal Angkor Foundation (Hungary)
 - University of Sydney (Australie)
 - HOLCIM Group of Companies (Switzerland)
- 2 BAKHENG**
- World Monuments Fund (USA)
- 3 PRASAT TOP OCCIDENTAL**
- APSARA National Authority
 - Nara National Research Institute for Cultural Properties (Japan)
- 4 BANTEAY SREI**
- APSARA National Authority
 - Swiss Agency for Development and Cooperation
 - Banteay Srei Conservation Project (Switzerland)
- 5 PRE RUP**
- Ingegneria Geotecnica e Strutturale/ UNESCO-Italy Funds-in-Trust
- 6 TA KEO**
- Chinese Government Team for Safeguarding Angkor (China)
 - GEOLAB, Blaise Pascal University, CNRS (France)
- 7 BAPUON**
- *École française d'Extrême-Orient*
- 8 MEBON OCCIDENTAL**
- APSARA National Authority
 - *École française d'Extrême-Orient*
- 9 ANGKOR WAT**
- APSARA National Authority
 - Japanese Government Team for Safeguarding Angkor/ UNESCO-Japan Funds-in-Trust
 - Sophia University Angkor International Mission (Japan)
 - World Monuments Fund
 - Ingegneria Geotecnica e Strutturale/ UNESCO-Italy Funds-in-Trust
 - German Apsara Conservation Project
- 10 TA NEI**
- ICCROM
 - National Research Institute for Cultural Properties, Tokyo (Japan)
- 11 CHAU SAY TEVODA**
- Chinese Government Team for Safeguarding Angkor (China)
 - Chinese Academy of Cultural Heritage (China)
- 12 ANGKOR THOM**
- *École française d'Extrême-Orient*
- 13 TA PROHM**
- Archaeological Survey of India
- 14 PREAH KHAN**
- World Monuments Fund
- 15 TERRASSE DES ÉLÉPHANTS**
- *École française d'Extrême-Orient*
- 16 TERRASSE DU ROI LÉPREUX**
- *École française d'Extrême-Orient*
- 17 SRAH SRANG**
- APSARA National Authority/ UNESCO-Jet Tour Funds-in-Trust
- BAYON**
- APSARA National Authority
 - Japanese Government Team for Safeguarding Angkor/ UNESCO-Japan Funds-in-Trust
 - NFUAJ (Japan)
- 18 BANTEAY KDEI**
- Sophia University Angkor International Mission (Japan)
- 19 PRASAT SUOR PRAT**
- Japanese Government Team for Safeguarding Angkor/ UNESCO-Japan Funds-in-Trust
- 20 SIEM REAP**
- APSARA National Authority
 - JICA (Japan)
- 21 SIEM REAP AIRPORT**
- APSARA National Authority
 - Inrap (France)
 - Cambodia Airports

1 ROLUOS





Sunset at Angkor Wat



SUSTAINABLE
DEVELOPMENT
PROJECTS



Exhibition pavilion



Overall map of the centre



Models exhibited

APSARA NATIONAL AUTHORITY (CAMBODIA)

① Khmer Habitat Interpretation Centre

In order to preserve the traditional architecture of Khmer habitat in Angkor, the APSARA National Authority established within the Angkor Archaeological Park a Khmer Habitat Interpretation Centre. The Centre is a place where information on the communities living in the Angkor Archaeological Park is available, describing their living conditions and traditional habitat—one of the main components of the Angkor cultural landscape. It mainly provides for the local population by showing the different ways of farming their land, with a view to improving their daily lives.

In this Centre villagers may also acquire a wealth of information aimed at improving their living conditions. The APSARA National Authority technical staff assists them in trying to replicate on their land what they can see at the Centre.

Covered area: Rohal village, Sangkat of Nokor Thom, Siem Reap town

Duration: 2006 - 2012

Funding: APSARA National Authority, New Zealand Government

Total budget: USD 60,183

APSARA NATIONAL AUTHORITY (CAMBODIA)

2 Education on Heritage

The aim of this project is to include villagers within the Angkor Archaeological Park in the safeguarding process of their living environment. It is divided into four main activities: 1) youth education; 2) villagers' participation; 3) training of Buddhist monks; and 4) miscellaneous activities, such as training of tour guides and collaborative publication of a book series titled Exploring Angkor and edited by the NGO SIPAR.

Duration: 2009 – 2012

Funding: APSARA National Authority, National Federation of UNESCO Associations in Japan, New Zealand Ministry of Foreign Affairs and Trade

Total budget: USD 175,238

Number of Cambodians trained and/or working on the project:

Youth education in 2009: 9,400 students and 161 teachers

Youth education in 2012: 3,500 students, 144 teachers, 1,000 teacher trainees

Buddhist monk seminar in 2005: 270 participants

Buddhist monk seminar in 2012: 253 participants

Buddhist monk seminar in 2013: 116 participants

Villager training in 2012-2013: 1040 villagers

All project staff: 25 APSARA staff members



Buddhist monks seminar, 2005



Outreach to villagers



Education on heritage



Visit to the monuments



Registration of land



Land use map using a participatory approach



Registration of land using a participatory approach



Land use map of the villages of Rohal and North Srah Srang

APSARA NATIONAL AUTHORITY (CAMBODIA)

③ Design of Land Use and Registration Plans

The objective of this project is to identify and measure each plot of land and to regroup them according to their use. Land occupancy titles will be granted to villagers who have been farming their plots legitimately over a long period of time. Although zones 1 and 2 are State properties, according to Law number 70SSR, dating from 16 September 2004, villagers may continue to live on the land they occupy and transfer this right to their heirs.

The fact that these activities were included in the New Zealand Angkor Participatory Natural Resource Management and Livelihoods (APNRM&L) Project enabled the modernisation of the project. An aerial photography survey has been carried out over the entire protected area of zones 1 and 2.

The land use and plots plans have been completed for Rohal, North Srah Srang, South Srah Srang, Phloun and Leang Dai villages. The project is currently being extended to ten villages supported by the New Zealand project. The APSARA National Authority plans to extend the project to other villages in the Angkor Archaeological Park.

Duration: 2006 - Present

Funding: APSARA National Authority, New Zealand

Total budget: USD 193,000

All project staff: 8 APSARA staff members

APSARA NATIONAL AUTHORITY (CAMBODIA)

4 Improvement project of the North Baray (Jayatataka)

It was only recently that a Cambodian hydraulic engineer unveiled the system used to flood the North Baray of the Angkor site, which had dried up in the 16th century. Re-flooding of the baray should allow the following:

- The restoration of the historical and cultural landscapes of the surrounding areas and design of a new tour in order to diversify visitors' experience of the site;
- The improvement of the living conditions of the Angkor Archaeological Park's population by providing an exemplary water sharing model which meets domestic and farming needs while spreading the benefits of tourism at the baray; and
- The maintenance of the hydraulic balance necessary for the stability of the area's monuments and to recharge the groundwater table to counterweigh the unbridled pumping of groundwater in the city of Siem Reap.

Duration: June 2007 - Present

Funding: Royal Government of Cambodia

Total budget: USD 3,600,000

Number of Cambodians trained and/or working on the project: 6 hydraulic engineers, 1 architect, 3 archaeologists, 1 agricultural engineer, 1 rural development engineer

All project staff: 160 workers, 20 APSARA staff members



Overlooking Neak Peaon ponds



North Baray: canals and dikes (Google Earth)



North Baray view from the eastern pier of Preah Khan



View of 560 meters of the West Baray dike after restoration



Restoration work on the western dike



Platform and information panels for visitors

APSARA NATIONAL AUTHORITY (CAMBODIA)

5 Improvement Project of the West Baray

In order to restore this unique 9th century reservoir, the APSARA National Authority has implemented the following:

- The original system to flood the West Baray was recreated and restored in 2011 with a view to filling it to its maximum capacity of 56 Mm³;
- Archaeological researches revealed the original construction methods of the dike;
- The restoration of the dike consisted in identifying the damaged areas before carrying out the necessary emergency repairs;
- The cultural landscape around the baray has been improved by planting trees and grass, and caring for existing vegetation, guaranteeing the beauty of the landscape. The draught excluder of the dike defines the original height of the dike and must be carefully improved; and
- Tours have been created to discover the baray, its environment and neighbouring villages. Two platforms were built on the dike and display informational signs. A wooden platform now connects the inlet water canal to the northeast of the baray: visitors and villagers use it to circulate on the four dikes which now represent a total of 22 uninterrupted kilometres.

Duration: 2007 - Present

Funding: Royal Government of Cambodia

Total budget: USD 11,000,000

Number of Cambodians trained: 6 hydraulic engineers, 1 architect, 3 archaeologists, 1 agricultural engineer, 1 rural development engineer

Number of Cambodians working on the project: 90 workers, 20 APSARA staff members

APSARA NATIONAL AUTHORITY (CAMBODIA)
ASSOCIATION DES AMIS D'ANGKOR (FRANCE)

Water Development and Management in Angkor and Siem Reap

The APSARA National Authority has carried out a major hydraulic development programme that involves refilling the North Baray, constructing approximately 30 sluice gates to control water flow, renovating ancient canals and installing measuring stations (weather, water level and flow).



Measuring the flow of the river of Siem Reap with Qliner



Phnom Krom weather station near Tonle Sap



Kraing Kroch weather station in Angkor Archaeological Park

The APSARA National Authority is in the process of improving and optimizing the management of the system. In doing so, they must:

- Set up a ranging system for the measuring stations (connected remotely to the measurements from a computer located in the APSARA National Authority offices); and
- Remotely manage some of the sluice gates (from the APSARA National Authority office).

In 2012, the *Association des Amis d'Angkor* appointed the engineering company Hydratec to carry out a preliminary study whose findings highlighted the relevance of this project and confirmed its feasibility.

According, in 2014, and in the footsteps of an appraisal mission undertaken in June 2013, the French partners plan to implement the following steps:

- Make the measuring stations more homogeneous, in order to facilitate maintenance;
- Set up a ranging system for all measurement networks;
- Carry out additional research on: hydraulics, groundwater, sanitation; and
- Upgrade the measuring stations.

The agreement between the Cambodian and French partners will be signed in Siem Reap in December 2013.

Duration: February 2012 – for 4 to 5 years

Funding: APSARA National Authority (Cambodia)

- SIAVB: *Syndicat Intercommunal pour l'Assainissement de la vallée de la Bièvre* (France)

- SIAAP: *Syndicat Interdépartemental pour l'Assainissement de l'Agglomération Parisienne* (France)

- AFD: *Agence Française de Développement* (France),
Deliberation in progress

- AESN: *Agence de l'Eau de Seine Normandie* (France),
Deliberation in progress

- VEOLIA Eau (France)

Total budget: USD 7,000,000 (30% APSARA, 70% from other donors being sought)

Number of Cambodians trained and/or working on the project: 5 hydraulic engineers, 2 archaeologists, 6 technicians, 30 workers

All project staff: 43 Cambodians, 12 to 15 international staff members

APSARA NATIONAL AUTHORITY (CAMBODIA)
HERITAGE TRAINING CENTER (CAMBODIA)
FRENCH EMBASSY IN CAMBODIA (FRANCE)
ÉCOLE DE CHAILLOT (FRANCE)

Heritage Training Centre: Regional Training in Heritage Skills (Cambodia, Laos and Vietnam)

The Heritage Training Centre, a public establishment under the supervision of the Cambodian Ministry of Culture and Fine Arts, was established in 2007 with the assistance of the French Government. Its focus is the continuing education of architects, archaeologists and conservators who specialize in architectural, urban and landscape conservation and restoration.

With a regional outreach, the training is designed to retrain specialists in project ownership, implementation and management of heritage in Cambodia, Laos and Vietnam. For many years, *École de Chaillot* (France) has been carrying out similar cooperation activities overseas and has been commissioned to design the project's scientific approach and curriculum.

Between 2007 and 2010 a total of 50 students (three graduating classes) have received a diploma. A new project has been set up with the cooperation of the French Government. The project is slated to run from 2011 until 2015 and is a follow-up to the earlier training programme. The project includes a series of workshops based on hands-on cases with a curriculum that will facilitate the training of future trainers who in turn will be able to train architects, archaeologists, town planners and heritage site managers.

Duration: 2007 - Present

Funding: French Ministry of Foreign Affairs, French Ministry of Culture and Communication, Cambodian Ministry of Culture and Fine-Arts, APSARA National Authority

Total budget: USD 475,000

Number of Cambodians trained and/or working on the project: 50 students, 26 participants

Total project staff: 4 Cambodians, 1 French staff member



Lecture in classroom, December 2012



Field visit, Spean Memai, 2012



On-site exercise, West Mebon, December 2012



Visiting restoration operations at Churning of the Sea of Milk Gallery, Angkor Wat WMF, December 2009



Oxcart tours



Farming



Handicrafts



Solar panel station

APSARA NATIONAL AUTHORITY (CAMBODIA)
NEW ZEALAND MINISTRY OF FOREIGN AFFAIRS AND TRADE
(NEW ZEALAND)

Angkor Participatory Natural Resource Management and Livelihoods Programme (APNRM&L)

The Angkor Participatory Natural Resource Management and Livelihoods (APNRM&L) Project was implemented in two phases:

Phase I: May – November 2009, in 2 villages

Phase II: September – October 2013, in 8 villages

The project aims to reduce poverty, safeguard and protect the World Heritage status and natural environment of the Angkor Archaeological Park and its communities through sustainable economic development. The project has three components:

- Capacity Development (Communities and APSARA National Authority);
- Participatory Natural Resource Management and Commune Land Use Mapping ; and
- Monitoring and Evaluation.

A baseline study of 255 families in the targeted villages identified the following community priorities for the project: food security, the development of other livelihood activities, access to water and energy and the need to improve relationships with the APSARA National Authority.

Duration: September 2010 - December 2012

Funding: APSARA National Authority, New Zealand

Total budget: USD 1,500,000

Number of Cambodians trained: over 2,000 participants in Heritage Education activities

Beneficiaries of the project: 15,723 villagers

Total project staff: 34 Cambodians, 2 international staff members

APSARA NATIONAL AUTHORITY (CAMBODIA)
UNESCO/AUSTRALIA-CAMBODIA FUNDS-IN-TRUST
GODDEN MACKAY LOGAN-GML (AUSTRALIA)

Angkor Heritage Management Framework (Angkor HMF)

The “Angkor Heritage Management Framework” is a collaborative project between the Royal Government of Cambodia, the Australian Government, and the UNESCO. The project is being undertaken by the APSARA National Authority, Godden Mackay Logan Heritage Consultants, and coordinated by UNESCO. It provides a “best-practice” case study of World Heritage management for the conservation of the cultural and natural heritage values of Angkor. The project’s broad scope encompasses:

- Formulation of an overarching **heritage management framework** for Angkor;
- **Building capacity** of the APSARA National Authority;
- Preparation of a **Tourism Management Plan** for Angkor (TMP);
- Development of a multi-layered **risk map** encompassing structural, environmental and sociocultural risks; and
- Testing and refining heritage management approaches, such as integrated site management, through **pilot projects** which demonstrate and test aspects of the project.

Duration: 2010 - 2014

Funding: UNESCO/Australia and Cambodia Funds-in-trust, Royal Government of Cambodia

Total budget: USD 1,662,200

Number of Cambodians trained: 8 APSARA HMF Technical Committee members trained in integrated heritage management, 14 APSARA staff members trained in structural risk mapping, 12 APSARA staff members trained in social and environmental risk mapping

Number of Cambodians working on the project: 60 APSARA staff members

Total project staff: 1 Cambodian, 9 international staff members



Religious ceremony to bless the new tourist boat tour of Northern Baray called Community tour of Baray Reach Dak



Nature tour of Northern Baray



Hands-on monument risk map training session featuring Angkor Thom enclosure walls



Trainer team with staff at Beng Mealea



Research on the ecology of the flora in the Angkor Archaeological Park



Installation of a precise water pressure logger in the Srah Srang reservoir



Ichthyological investigation in the moat of Angkor Wat



Installation of a meteorological station in the Kulen Mountain

APSARA NATIONAL AUTHORITY (CAMBODIA)
KANAZAWA UNIVERSITY (JAPAN)

① Environmental Research in Angkor Region and its Surroundings (ERDAC Programme)

Problems of environmental pollution and deterioration in and around the Angkor World Heritage Site have worsened within a short period of time. Their harmful effects on the conservation of Angkor's temples, the health of local people, and sustainment of the area's great biodiversity, including that of the Tonle Sap Lake, have reached critical levels.

During the first three years (2006 - 2009), the ERDAC Programme focused on an assessment of the environmental pollution and deterioration of Angkor monuments based on measurements of the atmospheric, hydrological and forest environments. The programme also involved research on the actual sources of pollutants in the air and water on the basis of field research results and laboratory analyses (from 2009). Then it designed a pollution-free harmonised environment for the Angkor World Heritage area. The team is divided into three major research groups: the Atmospheric Environment Group, the Forest Environment Group, and the Water Environment Group. Additional subgroups specialize in Hydrology, Geoscience, and Biodiversity. Field research is carried out in the Angkor monument area in close cooperation with the APSARA National Authority.

Duration: 2006 - Present

Funding: Japan Society for the Promotion of Science (JSPS), Grants-in Aid for Scientific Research, Grants-in-Aid for Strategic Research of Kanazawa University

Total budget: USD 400,000

Number of Cambodians trained and/or working on the project: 10 to 20 hydrologists and hydro-geologists

Total project staff: 20 Cambodians, 20 international staff members

APSARA NATIONAL AUTHORITY (CAMBODIA)
KANAZAWA UNIVERSITY (JAPAN)

② Evaluation of Mechanisms Sustaining the Biodiversity in the Tonle Sap Lake (EMSB Programme)

To evaluate the mechanisms sustaining the biodiversity and the unique freshwater ecosystem of the Tonle Sap Lake and its surroundings, a team of Cambodian and Japanese scientists launched the Tonle Sap Evaluation of Mechanisms Sustaining the Biodiversity (EMSB) Programme, in late 2003. This is an urgent issue given the high value of the area for biodiversity conservation and economic development, as well as the increasing pressure from exploitation of natural resources and inadequate land use. The team has conducted surveys during the seasons of the lowest and highest water levels in and around the entire lake area, and has studied the year-long cycle of change in the water environment and related fluctuations of the ecosystem. The team has also demonstrated that the flood plains and flooded forests around the permanent lake play a major role in sustaining its great biodiversity. The EMSB Programme is the first systematic and scientific research at the Tonle Sap Lake that focuses on the lake's biodiversity.

Duration: 2003 - Present

Funding: UNESCO-MAB/IHP Funds-in-trust, Japan Society for the Promotion of Science (JSPS) Grants-in-Aid for Scientific Research, 21st Century COE (Centre of Excellence) Programmes of Kanazawa University and Hokkaido University

Total budget: USD 500,000

Number of Cambodians trained and/or working on the project: approximately 10 hydrologists, plant ecologists, geologists, and archaeologists

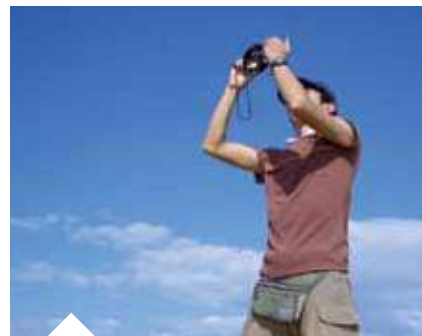
Total project staff: 10 Cambodians, 23 international staff members



Aquatic insect sampling in the flooded forest area - Tonle Sap Lake



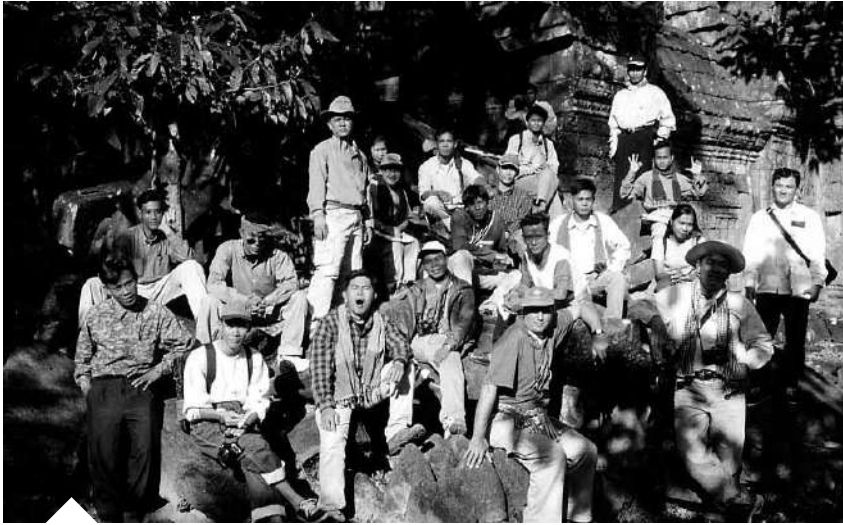
Research on plant ecology in the flooded forest area - Tonle Sap Lake



Meteorological observation on Tonle Sap Lake using a portable anemometer



Benthic organisms sampling using an Ekman-Berge sampler - Tonle Sap Lake



Participants of the Ta Nei 1 Training Programme, 1999-2000



INTERNATIONAL CENTRE FOR THE STUDY OF THE PRESERVATION AND RESTORATION OF CULTURAL PROPERTY - ICCROM

① Archaeological Training at Ta Nei Temple

APSARA National Authority staff members were trained at Ta Nei in 1999 and 2000. Twelve years later, ICCROM is renewing this training programme with the newly established Preah Vihear National Authority.

Research works carried out by ICCROM and the APSARA National Authority have for the first time allowed the re-execution of stone carving and construction using traditional Khmer techniques based on Bayon bas-reliefs. A close collaboration with other international projects and specifically with JASA, CSA and the EFEO has been a major feature of this endeavour.

Duration: 1999 - 2000 and 2012

Funding: Japanese Government

Total budget: USD 100,000

Number of Cambodians trained: 20 participants trained, among them architects, archaeologists and engineers. 16 of these have been hired by the APSARA National Authority

**INTERNATIONAL CENTRE FOR THE STUDY OF THE PRESERVATION
AND RESTORATION OF CULTURAL PROPERTY - ICCROM**

② Research and Conservation Project for World Heritage Sites

Research has been undertaken at the Phnom Bakheng library, a place of much significance for the local population. This is one of the oldest buildings still in use at Angkor. The collected data will bring an understanding of the function of the temples throughout the centuries. Community participation in this project has been one of the exciting elements of this research. Exchanges with the elderly and spiritual leaders (*achars*) from nearby villages have led to a re-assessment of the role of the local community. The local community is fully engaged in the process and has provided priceless information and knowledge.

Duration: October 2008

Funding: APSARA National Authority, Preah Vihear National Authority, World Monuments Fund

Total budget: USD 32,000

Number of Cambodians trained: 28 participants trained, among them architects, archaeologists and administrators



Participants at the Bakheng Temple Site



Field exercise with local community leaders



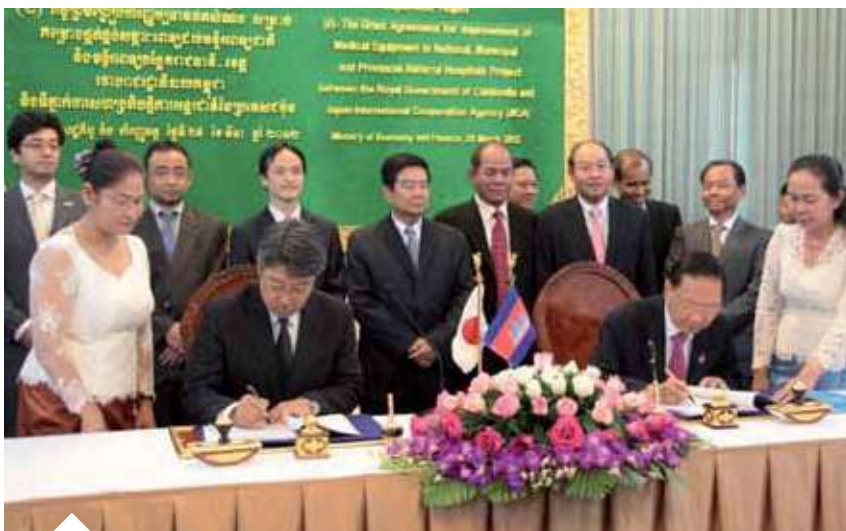
Class sessions with ICCROM
course team



Course participants from the local
religious community on practical
session at the Museum



Exchange of Note (E/N), Signing Ceremony between the Royal Government of Cambodia and the Embassy of Japan, 29 March 2012



Loan Agreement (LA), Signing Ceremony between the Royal Government of Cambodia and JICA, 29 March 2012

SIEM REAP WATER SUPPLY AUTHORITY (CAMBODIA)
JAPAN INTERNATIONAL COOPERATION AGENCY - JICA (JAPAN)

Siem Reap Water Supply Expansion Project

The Government of Japan has provided assistance to water supply system development since 1996 in order to address the shortage of water supply of the city of Siem Reap. The increase in population and tourists has led to pressure on urban infrastructure development, which can no longer cope with the growth in a sustainable manner. Siem Reap has a major shortage of water (approximately 1,500 million yen in grant) for residents, tourists and business activities and this has led to the uncontrollable extraction of groundwater, which may threaten the Angkor World Heritage Site and hinder development of the Siem Reap/Angkor region.

To tackle the issues listed above, the Japanese Government, through the Japan International Cooperation Agency (JICA) and at the request of the Royal Government of Cambodia, constructed the Water Supply System of Siem Reap. It has a production capacity of 8,000 cubic meters per day of clean water. The project was completed in 2006 and served 22,400 inhabitants. In view of the expansion of water supply services to all residents and the eradication of the uncontrolled draught of groundwater, JICA has planned additional assistance to increase the water supply system's capacity to 60,000 cubic meters per day in the city of Siem Reap in addition to the 60 million yen grant assistance for assisting expansion and improving the existing water supply system

Duration: 2012 - 2018

Funding: Japanese Official Development Assistance Loan

Total budget: approximately 7,100 millions de yen

UNIVERSITY OF PALERMO (ITALY)

Training International Action for Conservation and Restoration of Iconographic Assets

In October 2011, this project began in the artefacts collection stored at Angkor Conservation in Siem Reap. Its purpose is to transfer to Cambodian trainees the know-how in the field of conservation and exploitation of cultural heritage, through four specific goals: technical education, university education, training of trainers, and communication.

The training project hopes to see the following results:

- **Technical education:** Cambodian teams of technicians for correct maintenance of cultural heritage;
- **University education:** postgraduate courses at the University of Phnom Penh in the fields of cultural heritage preservation, exploitation and fruition;
- **Communication:** creating widespread awareness among the resident population about the cultural and economic value of the natural and archaeological heritage of Cambodia.

The project will achieve the restoration of more than 100 objects (in stone, wood and metal) selected among Angkor's reserves.

Duration: 2011 - 2014

Funding: Italian Government, Italian Ministry of Foreign Affairs, University of Palermo, APSARA

Total budget: USD 550,000, APSARA : 50 000 USD

Number of Cambodians trained and/or working on the project: 15 archaeologists, 4 architects, 1 economist, 2 logistics assistants

Total project staff: 22 Cambodians, 24 international trainers



Banner of the Project



ICC ad hoc experts visiting the exhibition of restored artifacts before the ICC-Angkor Conference, June 2012



Buddha foot print from the collection of the Angkor Conservation, after restoration



Students with the coordinators of the Italian Team from the University of Palermo



GACP Team - Prasat Kravan



RESEARCH,
RESTORATION
AND CONSERVATION
PROJECTS



Western Gopura of the fourth enclosure, facing west (during work)



Hall of Dancers, facing west (during work)



Causeway between the third and fourth enclosures, facing west (after work)

ARCHAEOLOGICAL SURVEY OF INDIA - ASI (INDIA)

Conservation and Restoration of Ta Prohm Temple Complex

The Ta Prohm project was formally launched in February 2004 with an aim to highlight the authenticity and integrity of the temple.

The Archaeological Survey of India has undertaken detailed stone-by-stone documentation of various components of the temple complex. It has adopted the anastylosis technique, which involves reassembling the existing dismembered parts, while undertaking conservation and restoration in a way that retains maximum authenticity and integrity.

To date, the conservation and restoration of four of the five assigned sites have been completed: the third enclosure gallery on the eastern side of the south wing, the causeway connecting the third and fourth enclosures on the western side, the gopura on the fourth western enclosure, and the entrance gopura on the fifth western enclosure, including laterite walls on both sides. Work in the hall of dancers is currently on-going.

Duration: February 2004 - Present

Funding: Government of the Republic of India

Total budget: USD 7,591,112

Number of Cambodians trained and/or working on the project: 22 architects, 6 archaeologists, 1 labour Supervisor/Site Manager, 2 image processors, 5 head masons, 119 skilled workers

Total project staff: 193 Cambodians, 5 Indian staff members

APSARA NATIONAL AUTHORITY (CAMBODIA)

1 Research on Iron and Iron Smelting Sites

Research on ancient iron smelting sites has been conducted within the framework of the Living Angkor Road Project (LARP), a collaborative project between the APSARA National Authority and Thailand. Since 2005, the LARP team has conducted mapping work on more than 100 sites in Cambodia (Siem Reap, Oddar Meanchey, Kampong Thom, and Preah Vihear) and roughly 85 sites in north-west Thailand (Buriram and Surin).

Two archaeological excavations were performed at an ancient iron smelting site in Khvav village, Khvav commune, Chikreng district, Siem Reap province, on the southern section of the ancient road from Angkor to Bakan (Preah Khan of Kampong Svay).

The objectives were to pioneer the first archaeological study on iron smelting sites in Cambodia, rescue the important archaeological site from destruction, and to enhance the anthropological studies on the Kuy Dek ethnic group, the iron smelting communities.

Duration: 2009 - 2010

Funding: APSARA National Authority

Total budget: USD 9,500

Number of people trained: 11 Cambodian trainees,
2 international trainees

Total project staff: 11 Cambodian staff members



Site excavation in Khvav



Tuyeres and debris from a furnace



Community awareness campaign



Survey of the Rock Arts with Prof. Paul Taçon from Griffith University, Australia



Three samples of Kulen Rock Arts

APSARA NATIONAL AUTHORITY (CAMBODIA)

② Research on Rock Art in the Greater Angkor

This research focuses on the occurrence of rock art in conjunction with later religious (typically Buddhist, but also Hindu) sites at rock shelters in Cambodia. The rock art at Phnom Kulen represents an excellent case study, as it appears to have been the earliest form of non-utilitarian and possibly ritual activity found in the area.

The aims are (1) to document the rock art at Phnom Kulen, (2) observe and measure the landscape, and survey new rock art sites; (3) explain the history and significance of the area through anthropological study; (4) examine rock art dating potential; and (5) determine the local rock art style sequence and make recommendations for conservation and management.

Duration: 2009 - Present

Funding: APSARA National Authority

Total budget: USD 1,000

Number of Cambodians trained: 7 trainees from the APSARA National Authority

Total project staff: 7 APSARA staff members, 2 members from Griffith University, Australia

APSARA NATIONAL AUTHORITY (CAMBODIA)
SWISS AGENCY FOR DEVELOPMENT AND COOPERATION - SDC
 (SWITZERLAND)

Conservation of Banteay Srei Temple

The principal objectives of the Banteay Srei Conservation Project were to preserve the temple's condition and to research and maintain the cultural legacy of the Cambodian people. The long-term preservation of this exceptional work of art requires ongoing professional care and protection from its two principal enemies: visitors and nature. This requires constant observation and, when necessary, intervention.

The analysis, which included identification of causes of structural damage, documentation, condition assessment and archaeological research, helped to explain the factors that have impacted the temple complex. Measures aimed at stabilizing the structure, such as the construction of support pillars, have since been taken. The project also analysed the flow of visitors, which poses an additional threat to the temple. Implementing a prescribed itinerary, erecting signs, and training tour guides and on-site watchmen, were the first measures undertaken to resolve these problems. In addition, a plan to optimize tourist flows resulted in the construction of a parvis (plaza), which has been in operation since 2010.

The project to develop the Banteay Srei temple parvis or approach area attempts to showcase the monument in its green envelope, enabling visitors to enjoy the sensation of verdure and tranquility while having tourist services available upon arrival at the site.

Duration: 2002 - 2005

Funding: Swiss Agency for Development and Cooperation, APSARA National Authority

Total budget: USD 750,000

Number of Cambodians trained: 12 students of archaeology and architecture

Total project staff: 28 Cambodians, 8 international staff members, 8 exchange students of archaeology and architecture



Restoration of pavement inside the temple



Overview of the temple



Interpretation centre



Restoration of a carved pediment



Students replacing cement heads with newly carved sandstone replicas, South Gate of Angkor Thom



Conservation expert Long Nary explains the types of damage to trainees, Angkor Wat



Students trained in site measuring on a Naga balustrade, Angkor Wat

APSARA NATIONAL AUTHORITY (CAMBODIA)
DEUTSCHE GESELLSCHAFT FÜR INTERNATIONALE
ZUSAMMENARBEIT - GIZ (GERMANY)

APSARA Stone Conservation Unit and Training Programme (SCU)

Since March 2007, GIZ has supported APSARA's efforts to establish a permanent Stone Conservation Unit (SCU) within the APSARA National Authority. GIZ, based on its long-term experience in capacity development, has strengthened existing local capacities. In order to build capacities in stone conservation and to cover the high demand for well-trained restorers, SCU published a handbook titled *Skills for Stone Conservation in Angkor* and developed a training programme. The training was launched in March of 2013, and will last for two years, with theoretical and on-site training.

The training has been designed for people with little or no background in stone conservation who will later work on-site at the temples. Its main goal is to produce qualified stone conservators who have a holistic understanding of stone decay processes, and a practical understanding of appropriate conservation methods and available preventive and maintenance measures. Right now, twenty young Cambodians are undergoing training led by local conservation experts. Other SCU activities include coordination and implementation of conservation treatments, documentation, consultancy for international stone conservation projects, and capacity development.

Duration: March 2007 - February 2013 (extended to December 2015)

Funding: APSARA National Authority, GIZ

Total budget: USD 500,000

Number of Cambodians trained: 3 stone conservators, 20 students being trained

Total project staff: 23 Cambodians, 2 international staff members

APSARA NATIONAL AUTHORITY (CAMBODIA)
ÉCOLE FRANÇAISE D'EXTRÊME-ORIENT (FRANCE)

Restoration of the Western Mebon Temple

The Western Mebon is an architectural complex once dedicated to the worship of Vishnu. It is located on an island at the geometrical centre of the Western Baray, a huge water reservoir constructed in the 11th century in the western area of the Angkor Archaeological Park.

The planned restoration project is a technological and scientific challenge, a first for the Franco-Cambodian team (the EFEO and the APSARA National Authority). Besides overseeing the safeguarding and restoration of this unique architectural work, the programme also includes transferring skills to the APSARA National Authority based on an interdisciplinary approach (archaeology, restoration and showcasing).

This restoration operation is particularly challenging, because of its technical complexity. The island must be dewatered to maintain a buffer zone to allow work in dry conditions when the baray is flooded. Also, the work site is affected by a huge Western Baray rehabilitation operation being carried out by the APSARA National Authority.

Once the restoration is completed, a new itinerary of the Angkor Archaeological Park will be designed that will generate additional funding for the APSARA National Authority.

Duration: April 2012 – April 2016

Funding: French Ministry of Foreign Affairs, French Ministry of Higher Education and Research, French Ministry of Culture and Communication, École française d'Extrême-Orient (EFEO), Royal Government of Cambodia (through the APSARA National Authority and the EFEO)

Total budget: USD 2,560,000

Number of Cambodians trained and/or working on the project: 1 architect, 2 archaeologists, 5 draughtsmen, 112 masons, carpenters and carvers

Total project staff: 120 staff members



Construction of the dike for the work site protection



Temple protected by temporary dike during restoration



Eastern façade before dismantling



Axial pavilion, eastern enclosure dismantling



Pilot Phil Butterworth oversees a ground refueling at a remote location - Preah Vihear Province



Helicopter with lidar attached during flight operations over Angkor, April 2012



APSARA National Authority representatives confer with staff from the University of Sydney and the lidar company PT McElhanney during flight operations, April 2012

Khmer Archaeology LiDAR Consortium (KALC)

In early 2012 eight different teams (APSARA, EFEO, USYD, SCA, HUNINCO, ADF, JASA, WMF), including the APSARA National Authority, joined together to form the Khmer Archaeology LiDAR Consortium (KALC). The objective of KALC was to use innovative airborne laser scanning (or “lidar”) technologies over the forested areas of northwestern Cambodia. Previously, several projects on archaeological mapping throughout the region of Angkor using aerial and satellite data had been completed, but in many cases vegetation obscured the traces of Angkor-period urban landscapes that remain on the surface today. The lidar instrument however has the ability to “see through” that vegetation and produce incredibly detailed 3D models of the forest floor. In April of 2012, flight operations over Angkor, Phnom Kulen and Koh Ker were successfully concluded for a total coverage of 370 square kilometers, and the lidar data was delivered two months later. The resulting datasets have dramatically transformed the picture of urban spaces in many areas, and have generated research outcomes of global significance. KALC is the broadest research cooperation ever achieved at Angkor, the most extensive archaeological lidar programme ever undertaken anywhere in the world, and the very first application of this technology for archaeology in Asia. A second mission is currently in the planning stages.

Duration: 2012

Funding: 1. APSARA National Authority;
 2. *École française d'Extrême-Orient*, Siem Reap Centre (EFEO);
 3. University of Sydney, Robert Christie Research Centre (USYD);
 4. Cambodia Airports (SCA);
 5. Hungarian Indochina Company (HUNINCO);
 6. Archaeology & Development Foundation Phnom Kulen Programme (ADF);
 7. Japan-APSARA Safeguarding Angkor (JASA); and
 8. World Monuments Fund (WMF).

Total budget: USD 210,000

APSARA NATIONAL AUTHORITY (CAMBODIA)
INGEGNERIA GEOTECNICA E STRUTTURALE (ITALY)
UNESCO/ITALY FUNDS-IN-TRUST

① Restoration of Angkor Wat Temple

The *Ingegneria Geotecnica e Strutturale* (IGeS) has completed projects on many locations in Angkor Wat, including restoration of the moat embankment and stabilization of the West gopura and the west bakan pavilion. The provisional props placed on site in 1999 have been removed to allow tourist access to the sacred mountain. The cruciform terrace balustrade was restored by removing the old portion of concrete and the iron stirrups. The vault of the West gopura, as well as the damaged columns of the portal, have been strengthened and completed.

Heavy rainfall in September 1996 led to the collapse of 60 metres of the western steps of the southern half of the moat embankment at Angkor Wat. IGeS performed a full restoration.

Duration: 2001 - Present

Funding: UNESCO/Italy Funds-in-trust, APSARA National Authority

Total budget: USD 882,000

Total project staff: shared with the Pre Rup project



Panoramic view of the restored first span of moat embankment (2009 to 2011), and of the ongoing works (2012 and expected until 2014)



Chiselling of the surface of added new pieces of sandstone blocks to the upper staircase



Storage area for the sandstone blocks from the upper staircase



Restoration of the moat embankment, extension span, 2012 - 2014



General view of the site



Repositioning of a fallen lintel to its original place

APSARA NATIONAL AUTHORITY (CAMBODIA)
INGEGNERIA GEOTECNICA E STRUTTURALE (ITALY)
UNESCO/ITALY FUNDS-IN-TRUST

2 Restoration of Pre Rup Temple

The team, including young Cambodian professionals, conducted a comprehensive study of the structural behaviour of the 10 major towers. After several studies, investigation programmes and monitoring sequences, the team began general implementation of strengthening work. This addressed both the foundation and upper structures to restore in each tower both the structural integrity and the capacity to react to the applied loads. At the foundation level, the connection between the footings of the different walls was reinforced by a rigid structure.

The restored towers are used by the local villagers in their religious practice and are enjoyed by the site's many visitors.

Duration: 1995 - 2003

Funding: UNESCO/Italy Funds-in-trust, APSARA National Authority

Total budget: USD 227,469

Cambodians trained through orientation workshops:
8 architects, 3 engineers, 9 archaeologists

Total project staff: 25 Cambodians (including 5 architects and 3 engineers), 3 international staff members

APSARA NATIONAL AUTHORITY (CAMBODIA)
NARA NATIONAL RESEARCH INSTITUTE FOR CULTURAL
PROPERTIES (JAPAN)

Conservation of the Western Prasat Top

The Nara National Research Institute for Cultural Properties, in collaboration with the APSARA National Authority, began a comprehensive investigation at Western Prasat Top in 2002, including excavation, architectural investigation and conservation science. The research revealed that the structure of the stone buildings was unstable. In 2011, a conservation and restoration project was launched.

The team has performed dismantling work at the southern sanctuary, including the basement, and completed trial reassembly of the upper structure in March 2013.

A geotechnical survey was also conducted to study and analyze the soil condition inside the lower basement of the southern sanctuary during the dismantling process. Tests included standard penetration tests, tests for particle size distribution of soils, tests for loading and tests of the soil's water content.

Funding: Japanese Government Budget

Total budget: USD 180,000 per year

Number of Cambodians trained and/or working on the project: 3 archaeologists, 1 architect trained; 1 crane operator, 10 workers employed

Total project staff: 15 Cambodians, 5 international staff members



Dismantling the southern sanctuary



Workers carving sandstones for repairs



Training on architectural measurement



Measurement of the hardness of the stone and its microflora in a microclimate



APSARA NATIONAL AUTHORITY (CAMBODIA)
NATIONAL RESEARCH INSTITUTE FOR CULTURAL PROPERTIES,
TOKYO (JAPAN)

Joint Research Project on Conservation at Ta Nei Temple

1. Environmental and biological study on stone deterioration (since 2001)

The purpose of this study is to clarify the influence of microflora-like lichens, mosses, or algae-on the surface of stone monuments in the Angkor area, and to take appropriate measures against stone deterioration. Study on the relationship between stone deterioration and biocolonisation found that mosses on the stone surface were associated with weathering of the rock substrate. Environments conducive to dense growth of mosses might hamper the conservation of sandstone, even though the mosses do not actually accelerate weathering. Controlling the microenvironment could play an important role in reducing the biodeterioration of stone.

2. Architectural survey training (since 2012)

Human resources development has also been conducted through architectural measurement at the temple of Ta Nei, with the goal of transferring to the Cambodian staff the basic skills and knowledge required for surveying architectural remains.

Duration: 2001 - Present

Funding: National Research Institute for Cultural Properties, Tokyo (NRICPT)

Total budget: USD 560,000

Number of Cambodians trained and/or working on the project: 3 archaeologists, 2 in architects trained, 1 crane operator, 10 workers

Total project staff: 13 Cambodians, 19 international staff members

APSARA NATIONAL AUTHORITY (CAMBODIA)
**INSTITUT NATIONAL DE RECHERCHES ARCHÉOLOGIQUES
 PRÉVENTIVES - Inrap** (FRANCE)
CAMBODIA AIRPORTS (CAMBODIA)

Preventive Archaeology at Siem Reap Airport Area

Taking over a programme that started back in 2004, the Cambodia Airports Authority (CAA, a subsidiary of France's VINCI Airports) signed with the Inrap (National Institute for Preventive Archaeological Research) and the APSARA National Authority a new five-year partnership aiming at studying several Angkorian sites located within and in the vicinity of Siem Reap International Airport.

An outstanding research programme: Archaeological excavations at the Angkor complex have focused on a global approach of prominent religious monuments, lesser-known temples, habitations and land-space. Those exhaustive studies will provide further insight into the Angkorian habitat in its various forms and follow its evolution between the 10th and 12th centuries.

A responsible planning approach: Against the backdrop of the strong economic and tourism development in Siem Reap, the project has been a key tool for the planning of airport facilities. Since taking over the airport, CAA has adopted an expansion plan that has incorporated the preservation of the heritage component.

Training and public information objectives: The programme involves a Cambodian team and is designed with university teaching and public information components. In addition to site audits and excavations, the programme includes preventive archaeology training for archaeology students from the Royal University of Phnom Penh, and exhibitions of the findings to be held by CAA.

A unique partnership: This archaeological programme is being implemented at Angkor through close cooperation between three key partners. The APSARA National Authority is the project manager, ensuring scientific control over projects. CAA supports research projects and funds them. Inrap serves as the programme's scientific supervisor and coordinates works on site, training activities.

Duration : 2011 - 2015

Funding : Cambodia Airports

Total budget : 2,800,000

Number of Cambodians working on the project: 1 archaeologist coordinator, 6 archaeologists, 1 secretary accountant, 3 team leaders, 60 site workers, 1 maintenance staff

Number of international staff: 1 archaeologist (Inrap), 2 deputy archaeologists (Inrap and independant), 1 geoarchaeologist (Inrap), 1 topographer (Inrap), 2 ceramologists (CNRS - CERANGKOR Programme)



Archaeological excavation - Tuol Ta Lo site



On-going data record
Trapeang Lpeou site



Archeological excavation - Tuol Ta Lo site



Excavation of Torp Chey kiln no. 2



Southeast Asian students' field trip to Angkor



Southeast Asian students' field trip to Torp Chey kiln no. 2

APSARA NATIONAL AUTHORITY (CAMBODIA)
INSTITUTE OF SOUTHEAST ASIAN STUDIES (SINGAPORE)

The Excavation of a Brown Glazed Stoneware Kiln Site at Torp Chey

Dr. Ea Darith identified this kiln site in 2007 while studying temples located along the eastern Angkorian road.

The excavation revealed the biggest kiln discovered in Southeast Asia thus far. Sandstone chips testing confirmed that those from the kiln are similar to those from Torp Chey temple, located about 60 meters to the north of the kiln. This suggests that the Torp Chey temple can be dated back to the late 12th and early 13th centuries, during the reign of King Jayavarman VII.

Further research along the ancient road from Beng Mealea to Bakan is necessary to investigate the past importance of this road in relation to other structures. Further excavations at the site are also necessary to understand more about the nature of the site, how the community lived in the past, and the relationship between kilns, temples, and water structures.

Duration: 2011 - 2012

Funding: Institute of Southeast Asian Studies

Total budget: USD 19,910

Number of Cambodians trained and/or working on the project: 5 students from the Royal University of Fine Arts, 20 workers

Total project staff: 5 Cambodians, 4 international staff members

APSARA NATIONAL AUTHORITY (CAMBODIA)
 SILPAKORN UNIVERSITY, THAI FINE ARTS DEPARTMENT (THAILAND)
 CHULACHOMKLAO ROYAL MILITARY ACADEMY (THAILAND)

Living Angkor Road Project (LARP)

This project is a cross-border archaeological research on the royal roads from the capital of Angkor in Cambodia to the eastern, western, north-western and north-eastern provincial cities of the Khmer Empire, and neighbouring kingdoms.

The **objectives** of the project are the following: (1) to map the existing, researched road network; (2) to identify and describe the infrastructure existing along these roads: bridges, canals, temples, remains of rest houses, hospitals, human settlements and ancient industrial sites; (3) to understand the Angkorian history and civilization; and (4) to acquire more knowledge and develop new questions about Angkorian history.

Outcomes: Identification of the features of the Royal Road and associated structures (stone bridges, rest houses, hydraulic structures); mapping of the existing, researched on the Royal Road network, settlements, landscape and ancient industrial sites; understanding of the broader heritage significance of the Angkorian civilization; study on the homes of village communities, which are also considered as “living heritage”; maintain connectivity with the past and with Khmer civilization; and heritage education tools for enhancing the relationship between the countries in the region (five meetings have been organized in Thailand and Cambodia, allowing students from both countries to exchange cultural knowledge).

Duration: 2005 - 2008 and 2009 - 2013

Territories concerned: Cambodia and Thailand

Funding: APSARA National Authority,
 Thailand Research Fund, Friends of Khmer Culture Inc.

Total budget: USD 185,000

Number of Cambodians trained: 20 students
 from the Royal University of Fine Arts, Phnom Penh

Total project staff: 8 Cambodians, 6 international
 staff members



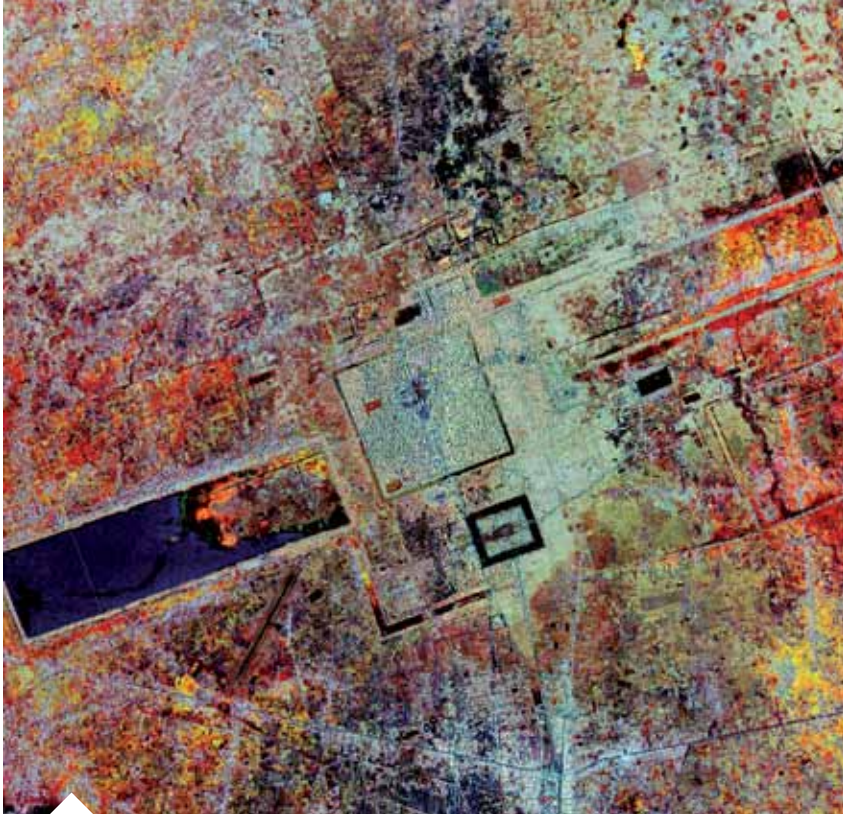
Overall plan of the Royal Roads



Archaeological excavations at the bridge of Kaul village, located on the Angkor-Phimay Road



Village surveys



AIRSAR survey image of portion of central Angkor



Members of the Greater Angkor Project team - Bam Penh Reach

APSARA NATIONAL AUTHORITY (CAMBODIA)
UNIVERSITY OF SYDNEY (AUSTRALIA)
ÉCOLE FRANÇAISE D'EXTRÊME-ORIENT - EFEO (FRANCE)

Archaeological Research on Greater Angkor

The Greater Angkor Project (GAP) is an international, multidisciplinary research programme on the decline of urbanism at Angkor in Cambodia. Specifically, the project investigates the relationship between the vast extent of Angkor in the 12th to 16th centuries, land clearance for rice production, and regional ecological damage, both then and now.

Angkor, the vast low-density Khmer capital founded in the 9th century, was abandoned sometime during the past 500 years. The processes, rate, and period of its demise are still unknown. The project will identify (1) the ancestry of Angkor's social and spatial organization in the first millennium BCE, and (2) the way the urban complex operated, to diagnose (3) why, when, and how it was abandoned, and reveal the transformations from the 16th to 19th centuries that created the modern landscape after 3,000 years of cultural continuity.

Duration: 2001 - 2014

Funding: Australian Research Council Discovery

Total budget: USD 230,000

Number of Cambodians trained and/or working on the project:
2 archaeologists, 3 RUFA students, 20 workers

Total project staff: 32 staff members

CHINESE ACADEMY OF CULTURAL HERITAGE (CHINA)
CHINESE GOVERNMENT TEAM FOR SAFEGUARDING ANGKOR - CSA
 (CHINA)

① Conservation and Restoration at Chau Say Tevoda Temple

The restoration and conservation of Chau Say Tevoda began with engineering construction in March 2000. The methods included collecting and reassembling scattered stones, repositioning and reinforcing foundation elements, building a drainage system, repositioning the main building, reinforcing the architectural structure, and repair and maintaining broken or damaged stones and carved art decoration. During the restoration process, CSA succeeded in matching and patching more than 3,000 pieces of fallen stone, which were returned to their original locations.

This conservation work continued for nearly a decade; the damage and threats to Chau Say Tevoda have been fully addressed, most of the fallen architectural components have been returned to their original locations, the damaged and broken stone components have been properly repaired and reinforced, and the temple has been returned to its original architectural features.

Duration: 1998 - 2008

Funding: Ministry of Finance of the People's Republic of China

Total budget: USD 1,700,000

Total project staff: 1 Cambodian professional technician in conservation, 12 Chinese staff members, 30 Cambodian technical workers



Anastylosis on southern library



Temple after conservation and restoration program



Reconstruction study on original layout of Chau Say Tevoda temple



Assembling a colonnette on southern interior gopura



Putting stone components back to original positions at eastern exterior gopura



Dismantling process of corner tower of southwest corner, second tier platform

CHINESE ACADEMY OF CULTURAL HERITAGE (CHINA)
CHINESE GOVERNMENT TEAM FOR SAFEGUARDING ANGKOR - CSA (CHINA)

② Conservation and restoration at Ta Keo Temple

The Chinese Academy of Cultural Heritage–Chinese Government Team for Safeguarding Angkor (CACH-CSA)—began the restoration and conservation of Ta Keo temple in 2007. CSA conducted comparative and comprehensive pre-stage research, consisting mainly of interdisciplinary research related to architectural reconstruction, archaeological investigations, structural engineering, geotechnical engineering, and conservation science. CSA also completed overall research on the temple and produced a master plan for conservation and restoration designs for some buildings of Ta Keo mountain temple.

In 2010, the team began engineering work, which marked the start of the official initial construction phase of the restoration and conservation of Ta Keo. At present, conservation and restoration work is being performed on the southwest corner of the second tier platform, the corner tower and the southern interior gopura, in close consultation with the ad hoc experts of the ICC-Angkor.

Duration: 2006 – Present

Funding: Ministry of Finance of the People’s Republic of China, Ministry of Commerce of the People’s Republic of China

Total budget: USD 7,700,000

Number of Cambodians trained and/or working on the project: 20 technical workers

All project staff: 1 Cambodian, 29 Chinese staff members

ÉCOLE FRANÇAISE D'EXTRÊME-ORIENT - EFEO (FRANCE)

① Sculpture Conservation-Restoration Workshop of the National Museum of Cambodia

The EFEO (French School of Asian Studies) has been one of the core players in Angkorian monuments restoration and Khmer studies development for over a century. In 1907 the EFEO was entrusted with inventory and preservation of the Angkor site. Following a request from the Royal Government of Cambodia which reinstated the School's former offices, the EFEO reopened its centre in 1992 and re-launched several research programmes and restoration sites.

From 1996 onwards, the EFEO has rekindled its relationships with the National Museum of Cambodia in Phnom Penh, setting up a conservation restoration stone sculpture workshop within the framework of cooperation with the Cambodian Ministry of Culture and Fine Arts.

Reaching beyond the conservation-restoration work, the workshop contributed to the knowledge and development of the museum's collections. It has also initiated several exhibitions. Recently, with assistance from UNESCO the workshop undertook the task of verifying documents and digitalising ancient photographic archives from the National Museum.

The work reaches out to the collections in the provinces and other countries in the region. Additionally, from 2004 to 2010 major collaborative work was developed with the Cham Sculpture Museum of Da Nang and with Hô-Chi-Minh-City History Museum. Activities included setting up workshops and the restoration and resetting of many sculptures. Since 2010, a new collaborative work has been set up with the Wat Phu site Museum in Laos.

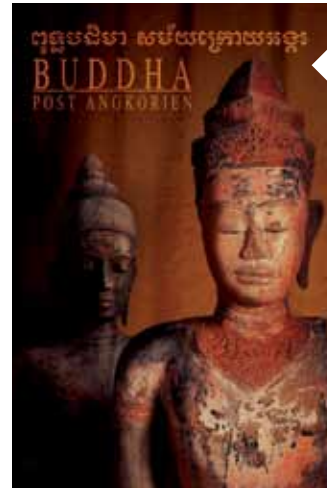
Duration: April 1999 - Present

Funding: *École française d'Extrême-Orient*, French Ministry of Culture and Communication, French Ministry of Foreign Affairs, sponsorship

Total budget: USD 200,000

Number of Cambodians trained and/or working on the project: 12 archaeologists, 1 architect from Phnom Penh Royal University of Fine-Arts

Several archaeology students and foreign students in conservation trained.



Exhibition "Post-Angkorian Buddha", 2000



Inscription's rubbing, 2009



Restoration of a Krishna Govardhana statue from Phnom Da, 2005



Works on a rearing lion (end 12th c.) from Preah Khan of Kompong Svay for the Preah Vihear Museum, 2013

ÉCOLE FRANÇAISE D'EXTRÊME-ORIENT - EFEO (FRANCE)

② From Yaçodharapura to Angkor Thom - Archaeology of the Capital of Angkor: Research in Urban Archaeology



Archaeological excavation at the Royal Palace - Angkor Thom (EFEO/MAFA)



Arhaeological excavation in the citadel - Angkor Thom (EFEO/MAFA)



Restitution of the map of Angkor Thom (J. Gaucher/EFEO/MAFA)



Supported by the EFEO and the French Ministry of Foreign Affairs, this archaeological programme is carried out in collaboration with the APSARA National Authority and has contributed to the history of the capital of the Khmer kings: the Angkor Thom site located at the heart of Angkor, covering a forested area of 10,000,000 square meters. This programme (1) revealed that Angkor Thom was built over a former ancient urban area, (2) characterised the archaeological depot constituting its urban soil, (3) created the map of the city in its last stage and (4) identified the main constitutive elements such as streets, canals, waterways, and buildings.

This ongoing programme focuses on the capital's formation from its origins to its abandonment. The aim is to determine and put in perspective the main stages of the historical evolution of Angkor Thom by characterising its successive constitutive spatial organizations.

The discovery and the dating of new major urban structures, particularly during excavations carried out inside the Royal Palace and on Angkor Thom's surrounding walls, revealed that Angkor Thom was not a city that was built from scratch and established by Jayavarman VII in the late 12th century, but rather an urban complex whose formation can be dated back to the late 9th century, corresponding with the date of the establishment of Yaçodharapura by King Yaçovarman the 1st.

Duration: September 2000 - Present

Funding: *École française d'Extrême-Orient*, French Ministry of Foreign Affairs, French Ministry of Culture, Czech Ministry of Foreign Affairs (2009), French Laboratory *Archéologie et Territoires* (Tours, France), miscellaneous

Total budget: USD 400,000

Number of Cambodians trained: 15 archaeologists, around 100 workers

All project staff: 2 Cambodians, 6 international staff members

ÉCOLE FRANÇAISE D'EXTRÊME-ORIENT - EFEO (FRANCE)

3 Archaeological Mission at Koh Ker

This project focused on Prasat Thom, the royal temple, specifically the entry pavilions of the sanctuaries' sheltered sculptures within the ringed formation. These entry pavilions are rated among the most refined of Khmer artworks. The excavations and the clearance of several pieces of statuary provide a more accurate vision of the organization of these groups of carved pieces, redefining the understanding of the temple's divine population.

More generally, the work carried out on the Koh Ker statuary allowed for : the development of expertise on the fight against antiques trafficking; the documentation of several objects in collections (starting with those from the National Museum of Cambodia) whose iconography and/or origin was previously unknown; and the spurring of restoration work on major works of art.

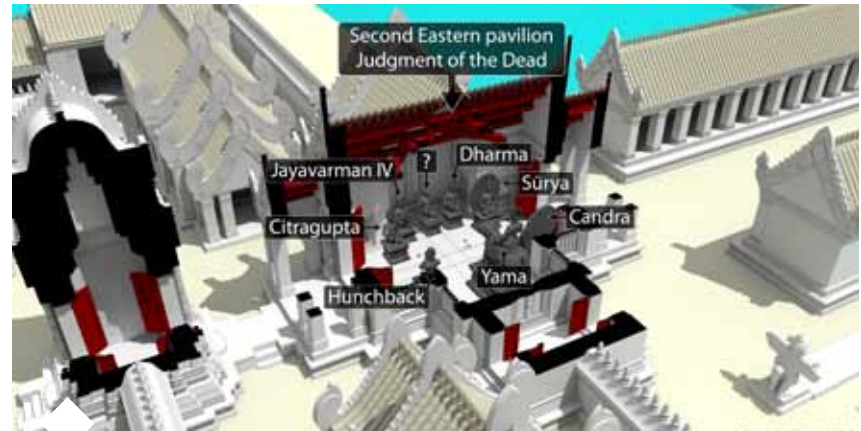
Duration: 2009 - 2012

Funding: École française d'Extrême-Orient, logistic support from the APSARA National Authority, sponsorship

Total budget: USD 50,000

Number of Cambodians trained and/or working on the project: 5 archaeologists, 50 workers (maximum number in 2009)

All project staff : 9 Cambodians, 5 international staff members



3D reconstruction of the second Eastern pavilion of Prasat Thom (sculpture : grez-production ; architecture and illustration : Olivier Cunin).



Excavations at the «Tomb of the White Elephant», West to Prasat Thom (March 2009).



Program of 3D scanning of the sculptures from the third Eastern pavilion of Prasat Thom (source : HGS MathComp, Hedielberg University).



Core drilling at the «Tomb of the White Elephant», West to Prasat Thom (March 2010).



Archaeological excavations of a pre-historic necropolis at Koh Ta Meas inside the West Baray, 2005



The excavation team unearthing the royal palace at Prei Monti (Roluos), 2008



Discovery of a new temple, Poy Ta Chap, in the dike of the West Baray, 2013



Site after the diagnosis trench was mechanically then manually excavated, and drawings of the remains unearthed in Prei Monti, 2008

ÉCOLE FRANÇAISE D'EXTRÊME-ORIENT - EFEO (FRANCE)

④ Franco-Khmer Archaeological Mission on the Angkorian Territory Development (MAFKATA)

The archaeological Franco-Khmer mission on the development of the Angkorian territory aims at understanding in detail the history and different phases of establishment of the first developments built by the Angkorian civilization in the Angkor region between the 6th and 9th centuries.

It is integrated with the “Construction of centres of civilization” research programme unit of the EFEO and is an addition to the Greater Angkor Project, a collaborative work between the EFEO, the University of Sydney and the APSARA National Authority.

The first field works were carried out in 2000 and concerned six sites in the Western Baray area where some outstanding pre-historical remains were unearthed. From 2004 to 2009, the works focused on the Roluos area, and from 2010 onwards, research has been conducted in both regions. Some of the temples’ surrounding potentially feature occupations ancient or contemporary to the construction of the Bakong and Ak Yum. The ongoing research conducted in these areas has yielded information about the first occupation phases and the genesis of the first Angkorian capitals in the region.

These works have shed new light on a still unknown period of Angkorian history whilst laying the foundation of our knowledge on the evolution of urbanism and territorial development at Angkor.

Duration: 2000 - Present

Funding: French Ministry of Foreign Affairs, *École française d'Extrême-Orient*, miscellaneous

Total budget: USD 240,000

Number of Cambodians trained: Approximately 200 trained workers, 20 archaeologists

All project staff: From 40 to 90 staff members, depending on the year

ÉCOLE FRANÇAISE D'EXTRÊME-ORIENT - EFEO (FRANCE)

5 Yaçodharâçrama Project: Archaeological and epigraphic studies on the Âçrama of Yaçovarman the 1st

Beyond the study of the physical and functional characteristics of the âçramas, this programme aims to increase our historical knowledge of the Khmer kingdom during a key period of time. This will allow us to specify its area of influence and map the different sects implanted there, making a political and religious map of the Khmer country at the end of the 9th century.

Duration: 2000 - 2014

Funding: École française d'Extrême-Orient, University of Chicago, French Ministry of Foreign Affairs

Total budget: USD 150,000

Human resources:

Number of Cambodians trained and/or working on the project: 2 archaeologists, 1 topographer, 1 specialist in ceramics, 50 workers

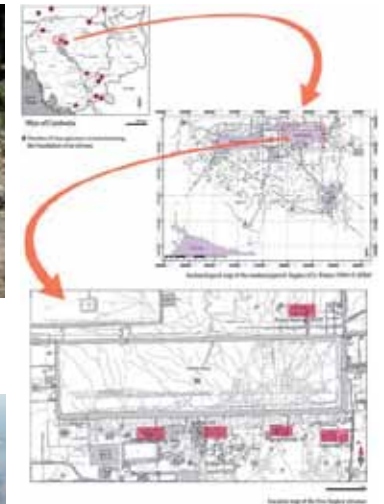
All project staff: 53 Cambodians, 7 international staff members



Excavation in the main sanctuary of the Vishnu âçrama (late 9th century)
Southern Prasat Komnap, 2012



Cleaning of the shrine of the Buddhist
âçrama stele (late 9th century) - Prasat
Ont Mong, 2012



Localisation of the âçrama
in Angkor and in
provinces



Aerial view of the Southern Prasat Komnap : identification of the main
structures and georadar study by Till F. Sonnemann, 2010



Overview of the work site



Restoration of the eastern courtyard, first tier



Western gopura, second tier



Terminal motif of northern gopura, second tier

ÉCOLE FRANÇAISE D'EXTRÊME-ORIENT - EFEO (FRANCE)

6 Restoration of Bapuon Temple

Restoration work began on Bapuon in 1995. The École française d'Extrême-Orient (EFEO), in partnership with the APSARA National Authority, implemented this project. Its technical objectives are to resume and bring to completion the work started by the Angkor Conservancy in the 1960s.

The major phases of the project included meticulous work on laterite stones stacked up as a protective measure between 1970 and 1972. The backfill had to be excavated down to the correct gradient to allow for the placement of reinforcement structures and appropriate drainage devices.

Although the temple suffered much neglect over centuries, it is now restored to its full splendour and has been reopened to visitors since late 2011.

Duration: 1995 - 2011

Funding: French Ministry of Foreign Affairs, *École française d'Extrême-Orient*

Total budget: EUR 8,375,000

Number of Cambodians trained: 2 archaeologists, 1 architect

Number of Cambodians working on the project: 1 architect, 2 archaeologists, 5 designers, 292 carpenters, mason and carriers

Total project staff: 300 staff members

NATIONAL FEDERATION OF UNESCO ASSOCIATIONS IN JAPAN - NFUAJ
(JAPAN)

① Angkor Community Learning Centre Project

The National Federation of UNESCO Associations in Japan (NFUAJ) has taken a leading role in implementing non-formal education programmes in developing countries since 1994, through UNESCO.

By April 2006, the programme has been expanded and operated its own office under the project name Angkor Community Learning Centre (ACLC) in order to provide multi-functional non-formal programmes through the Community Learning Centre (CLC) and other integrated economic and social development programmes at the grass-roots level.

Two CLC have been built in the Angkor Archaeological Park, at Kauk Srok and Leang Dai villages.

In Siem Reap, NFUAJ implemented a project related to the World Heritage Site of Angkor in 2009. Many Cambodians, including primary school children, do not have the opportunity to visit Angkor. Thus, in order to promote respect among Cambodian children for their own tangible and intangible heritage, NFUAJ published its very first pilot colouring book for primary school children, as well as a Student's Book and a Teacher's Guidebook, in partnership with the APSARA National Authority and the Provincial Department of Education and Youth of Siem Reap.

Duration: 2006 - Present

Funding: Donations from individuals, UNESCO Associations, several Japanese organisations and private companies

Total budget: USD 1,990,000

Number of Cambodians trained: Approximately 16,000 people through capacity building and literacy educational or vocational training

Total project staff: 7 Cambodians, 3 international staff members



Handicraft



CLC Project



Animal raising



Traditional dance and music



Restoration of *nagas* and *shinghas* statues



NATIONAL FEDERATION OF UNESCO ASSOCIATIONS IN JAPAN - NFUAJ (JAPAN)

② Restoration Project on *naga* and *shingha* Images at the Causeway and Outer Gallery of Bayon

NFUAJ also collaborates with JASA and JST on the restoration of stone statues at the Bayon Temple, undertaking several emergency tasks at the heritage site. Restoration and re-installation works on stone *naga* and lion statues is one of the highest priorities, since the statues are severely damaged and scattered around their original locations.

Duration: 2012 - 2014

Funding: Donations from individuals, UNESCO Associations, Japanese organisations and private companies

Total budget: USD 50,000

Number of Cambodians trained and/or working on the project: 1 architect, 4 site workers

Total project staff: 5 Cambodians, 1 international expert

GERMAN APSARA CONSERVATION PROJECT - GACP (GERMANY)

Project at Angkor, Koh Ker and Kulen - Conservation of Bas-reliefs and Polychrome Decorations

The German Apsara Conservation Project (GACP) works to protect and preserve sandstone bas-reliefs, sculptures, stucco and polychrome decoration in Angkor Wat and at other sites in Cambodia. It has three objectives:

1. **Scientific documentation** of the bas-reliefs in Angkor Wat, **research** on sandstones, brick and stucco, and polychrome decorations in brick sanctuaries as well as their weathering processes; research in adapted conservation materials and techniques for sustainable conservation treatments;
2. Execution of **conservation** interventions and implementation of long-term maintenance programmes.
3. **Training of Khmer conservators** in the conservation of porous building and sculpture materials and **scientific exchange** with international conservation professionals; and

GACP's scientists have developed special conservation products and techniques for the different construction and sculpture materials (sandstone, brick, stucco, and wall paintings). The conservation work always follows a risk map prepared for the different temples (e.g. stone, stucco, polychromy). The most important task, however, is the training of Cambodian conservators at international and scientific levels.

Duration: 1995 - Present

Funding: Government of Federal Republic of Germany,
German Federal Foreign Office

Total budget: USD 6,000,000

Number of Cambodians trained: 54 conservators

Total project staff: 24 Cambodians, 5 international experts,
17 non-permanent international experts



Working site - Bakong



Inscriptions cleaning,
Prasat Kravan



Injection for bas-relief conservation,
Angkor Wat



Dismantling work of the Southern Library



New sandstone process



Penetration test on the foundation soil of the Southern Library

**JAPAN/APSARA SAFEGUARDING ANGKOR - JASA (JAPAN/CAMBODIA)
UNESCO/JAPAN FUNDS-IN-TRUST**

Safeguarding of the Bayon Temple of Angkor Thom

Immediately after the establishment of the ICC-Angkor, the Japanese Government Team for Safeguarding Angkor (JSA), with administrative support from the Japan International Cooperation Centre (JICE) and UNESCO, carried out two phases (1994–2005) of a large-scale conservation and restoration project: restoration works of the Northern Library of the Bayon Temple, the towers of Prasat Sour Prat and the Northern Library of Angkor Wat, fundamental surveys, various research, the establishment of the Master Plan for the Conservation and Restoration of the Bayon Complex, and a training program for Cambodian experts.

The third phase (2005–2011) took place under the JASA-UNESCO joint framework. It was primarily aimed at gradually turning over the operational helm to Cambodian experts. This phase concentrated on the restoration of the Southern Library, and on studying methods for the conservation of the bas-reliefs of the inner galleries and the structural stabilization of the central tower.

The fourth phase began in 2012 and will be completed in 2017. This phase focuses on stabilization of the foundation and reinforcement of the upper structure of the central tower, a conservation work on the inner bas-reliefs including the restoration of its surrounding structure and hazardous areas, and improvement of the architectural landscape of the eastern façade.

Duration: 1994 - 2017

Funding: UNESCO/Japan Funds-in-trust

Total budget: 1st to 3rd phases: USD 23,869,765

4th phase (estimated): USD 2,500,000

Number of Cambodians trained and working with JASA:

4 architects, 3 archaeologists, 1 IT specialist, 5 heavy machine operators and drivers, 72 site workers

Total project staff: From the 1st to the 3rd phase, approximately 350 Cambodian experts and site workers had been involved in JSA/JASA project, and approximately 1,100 dispatches of international experts had been carried out (These dispatches were funded by UNESCO/Japan Funds-in-trust, after the 3rd phase, partially by Grant-in-Aid for Scientific Research (KAKENHI) and several other foundations)

LABORATORY OF PHYSICAL AND ENVIRONMENTAL GEOGRAPHY - GEOLAB (FRANCE)
BLAISE PASCAL UNIVERSITY (FRANCE)
NATIONAL CENTER FOR SCIENTIFIC RESEARCH - CNRS (FRANCE)

Accelerated Sandstone Decay induced by Forest Clearance around Ta Keo Temple

The decorative facings of Ta Keo Temple have been severely affected by sandstone deterioration which concerns up to 90% of the ornamentation of carved levels. The research project on the deterioration causes has been carried out by the GEOLAB French team since 2006. It is based on photogrammetric and microclimatic surveys, old photographs provided by the EFEO and the Guimet Museum, and analysis of similar decorative patterns at Ta Keo and on temples still in forested environments. These investigations have demonstrated that sandstone deterioration has dramatically increased (by ten times) since the clearance of forests around Ta Keo temple in the 1920s: direct exposure of ornamentation to sunshine and monsoon rains has enhanced wetting-drying cycles conducive to rapid mechanical decay of the sandstone by contour scaling and flaking. By contrast, at other sites, forest canopy has preserved the Angkor sandstones by acting as an umbrella which protects the decorative stone against atmospheric attacks.

Funding: National Center for Scientific Research, Blaise Pascal University, *Institut Universitaire de France*, French Ministry of Foreign Affairs, *Maison des Sciences de l'Homme de Clermont-Ferrand*

Total budget: USD 280,000

Number of people trained: Contribution to the training of 75 highly qualified South Asian architects, conservators, and archaeologists during the CRFMP field courses (2008 - 2010) and the UNESCO-IGeS theoretical and practical workshop (2011)

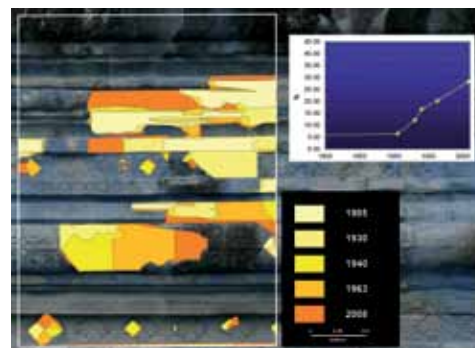
Total project staff: 4 APSARA staff members, 7 international staff members



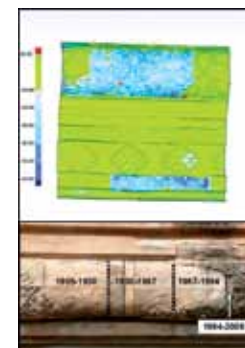
Serious decay of sandstone due to direct exposure to the tropical sun and monsoon rains - Ta Keo



Eastern façade of Ta Keo; the use of short-range laser scans allows for 3D modelling of sandstone decay



© Geolab / F. Vautier - O. Voltaire



© Geolab / F. Vautier - O. Voltaire - M.F. André

Comparing photographs taken between 1905 and 2008: reconstruction of the sandstone decay scenario emphasizing its dramatic acceleration once the temple was cleared of its forest canopy in the 1920s

3D mapping of the damaged areas and photographs taken at different dates: large erosion scars have formed since the temple was cleared of its forest canopy, erasing all traces of the ornamented surface



Discovery of Buddhist statues, 2001



Schoolchildren visiting the museum, 2009



Maintenance work, 2007

SOPHIA UNIVERSITY ANGKOR INTERNATIONAL MISSION (JAPAN)

① Research and Conservation at Banteay Kdei

The Sophia University International Mission began its archaeological research at Banteay Kdei in 1989. During its excavations in 2000 and 2001, the team discovered 274 Buddhist statues, 271 of which were images made of sandstone and three of which were small figures made of bronze. The statues are displayed at the Preah NORODOM Sihanouk-Angkor Museum in Siem Reap.

On-site training was conducted in parallel with the archaeological research work at Banteay Kdei. Around twenty students from the Royal University of Fine Arts' Department of Archaeology and Architecture in Phnom Penh were selected to attend a training programme held two or three times a year. Students were trained at the Banteay Kdei temple site to become conservators. By 2013, a total of 56 sessions were conducted.

In late 2011, Sophia University built the Sophia Angkor Center for Cultural Heritage Education, an information center for villagers and children. It is used as a rest house and training programme base.

Duration: 1989 - 2013

Funding, budget, staff: integrated in the project on page 101

SOPHIA UNIVERSITY ANGKOR INTERNATIONAL MISSION (JAPAN)

② Research, Restoration and Conservation at Angkor Wat

The Sophia University Angkor International Mission undertook the conservation and restoration on the western causeway of Angkor Wat from 1996 to 2007. After receiving a request from the Royal Government of Cambodia, the mission began preliminary surveys on the western causeway in December 1993. Training of Cambodian professionals and workers commenced in 1996 and official dismantling work began in 2000. By October 2007, a total of 5,000 stones were reinstalled.

The restoration work uncovered the high level of wisdom and technology that existed at the time of the original construction, such as methods for diverting rainwater. In November 2007, Phase 1, involving 100 out of the 200 meters of the western causeway, was completed and celebrated with a completion ceremony, held with the participation of Deputy Prime Minister Sok An and 2,400 villagers.

Duration: 1996 - 2007

Funding: Sophia University (Japan), various contributions from supporters, individuals and foundations such as Aeon 1% Club (Japan), the Grant Assistance for Cultural Grassroots Project, the Government of Japan, APSARA National Authority, the Royal Government of Cambodia

Total budget: USD 4,000,000

Human resources: Number of Cambodians trained:

- 1,500 students of archaeology and architecture attended the lecture at RUFA, Phnom Penh (March 1991 - May 1997)
- 500 students of archaeology and architecture participated in on-site training at Angkor area, Siem Reap (March 1991 - September 2013)
- 200 local residents participated in Cultural Heritage Education (February 2008 - September 2013)
- 2,300 primary school students participated in Cultural Heritage Education (August 2009 - September 2013)

Total number of staff: 85 Cambodians (3 architects, 3 archaeologists, 3 drivers, 1 administrator, 45 workers, 30 stonemasons), 20 international staff members



Dismantling of the western causeway, 2000



Cambodian trainee, 2000



Compacting the soil on the western causeway, 2005



Shrine dedicated to Dharanindra-devi before intervention, 1994



Same shrine after the intervention, 1994



A newly trained stonemason attending a column, 1994



Lintel of the Central East tower, West side, 1994

ROYAL ANGKOR FOUNDATION - RAF (HUNGARY)

Roluos Project

The Royal Angkor Foundation (RAF) was among the founders of the International Coordinating Committee for Safeguarding and Development of the Historic Site of Angkor.

The first GIS of Angkor was initially developed by the RAF and then jointly developed with UNESCO as a part of the Zoning and Environmental Management Plan (ZEMP 1993-1996).

The Foundation carried out joint research with the NASA/Jet Propulsion Laboratory and the World Monuments Fund (WMF 1995 - 1996) to collect and analyse data sensors on Angkor and the restoration of the Preah Ko temple.

Duration: 1992 - 2010

Funding: Ministry of Foreign Affairs of Germany, UNESCO, NASA/JPL, Ministry of Foreign Affairs of Hungary, CIDA

Total budget: USD 1,216,000

Number of Cambodians trained and/or working on the project: 3 archaeologists, 18 teachers, 52 workers

Total project staff: 108 staff members

UNIVERSITY OF BONN (GERMANY)

Angkor Inscriptions Survey (AIS)

The Angkor Inscriptions Survey (AIS) Project was inaugurated in February 2007. Its principal aims are:

- To identify, inspect, and monitor the location and condition of inscriptions yet to be found on the temples of the ancient Khmer capitals in the Angkor area (Roluos, Angkor, Koh Ker) and on the linked temple of Banteay Chhmar by means of physical surveys;
- To compile priority lists for inscription conservation measures based on a specific set of criteria; and
- To raise public awareness of the meaning and significance of the inscriptions through re-examination and explanation of their purpose and contents, including new translations, documentary and public relations films, and publications. This public awareness programme is one method of protecting the inscriptions from further inadvertent damage.

In 2009, the work of AIS was extended to include the temple of Banteay Chhmar. Between July 2008 and June 2009, AIS increased its documentation from 133 to 215 inscriptions. In 2010, inscriptions found at Preah Khan of Kampong Svay were analysed and a new translation was produced.

The Handbook on the interpretation of Banteay Chhmar, at present being edited in the USA, was completed and discussed at the Ministry of Culture, Phnom Penh, in 2012. Two Old-Khmer inscriptions and one unpublished Sanskrit stele (K.1318), all from the Banteay Chhmar area, have been documented and translated in 2013.

Duration: 2007 – Present

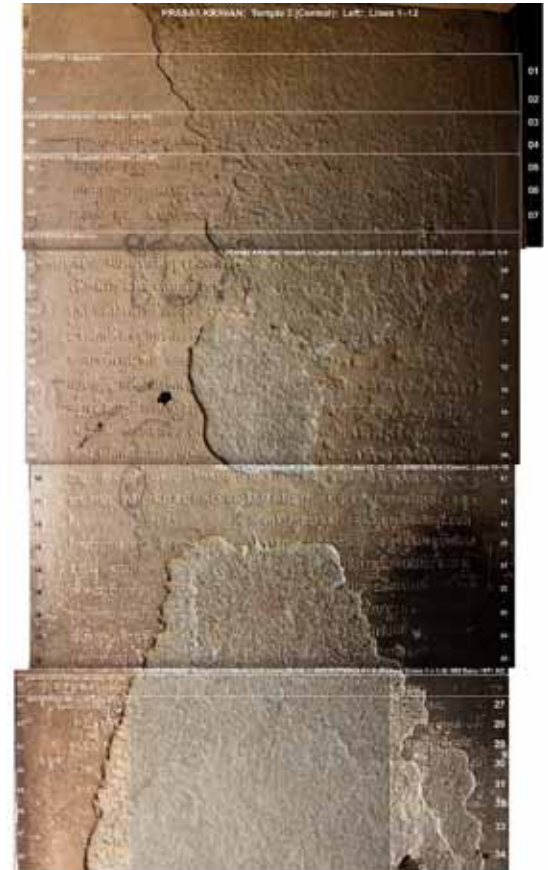
Funding: Boner Foundation for Fundamental Research, University of Bonn, private funding

Total budget: USD 88,000

Number of Cambodians trained: 5 Cambodian trained in detection and specialized illumination of inscriptions for detailed photographic documentation using a generator

Total project staff: 5 Cambodian assistants, 1 international assistant

Prasat Kravan, Angkor:
Central temple, East
doorframe, South
pillar. Inscription
K. 270 (1), Lines 01-34.
Dated 843 and 893
Saka (921 and 971 CE).
Old Khmer.



Banteay Chhmar area,
Banteay Meanchey:
Upper portion of an
inscribed stele.
Discovered in 2012
near Banteay Chhmar.
«Stele 2», Side A,
Lines 01-10 of 41 lines
in total. Old Khmer.





Staff from APSARA and the University of Sydney oversee a 64 square meter excavation - Phum Lovea, 2012



One of a number of prehistoric burials uncovered in two field seasons - Phum Lovea, 2012

UNIVERSITY OF SYDNEY (AUSTRALIA)

① From paddy to *pura*: the Origins of Angkor Project

The principal aim of the proposed research is to examine the emerging socio-political complexity in Cambodia and Thailand prior to the rise of the Angkorian state. The project seeks evidence of the indicators of socio-political transformation including the control of trade and exchange networks, settlement transformation and growth, rising militarism, attainment of status through the deployment of surpluses, and privileged access to vital resources.

Furthermore, the project will examine changing population dynamics, specifically regarding health, mobility, and the genetic relationship between occupants of sites located within the ancestral core of Angkor and on its periphery. The aim is to distinguish which factors differed in kind or degree between the two regions and assess how they relate to the different rate and magnitude of state formation in Thailand and Cambodia.

Duration: 2011 - 2014

Funding: Australian Research Council Discovery Project

Total budget: USD 100,000

Number of Cambodians trained and/or working on the project: 1 archaeologist, 2 conservators

Total project staff: 4 staff members

UNIVERSITY OF SYDNEY (AUSTRALIA)

② The Sculpture Workshops of Angkor Project: Roluos, Angkor Thom, Phnom Dei

The sculptures of Angkor are recognized in the UNESCO World Heritage listing as among the greatest creations of human genius. Khmer images in sandstone and bronze are distinguished by the precision of execution and the classic canons of beauty. Over eight centuries, kings of the Khmer Empire invested great resources in representations of the gods consistent with their ability to fulfil spiritual necessity and confer political legitimacy. Subsequently, the production methods used were often amongst the most innovative technological accomplishments of the civilization. However, the methods of manufacturing and the activities of the teams of artists who created these works remain unknown.

For the first time in Southeast Asia, an international multi-disciplinary project is conducting research at the sites of sculptural workshops. Three sites are under investigation: Roluos, an area located to the southwest of the Bakong temple; the region behind the Terrace of the Leper King; and Phnom Dei, situated at the north of Angkor Thom.

Duration: 2011 - 2012

Funding: Australian Research Council Discovery Project

Total budget: USD 30,000

Number of Cambodians trained and/or working on the project: 4 archaeologists, 6 RUFA Students, 25 workers

Total project staff: 40 staff members



An unfinished statue uncovered during the excavation of a sculpture workshop adjacent to the Royal Palace - Angkor Thom



Excavations near the Bakong temple, in Roluos, reveal buildings likely associated with a workshop of stone carvers located there in the 9th century



CSM at Angkor Wat



Phnom Bakheng

WORLD MONUMENTS FUND - WMF (UNITED STATES OF AMERICA)

① Angkor Wat Restoration

In 1998, at the invitation of the APSARA National Authority, the World Monuments Fund (WMF) began surveying the Churning of the Sea of Milk Gallery at Angkor Wat to address moisture problems evident on the surface of the bas-relief. At the conclusion of the investigative phase, WMF began a programme to disassemble, conserve and reassemble the roofing stones to prevent water infiltration and re-establish the impressive drainage system originally employed by the Khmer builders. The conservation work was completed in December 2011. In response to requests from the APSARA National Authority and in accordance with recommendations from the ad hoc experts of the ICC-Angkor, WMF is currently replacing the wooden ceiling in the gallery and installing original apsara carvings and replicas on the roof.

Duration: 1998 - 2013

② Phnom Bakheng Restoration

World Monuments Fund began working at Phnom Bakheng nearly a decade ago, beginning with condition surveys and interpretive workshops on the importance of this temple. In recent years, the project has focused on structural stabilization, stone conservation and waterproofing as well as necessary archaeological excavation. WMF upgraded the pedestrian paths to improve access to Phnom Bakheng. The project currently focuses on the entire eastern elevation of the temple. In 2010, WMF convened a workshop to address brick shrine conservation needs.

WMF's work at Phnom Bakheng has extended beyond physical conservation to address overall site management issues. In 2011, WMF conducted a week-long session with representatives from the APSARA National Authority and UNESCO to review the most important stewardship needs and visitors' experience on the site.

Duration: 2004 - 2016

Funding, budget, staff: integrated in the project on page 107

WORLD MONUMENTS FUND - WMF (UNITED STATES OF AMERICA)

3 Preah Khan Restoration

World Monuments Fund implemented a comprehensive plan to stabilize the monastic complex and assure effective presentation of the monument, ensuring the public's safety in exploring the extraordinary sculptures and architectural features of the site. In addition to general conservation activities, WMF mounted a campaign to restore the garudas that surround the exterior of Preah Khan. In 2008, WMF also created a visitor Centre in an equipment shed that was no longer needed. The visitor Centre provides tourists with information on the history of Preah Khan and its restoration. In 2010, WMF published *The Preah Khan Monastic Complex*, which describes the cultural significance of the site and illustrates the conservation programme undertaken by WMF in collaboration with the APSARA National Authority.

Durée : 1990 - 2013

Duration: 1990 - 2013

Funding: Private individuals, foundations, corporations, Government of the United States of America

Total budget: USD 9,250,000

Number of Cambodians trained: Dozens of Cambodians have participated in training at Preah Khan and Ta Som. In addition to providing general training opportunities, in-depth professional training was provided to six architects, one engineer and one archaeologist.



Ongoing implementation of a conservation and stabilization plan for a unique two-story pavilion



Preparing structural adhesive for stone repair



Resetting a stone to its original position



Ad hoc experts visit at Kok Châk temple



Provisional roof structure support - Angkor Vat

**INTERNATIONAL COORDINATION COMMITTEE FOR
THE SAFEGUARDING AND DEVELOPMENT OF THE HISTORIC SITE
OF ANGKOR (ICC-ANGKOR)**

The Charter for Angkor

The Charter for Angkor clearly recognizes the great importance of on-going research and the constant evolution of conservation methods and materials. Its drafting began ten years ago (2002) by an interdisciplinary group of conservation professionals who have been involved in the field of heritage conservation and, for the last 20 years, specifically in the complex issues of safeguarding Angkor.

The Charter recommends that any conservation and/or restoration project should include the following activities:

Planning: This includes first contacts, preliminary site visits, definition of the aims and objectives, formulation of a work plan, a budget, a schedule and distribution of tasks.

Acquisition of data: This includes the collection of all data regarding the history of the object to be conserved or restored, its iconography, construction, previous conservation and restoration interventions, social research, and preparation of plans and documentation forms, as well as photographic documentation, picture monitoring, current condition, mapping and documentation of materials, execution of techniques, and examination of materials and agents of decay. This phase also concerns preparation of a clear investigation plan, or an “anamnesis.”

Diagnosis and safety evaluation: On the basis of the acquired data and structural analysis, the causes of damage and decay and the present safety conditions must be examined and evaluated case by case.

Treatment: Tailoring of the measures to ensure the safety and durability of the structure.

Controls: Quality control surveys implemented during and after the conservation/restoration operations, including a long-term maintenance plan.



Fish farming pond - Phum Thma Chruogn, May 2013 (ADF)





Cleaning of Angkor Wat moats

PROJECTS LINKING
RESTORATION
AND SUSTAINABLE
DEVELOPMENT





Test-pit at the Royal Palace - Phnom Kulen, March 2012



Villagers' survey - Phnom Kulen, July 2013



Sanitation and food programme - Phnom Kulen, May 2013



Mine clearance of archaeological sites - Phnom Kulen, January 2008

ARCHAEOLOGY AND DEVELOPMENT FOUNDATION - ADF
(UNITED KINGDOM)

Phnom Kulen Programme

The Phnom Kulen Programme has been implemented by the Archaeology and Development Foundation (ADF), a London-based charity associated with the local NGO Integrated Solutions Asia Cooperation (ISAC) since 2008.

This programme, in partnership with the APSARA National Authority, blends archaeology with sustainable development by engaging local communities, addressing their immediate needs, and preserving their heritage. The area registered as Phnom Kulen National Park has always been of archaeological, cultural and religious significance for Cambodians. Around 4,000 inhabitants live on the plateau. The programme endeavours to research and conserve Khmer archaeological heritage, train local archaeologists and to raise awareness among local communities of their rich and unique cultural heritage. The programme also addresses the harsh economic situation facing the people, with particular emphasis on food security, education, building infrastructure, and alternative income generation, as well as protection of the Phnom Kulen National Park forests. It also supports local education programmes and villages with the building of infrastructures.

Duration: January 2008 - Present

Funding: Private and institutional donors

Total budget: USD 820,000

Number of Cambodians trained and/or working on the project: 50 students from the Faculty of Archaeology (RUFA), 7 graduated archaeologists, numerous workers from the Phnom Kulen villages for excavations and stone conservation, 24 APSARA staff members, numerous farmers from the income generation activities, 6 village health facilitators for the hygiene and nutrition programme

Total project staff: 13 Cambodians, 2 international staff members (and 3 part-time staff members)

APSARA NATIONAL AUTHORITY (CAMBODIA)
HOLCIM GROUP OF COMPANIES (SWITZERLAND)

Restoration of the Vihear of Wat Bakong and its Mural Paintings

Painted in the 1940s by a small team of local painters and left undamaged by the Khmer Rouge, the galleries of the vihear of Wat Bakong contain magnificent scenes from Buddha's life and other rare events. The restoration respected the strict protocol for any intervention taking place within a World Heritage zone.

For the first time in the history of post-Angkorian monuments, a deteriorating Buddhist monument was not demolished and re-built by monks. Instead, the structure was entirely restored to its original condition, while the mural paintings were extracted and restored by the team from *Restaurateurs sans frontières* (RSF), in association with the Cambodian teams from the APSARA National Authority and the Royal University of Fine Arts (RUFA), along with a monk from Wat Bakong.

Duration: 2007-2011

Funding: APSARA National Authority, HOLCIM Group of Companies

Total budget: USD 460,000

Number of Cambodians trained and/or working on the project: 2 students from RUFA, 1 Buddhist monk, 1 APSARA staff member

Total project staff: 13 APSARA staff members, 20 international staff members from *Restaurateurs Sans Frontières*



Overall view of the Vihear after restoration



Restoration of the paintings



Dilapidated state of the Vihear and wall paintings



Ceremony for the unveiling of the commemorative plaque at the completion of the works



Archaeological excavation



Dismantling work at the pier



Pedestrian and oxcart tours

APSARA NATIONAL AUTHORITY (CAMBODIA)
UNESCO/JET TOUR FUNDS-IN-TRUST

Strengthening and Restoration of the Srah Srang Complex

The project focuses on the consolidation and restoration of the jetty of the Srah Srang pond (780 by 380 meters). The Srah Srang pond is located directly opposite to the Banteay Kdei temple. An esplanade which now divides the two complexes originally linked them together. This esplanade needs to be retrofitted and a bypass road must be constructed.

The Srah Srang-Banteay Kdei complex is surrounded by three villages: Rohal, North Srah Srang and South Srah Srang. The villagers are associated with the conservation and presentation project, while enables them to benefit from tourism generated income.

Two additional activities have been included in the actual conservation work:

- **Local community component:** programme linking the villages of Rohal, North Srah Srang and South Srah Srang (in synergy with the community development project financed by New Zealand);
- **Visitor experience improvement:** an approach area to the south of Banteay Kdei and a secondary parking area to the north of Banteay Kdei were constructed, as well as walking and cycling paths laid around Srah Srang and walkways linking Srah Srang and Batchum, Srah Srang and Pre Rup, Srah Srang North, Rohal and Ta Prohm. Also, oxcart itineraries have been established in Rohal, South Srah Srang and Kravan.

Duration: 2009 - Present

Funding: APSARA National Authority, Jet Tours (via the World Heritage Center), New Zealand

Total budget: - APSARA: USD 50,000
- Jet Tours: USD 77,820
- New Zealand: USD 20,500

Total project staff: 10 APSARA staff members

HUNGARIAN INDOCHINA COMPANY - HUNINCO (HUNGARY)

Koh Ker Project

The main objective of the Koh Ker Project is to support the efforts of the APSARA National Authority in safeguarding and developing the Koh Ker area as a potential World Heritage site. The first two years of the Koh Ker project were dedicated to surveying, with the aims of creating a multi-purpose base map and providing detailed information on the broader archaeological context. HUNINCO has also added an Inscriptions Programme to its project. Thanks to the active role of leading Khmer and French epigraphists, a re-read programme was launched based on the early rubbings of the EFEO as well as HUNINCO's newly developed documentation. From 2008 to 2010 HUNINCO had the Royal Angkor Foundation as its scientific partner. In 2011, the Hungarian Southeast Asian Research Institute assumed organizational and scientific control of the Koh Ker Project.

In its third year, the Hungarian Southeast Asian Research Institute assumed organizational and scientific control of the Koh Ker Project. Since March 2011, the Hungarian Indochina Company, the APSARA National Authority, and the Hungarian Southeast Asian Research Institute have cooperated in the systematic archaeological excavation at Prasat Krachap in Koh Ker, the comprehensive study and publication of Koh Ker's epigraphy, and Koh Ker's participation in the LiDAR survey, including data processing.

Duration: 2008 - Present

Funding: HUNINCO

Total budget: USD 572,000 (2008-2011),
USD 3,000,000 (2011-2015)

Number of Cambodians trained and/or working
on the project: 3 archaeologists, 1 epigraphist, 10 workers

Total project staff: 36 staff members



Archaeological mission at Koh Ker in 2011: Trench in front of the west gate of Prasat Krachap



Schoolchildren participating in the community program



Shape of the staircase before and after the restoration works



Shape of the lions before and after the restoration works

CZECH PROJECT GOPURA II (CZECH REPUBLIC)

Czech School of Restoration at Phimeanakas temple

There was completed and restored a lion statue from several fragments found around the temple, which was fitted onto an original place on the western side of the temple. On the south side of the temple there was completely restored statue of a lion. Statue of a found smaller lion was reconstructed, missing half of body was casted from artificial stone and fitted into a top place on the north side of the temple.

Fragments of statues of lions and elephants found around the temple were cleaned, completed and stored. Over thirty trainees - employees of the APSARA National Authority and several local sculptors and painters - completed training programmes in restoration and conservation the stone.

Duration: 2007 - 2011

Founding: Czech Republic Development Cooperation, Maitrea Foundation, Lux et Lapis Foundation, Regina and Petr Hodny, Jiri Nekovar, Aqua Barta, Michal and Katerina Blazek

Total budget: USD 70,000

Number of Cambodians trained: Over 30 trainees

Total project staff: 5 international staff members

UNIVERSITY OF SYDNEY (AUSTRALIA)

Living with heritage

World Heritage conservation in developing countries faces challenges from conflicting demands of preservation, economic development, and social equity. Managing these demands requires monitoring dynamic interaction between natural environment, cultural heritage, and contemporary society. Angkor, the great World Heritage Site in Cambodia, epitomises this challenge. The joint Cambodian and international team created a time-based spatial information monitoring system for site management using Angkor as a test case. The new methodology integrated past and future research, community values, national policies, and international heritage best-practice. Research, management, and governance came together to reconcile the competing demands of living with heritage.

This project aimed to create a versatile monitoring system to track, visualize, and compare change over time on differing scales. World Heritage Site managers gained a new tool essential for implementing heritage policies to achieve sustainable development integrated with community needs and aspirations.

Duration: 2004 - 2009

Funding: Australian Research Council, private partners

Total budget: USD 1,200,000



Surveyors working to define access areas - Pre Rup



Consultations with communities in development strategies



Assessments of soil, vegetation and other kinds of land cover



Floating village - Tonle Sap

ANNEXES

CHRONOLOGICAL LANDMARKS

French naturalist
Henri Mouhot “rediscovers”
Angkor

1863

Operations carried out
by the Angkor Conservation
Office: excavations
and research, conservation
and restoration,
documentation

**1908/
1975**

Signature in Paris
of the Agreements on a
comprehensive political
settlement of the Cambodian
conflict

23 October
1991

Inscription of
the Angkor site
on UNESCO’s
World Heritage
List

14 December
1992

1907

Establishment of
the *École française
d’Extrême-Orient*
at Angkor

1991

9-11 September

On the occasion of
the second roundtable
on Angkor held at UNESCO
headquarters (Paris),
official request from HRH
Prince NORODOM Sihanouk,
Chairman of the Supreme
National Council and
Head of State of Cambodia
asking UNESCO
to coordinate international
efforts to safeguard
the Angkor monuments

1991

30 November

Appeal from
the Director-General
of UNESCO to
the international
community:
“Save Angkor!”

1993

12-13 October

1st Intergovernmental
Conference for
the Safeguarding
and Development of
the Angkor Site,
held in Tokyo

Establishment of the International Coordinating Committee for the Safeguarding and Development of the Historic Site of Angkor, under the co-chairmanship of France and Japan, with UNESCO providing the services of standing secretariat. First plenary session of the committee held in Phnom Penh

21-22 December
1993

Enactment of the Law on the Protection of Cultural Heritage

25 Janvier
1996

Angkor taken off the List of World Heritage in Danger and put on the World Heritage List

5 July
2004

Enactment of the Charter for Angkor

6 December
2012

1995
19 February

Establishment of the APSARA National Authority

2003
14-15 November

2nd Intergovernmental Conference for the Safeguarding and the development of the Angkor Site held in Paris.

2006
November

Creation of the ad hoc experts group for sustainable development

2013
5 December

3rd Intergovernmental Conference for the Safeguarding and the development of the Angkor Site held in Cambodia

FOUNDING DOCUMENTS FOR THE INTERNATIONAL ACTION AT ANGKOR

Angkor on the World Heritage List

“The sixteenth ordinary session of the World Heritage Committee was held in Santa Fe, New Mexico, United States of America, from 7 to 14 December 1992. It was attended by the following members of the Committee: Brazil, China (People’s Republic of), Colombia, Cyprus, Egypt, France, Germany, Indonesia, Italy, Mexico, Oman, Pakistan, Peru, Philippines, Spain, Senegal, Syrian Arab Republic, Thailand, Tunisia and the United States of America.

The following State Parties to the Convention who are not members of the Committee were represented by observers: Algeria, Australia, Bangladesh, Belize, Bulgaria, Canada, Czech & Slovak Federal Republic, Finland, Greece, Guinea, Holy See, Japan, Netherlands, Poland, Russia and Switzerland.

Representatives of the International Centre for the Study of the Preservation and the Restoration of Cultural Property (ICCROM), the International Council on Monuments and Sites (ICOMOS) and the World Conservation Union (IUCN) attended in an advisory capacity.

Properties inscribed on the World Heritage List

Angkor

The Committee took note of the report presented by Mr. Azedine Beschaouch, Chairman of the World Heritage Committee. Given the unique situation in Cambodia, which, in accordance with the Paris Accords, has been placed under the temporary administration of the United Nations since October 1991, the Committee has decided to waive some conditions required under the Operational Guidelines of the World Heritage Agreement and, on the basis of criteria (I), (II), (III) and (IV), has inscribed the Angkor Site, together with its monuments and its archaeological zones, as described in the “Périmètre de protection” accompanying the ICOMOS report, on the World Heritage List.

The Committee stressed that this action was not to be taken as setting a precedent for the inscription procedure, but was in answer to an exceptional situation.

Therefore, in order to guarantee the protection of the site for a three-year period (1993 to 1995), the Committee has decided that a special in-depth study will be made of the Angkor Site and that reports will be presented periodically to the Bureau and the Committee on the status of the monuments and the protective perimeter; the first report is to be presented by the July 1993 session of the Bureau to be followed by a report to the Committee during its seventeenth session in December 1993.

In order to deal with the urgent problems of conservation quickly and effectively, the Committee has inscribed the site of Angkor on the List of World Heritage in Danger, and has requested, on the recommendation of ICOMOS, that the authorities concerned take the necessary steps to meet the following conditions:

- a) Enact adequate protective legislation;
- b) Establish an adequately staffed national protection agency;
- c) Establish permanent boundaries based on the UNDP project;
- d) Define meaningful buffer zones;
- e) Establish monitoring and co-ordination of the international conservation effort.”

EXCERPT FROM THE REPORT OF THE SIXTEENTH SESSION OF THE WORLD HERITAGE COMMITTEE ON THE INCLUSION OF ANGKOR ON THE WORLD HERITAGE LIST, SANTA FE, USA (7 TO 14 DECEMBER 1992 - SANTA FÉ, USA (7/14 DÉCEMBRE 1992)



Bayon Temple

TOKYO DECLARATION OCTOBER 13, 1993

“We, the representatives of Australia, Belgium, Brunei, Cambodia, Canada, China, France, Germany, Hungary, India, Indonesia, Italy, Japan, Laos, Luxembourg, Malaysia, the Netherlands, Norway, the Philippines, Poland, Russia, Singapore, Spain, Sri Lanka, Sweden, Switzerland, Thailand, the United Kingdom of Great Britain and Northern Ireland, the United States of America, Viet Nam, the European Community, the Asian Development Bank, the International Centre for the Study of the Conservation and Restoration of Cultural Property (ICCRUM), the Southeast Asian Ministers of Education Organization Regional Centre for Archaeology and Fine Arts (SEAMEO/SPAFA), the United Nations Development Program (UNDP), the United Nations Educational, Scientific and Cultural Organization (UNESCO), and the United Nations Volunteers Programme (UNV), meeting at the Inter-governmental Conference on the Safeguarding and Development of the Historic Site of Angkor which was held in Tokyo on 12 and 13 October, 1993, adopted the following:

1/ We recognize that the Angkor monuments are one of the world’s most valuable cultural heritages in Asia as well as the national symbol of Cambodia and its people, and that international co-operation for the safeguarding and development of the Angkor region, including the Angkor monuments, is of particular importance for national reconstruction.

2/ We recognize that the people of Cambodia have sovereignty over and primary responsibility for the safeguarding and development of the historic area of Angkor. Based on this recognition, we will support the Cambodian people’s efforts to bring about and pursue this task. We pay tribute to His Majesty Samdech Preah NORODOM Sihanouk, King of Cambodia, for His action in favour of national reconciliation. His personal commitment has been the essential factor in the mobilization of the international community for the site and region of Angkor. We welcome the establishment of the new Government of the Kingdom of Cambodia as a result of free and fair elections, permitting the reinforcement of interna-

tional co-operation for the site of Angkor and the surrounding region. We also welcome the announcement by the Government of the Kingdom of Cambodia of the introduction of organizational and legal measures to protect the site, prevent looting, and ensure the maintenance of security of the region as well as to facilitate efficient operations of preservation, restraint and development.

3/ In holding this conference, we respond to the appeal of the Government of the Kingdom of Cambodia. We recognize the urgent need for international assistance to prevent the Angkor monuments from further decay and destruction. These international efforts should be carried out in a coordinated manner for the safeguarding and preservation of the monuments and historical area taking into account their cultural, socio-economic and ecological dimensions.

4/ We hold this conference for the purpose of mobilizing such international efforts. We examined the various means of assistance for the preservation and development of the Angkor area and a number of participants announced substantial financial and technical assistance for further co-operation. A list of participants which indicated their willingness, during this Conference, to contribute, by one means or another, is attached as well as the declarations made by Delegations.

5/ We declare our deep appreciation of UNESCO’s action for safeguarding of the Angkor monuments to date, as well as for the recognition of the site as a common heritage of mankind. This deep appreciation is also extended to the countries. Organizations and foundations which, despite difficult conditions, took and are taking measures for preventing decay and launching restoration works on the site of Angkor. A special mention of those countries, organizations (especially UNDP) and foundations, is made in the list attached. In extending international assistance, we should take into consideration the approach of regional development that the Government of the Kingdom of Cambodia wishes to emphasize and for which the Zoning and Environmental Management Plan (ZEMP), might after review by the national authorities, be considered as a useful Contribution for the elaboration of a master plan for the region.

6/ We also declare our deep appreciation for the role of international and national non-governmental organizations as well as community-based organizations in preserving the site and hope that they will continue and increase their efforts.

7/ We recognize that each country and organization has its own ways and means of co-operation in accordance with its circumstances to decide what would be done in order to best mobilize international support.

8/ We appeal to the international community for its support to the Government of the Kingdom of Cambodia in its actions against the looting and illicit traffic of cultural property which continue to plague the heritage of Cambodia.

9/ We expressed, as requested by the Cambodian Delegation, our readiness to systematically include, in the programme of rehabilitation and the promotion of the site of Angkor, training activities for Cambodians at all levels. We also encourage the transfer of necessary know-how between the international experts and their national counterparts. We equally share the view on the importance that, as soon as possible, the authorities and administration of Cambodia be able to assume responsibility of the conception and implementation of works to be carried out. We took note of the Cambodian Delegation's desire that, without prejudice to indispensable studies to be undertaken, the assistance of its partners leads quickly to concrete operations on the site. We express our willingness to take into account these requests in our actions.

10/ We agree to establish a co-ordinating committee (the Committee) at the ambassadorial level in Phnom Penh as the international mechanism for co-ordination of assistances to be extended by different countries and organizations as referred to in the previous paragraph. In order to assure its co-ordinating role, the Committee will be systematically informed of the details of work being undertaken on the site and in the region. It will ensure the consistency of the different projects, and define, when necessary, technical and financial standards and will call the attention of the concerned parties when required.

11/ We agree that the Committee should be composed of representatives of the Kingdom of Cambodia and interested governments and organizations. Relevant non-governmental organizations and foundations may be invited to participate in the Committee as observers. It is proposed to place this Committee under the honorary presidency of His Majesty Samdech Preah NORODOM Sihanouk, King of Cambodia. It will be co-chaired by France and Japan, and UNESCO will be in charge of the secretariat of the Committee. We agree that all decisions by the Committee be subject to the agreement and co-operation of the Government of the Kingdom of Cambodia. The participants share the view that the Committee should be the international mechanism referred to in the Resolution 3.13 of the 26th session of the General Conference of UNESCO.

12/ We agree to establish, when appropriate, working groups and hold round tables composed of experts nominated by the countries and international organizations which are participants of the Committee.

13/ We agree to convene a second meeting of this Conference in due course to review the progress made and to discuss the need for new actions."

DECLARATION ADOPTED AT THE FIRST INTERGOVERNMENTAL CONFERENCE FOR THE SAFEGUARDING AND DEVELOPMENT OF THE ANGKOR SITE - TOKYO, JAPON (12 ET 13 OCTOBRE 1993)



PARIS DECLARATION NOVEMBER 15, 2003

We, the representatives of Australia, Belgium, Cambodia, Canada, China, Denmark, Egypt, France, Germany, Greece, Hungary, India, Indonesia, Italy, Japan, the Republic of Korea, Laos, Luxemburg, Malaysia, Mexico, the Netherlands, New Zealand, Norway, the Philippines, Poland, Portugal, the Russian Federation, Spain, Sri Lanka, Sweden, Switzerland, Thailand, Tunisia, the United Kingdom of Great Britain and Northern Ireland, the United States of America, Vietnam, the Asian Development Bank, the Food and Agriculture Organization of the United Nations (FAO), the International Centre for the Study of the Preservation and Restoration of Cultural Property (ICCROM), the International Council of Museums (ICOM), the International Council of Monuments and Sites (ICOMOS), the International Monetary Fund (IMF), the Southeast Asian Ministers of Education Organization Regional Centre for the Archaeology and Fine Arts (SEAMEO/SPAFA), the United Nations Development Programme (UNDP), the United Nations Educational, Scientific, and Cultural Organization (UNESCO), the World Bank, the World Monuments Fund (WMF) and the World Tourism Organization (WTO), meeting at the Second Intergovernmental Conference for the Safeguarding and Sustainable Development of the Historic Site of Angkor and of its region, held in Paris on November 14 and 15, 2003, adopt the following:

- 1/** We pay tribute to His Majesty Samdech Preah NORODOM Sihanouk, King of Cambodia and Honorary Chairman of the International Coordinating Committee for Angkor, for his personal commitment to the safeguarding and development of the site and its region;
- 2/** We pay tribute to the action undertaken by the Royal Government for its ongoing involvement in this programme;
- 3/** We acknowledge that the mechanism of the International Coordinating Committee for the Safeguarding and Development of the Historic Site of Angkor has enabled the successful achievement of the goals of the Tokyo Declaration (13 October 1993). We express

our sincere appreciation to France and Japan for handling the responsibility of co-chairmanship and to UNESCO for its unflagging and very efficacious services as Secretariat of the ICC;

4/ We extend our warm congratulations to the Cambodian authorities, in particular to the APSARA Authority, for the efforts put forth in recent years to ensure the safeguarding and development of Angkor. We encourage them to strengthen the human resources of the APSARA Authority, and its financial resources, if feasible with the shortest possible delay, by implementing appropriate regulatory, legal and administrative measures so that this public institution can fully assume its role as partner of the international community, permanent project owner and, as required, main contractor for the work to be done;

5/ With reference to the Tokyo Declaration of October 13, 1993, we express our satisfaction with the plurality and quality of what is being done to improve the knowledge, safeguarding and development of the eco-historic site of Angkor and express our deep gratitude to the countries, organizations and scientific institutions that have contributed to safeguarding the monuments and preserving the site. We encourage them to give increased attention to archaeological, epigraphical and historical research and to make appropriate means available;

6/ We reaffirm our intention to pursue international cooperation in the framework of the International Coordinating Committee for the Safeguarding and Development of the site of Angkor by strengthening the role of the APSARA Authority within this mechanism and by maintaining the integrated, multidisciplinary approach of the Committee, as well as the spirit of cooperation that characterizes its activities;

7/ We invite the international organizations and scientific institutions that have contributed to the safeguarding of the monuments to contribute to the elaboration of a methodological document on the ethics and practice of conservation at Angkor (conservation, showcasing and development), based on the recommendations submitted during this conference by the ad hoc working group on the points of reference for integrated sustainable tourism, as well as

on the draft Bayon Charter being prepared by the Japanese Government Team for Safeguarding Angkor (JSA);

8/ We warmly welcome the new partners of the Kingdom of Cambodia and invite them to work with the ICC in harmonizing their project proposals for heritage preservation, environmental protection and the accommodation of the local communities;

9/ We affirm the need to direct our efforts in keeping with sustainable development as outlined at the Johannesburg Summit on Sustainable Development (September 2002), in the “Declaration” made by President Chirac and the Statement made by Prime Minister Koizumi on that occasion, as well as in the Millennium Speech made by the Secretary General of the United Nations;

10/ We recognize that sustainable ethical tourism can furthermore contribute to the dialogue among cultures and civilizations, to the recognition of the values of cultural diversity and to the strengthening of solidarity and peace;

11/ With this in mind, we recognize the need to develop sustainable ethical tourism in the Siem Reap / Angkor region as a tool in the fight against poverty. We stress the importance of seeing to it that the local communities in this zone and around the Tonle Sap are involved in the promotion of this policy in order to highlight the diversity of their tangible and intangible cultural resources and to offer them access to education and training as well as employment opportunities and a meaningful cultural life;

12/ With a view to attaining sustainable development, we recommend that development projects in the province of Siem Reap / Angkor be discussed in all their aspects, particularly economic, social and environmental, within the framework of the periodic meetings of the ICC. The planning of these projects should also be reported to the World Heritage Committee, in line with the operational guidelines of the implementation of the World Heritage Convention.

13/ We recall the need for the necessary transfer of know-how between international experts and their Cambodian counterparts and encourage all international teams to contribute to the promo-

tion of university training and research. We also invite the APSARA Authority to coordinate all initiatives that will be taken in the area of on-site training;

14/ We encourage the pooling of knowledge and information about Angkor through active and ongoing support to the International Documentation Centre for Angkor (APSARA / UNESCO) and call upon all stakeholders regularly to forward to it documents concerning their past and present activities;

15/ We express our satisfaction with the steps being taken to ensure safety and security at the Angkor site through demining operations and efforts to prevent archaeological looting. However, we address a solemn appeal to all members of the international community so that a genuine network of solidarity may be developed to extend looting prevention measures to other sites in Cambodia;

16/ We express our satisfaction that the international mechanism for cooperation that has proven efficient with regard to knowledge, conservation and development of the World Heritage Site of Angkor is now starting to be viewed as a model for other similar actions throughout the world. We will see to it that this mechanism continues to strengthen the activities, projects and programmes implemented by Cambodia to promote national reconciliation, social cohesion and the affirmation of cultural identity.

17/ We agree to hold a third conference, at a suitable time, in order to examine the progress made and to debate the need for new actions. This conference could be held in the Kingdom of Cambodia.

PARIS, 15 NOVEMBER 2003



RECOMMENDATIONS OF THE SECOND INTERNATIONAL CONFERENCE FOR THE SAFEGUARDING AND SUSTAINABLE DEVELOPMENT OF THE HISTORIC SITE OF ANGKOR AND ITS REGION

The Second International Conference for the Safeguarding and Sustainable Development of the Historic Site of Angkor and its Region considers that the framework of the International Coordinating Committee (ICC) has proven its effectiveness and relevance in working in a post-conflict situation in the field of cultural heritage management, as well as for reconciliation in Cambodia.

The Conference also considers, with satisfaction, that the international community –governmental, non-governmental, scientific and educational organizations – should bring its expertise and financial support to the harmonized development of the cultural site of Angkor.

A. Safeguarding, Research and Enhancement

1/ In terms of conservation, first priority should be given to activities relating to the maintenance of the site of Angkor. Bearing in mind the scale of the World Heritage Site (401 km²), it is crucial that there be continued exchange of scientific research and knowledge between international partners and national actors that responds to ethical principles and to the best practices of sustainable conservation. It is recommended that the ICC Secretariat, with its ad hoc expert group and in liaison with the APSARA Authority, coordinate the drawing up of Guidelines on the conservation and restoration of the Angkor monuments.

2/ In terms of training, the progressive transfer of skills and knowledge to young Cambodian heritage professionals should be ensured in all fields related to the management of the Angkor site. This means that all projects conducted at the site by international teams should contain a training component that targets future national experts and aims at strengthening expertise within the APSARA Authority.

3/ It is recommended that a mechanism for consultation and coordination between APSARA and the Royal University of Fine Arts (Faculties of Archaeology and Architecture) be established.

4/ In term of enhancement of the site, the priority should be the management plan for the Angkor site as a whole, with special attention being given to water, forest and population.

5/ It is also recommended to undertake a process of reflection on the problem of how to present cultural and scientific issues to the public and of the national and international public's knowledge and practices within the perspective of a sustainable tourism that respects the monuments and cultural heritage of Angkor.

6/ Priority should be given to encouraging multi-disciplinary approaches in research in archaeology, epigraphy and history that contribute to the in-depth knowledge of the Angkor site.

7/ In order to promote exchange between the different actors, it is recommended that the International Documentation Centre (APSARA/UNESCO) be reinforced with the support of UNESCO, and that a compulsory deposit procedure be introduced at the Centre for all reports undertaken on activities carried out at the Angkor Site.

8/ UNESCO is requested to assist the APSARA Authority in the preparation of the regulations for this Centre and to contribute to the setting up of a central heritage conservation laboratory under the aegis of the APSARA Authority.

9/ In term of the illicit traffic of cultural properties, successful activities conducted over the past ten years for the protection of the Angkor World Heritage Site should be extended to the cultural heritage of Cambodia as a whole, and particularly to remote sites.

10/ In the field of legal protection, efforts should be concentrated on making operational the application of the recently enacted sub-decrees on commercial activities related to cultural property.

11/ It is recommended that all actors strongly support and actively contribute to the establishment of an administrative and technical inventory of all Cambodian cultural property, which will be used as a tool in the fight against its illicit traffic.

12/ It is also recommended that provincial authorities and local communities work together in the interests of their own cultural heritage to prevent the illicit traffic of cultural property in Cambodia.

B. Sustainable Development and Fight against Poverty

1/ Programmes for development must better protect poor populations from negative social and human impacts, and contribute to the redistribution of economic wealth, notably through health and education infrastructures and basic services (drinking water, electricity, sanitary equipment, urban waste disposal, etc.)

2/ The objective of the eradication of poverty and the reduction of inequalities implies both support for new economic activities in favour of urban and rural populations, leading to their effective participation and the respect for their cultural wealth.

3/ The growth in population flows and visitor numbers leads to the degradation of the environment, such as of water, forests or landscape. This growth, and the major risks it involves for these resources, requires the implementation of well-coordinated and sustainable programmes for protection and long-term management.

4/ Sustainable development programmes should be envisaged through an economic vision and a regional approach involving not only the World Heritage Site of Angkor, but also Siem Reap and Tonlé Sap, as well as rural activities, taking into account the consequences for the development of the country as a whole. This development contributes to the diversification of activities linked to tourism and culture, and is integrated within the economic region of the Greater Mekong.

5/ The APSARA Authority has demonstrated its dynamism and willingness to take care of numerous questions dealing with economic planning, landscaping and the setting up of services. Its capacities and human resources must be strengthened, particularly concerning matters of management. It must also better define its roles and reinforce its co-operation in harmony with other public partners, especially in the province of Siem Reap.

6/ The presence of a public initiative, notably through the APSARA Authority and the Province of Siem Reap, as well as private initiatives, should allow the handling of the requirements of collective infrastructure and the exploitation of commercial and economic activities. However, the public authorities must pay attention to the balanced regulation of public and private partnerships, as well as the transparency of procedures (land ownership, environmental and financial).

7/ The diversity of future investments, necessary co-ordination of the management of natural resources and the alleviation of poverty, as well as the management of programmes, necessitates the exchange of information between the partners involved in programmes of social, economic and environmental development. It is recommended in particular that these programmes be discussed within the framework of the ICC, in order to ensure their coherence.

PARIS, 15 NOVEMBER 2003



INTERNAL REGULATIONS
OF THE ICC-ANGKOR



INTERNATIONAL COORDINATING COMMITTEE FOR THE SAFEGUARDING AND DEVELOPMENT OF THE HISTORIC SITE OF ANGKOR

ADOPTED ON DECEMBER 1, 2008; AMENDED ON MAY 31, 2009

The International Coordinating Committee for the Safeguarding and Development of the Historic Site of Angkor (ICC) was established by the Intergovernmental Conference for the Safeguarding and Development of the Historic Site of Angkor and Its Region (Tokyo, October 12 and 13, 1993) held in response to the appeal made by His Majesty NORODOM Sihanouk Varman of Cambodia for Angkor to be put on the World Heritage List and in consideration of the urgent need for coordinated international assistance for the safeguarding and preservation of the monument site including its cultural, socio-economic and ecological dimensions.

The ICC is an international partnership that recognizes the Angkor site, national symbol of Cambodia, as one of the most precious cultural heritages in the world.

The ICC recognizes Cambodia's sovereignty over the Angkor site and its responsibility for safeguarding and sustainably developing the site and its region.

Cambodia as a State Party to the Convention for the Protection of the World Cultural and Natural Heritage, and more particularly the Authority for the Protection of the Site and Management of the Angkor Region, referred to as the APSARA National Authority, in its capacity as project owner, complies with the standards of the World Heritage Committee for the safeguarding and sustainable development of the Angkor site.

ARTICLE 1: POLICY PRINCIPLES



In accordance with the Tokyo Declaration, 1993, the ICC was established in order to provide an international coordinating mechanism for the assistance made available for the safeguarding and development of the Angkor site by different countries and organizations.

The principles of the ICC expounded in the Tokyo Declaration were confirmed and rounded out by the Second Intergovernmental Conference for the Safeguarding and Sustainable Development of the Historic Site of Angkor and Its Region (Paris, November 14 and 15, 2003).

In keeping with the Paris Declaration of 2003, the ICC encourages international cooperation to promote the knowledge, safeguarding and sustainable development of the eco-historic site of Angkor in the framework of a comprehensive, multidisciplinary approach providing for an increasingly predominant role to be played by the Cambodian side in its capacity as project owner, and fostering a spirit of cooperation among the various stakeholders.

The ICC channels its efforts not only in favor of conservation but also with a view to sustainable development in follow-up to the Johannesburg Summit on Sustainable Development (September 2002), the "Declaration" made on that occasion by the President of France and the Prime Minister of Japan, as well as the Millennium Statement made by the Secretary-General of the United Nations Organization.

The ICC is aware of the need to develop ethical, sustainable tourism in the Siem Reap-Angkor zone that will provide a genuine tool for poverty alleviation.

The ICC encourages the involvement of the local communities in the Siem Reap-Angkor zone and area surrounding the Tonle Sap Lake in the conservation of the site and development of its region through such initiatives as the promotion of ethical, sustainable tourism that showcases the diversity of their cultural resources, both tangible and intangible, and helps them to enjoy access to education and training, on the one hand, and employment opportunities and a rewarding cultural experience, on the other.

The ICC encourages capacity building of the Cambodian side for the conservation and sustainable development of the historic site of Angkor, including strengthening the human and financial resources of the competent authorities, the necessary skills transfer among the international experts and their Cambodian counterparts, the systematic collection of all documentation on Angkor for the Cambodian side, the promotion of academic training and research (including archaeology, epigraphy and history), as well as making appropriate means available to them.

The ICC promotes measures to make the Angkor site safe for both people (demining) and heritage (prevention of archaeological looting and trafficking in cultural property).

ARTICLE 2: ROLE



The ICC is an international mechanism to coordinate the assistance made available by different countries and organizations for the safeguarding and development of the historic site of Angkor.

In order to fulfill its terms of reference, the ICC is kept abreast of scientific projects or development operations undertaken on the site and in the Siem Reap-Angkor region. It sees to the coherence of the various projects and defines, when necessary, the technical and financial standards required. It brings matters to the attention of the parties concerned when the need is felt.

The ICC sees to the implementation of procedures intended to promote the understanding, assessment and follow-through of scientific, conservation and development projects proposed for the Angkor site.

The ICC coordinates the development of a methodological document on conservation ethics and practice at Angkor (conservation, showcasing and development).

ARTICLE 3: OFFICIAL MEMBERS AND OBSERVERS



The members of the ICC are the participants of the Intergovernmental Conferences of Tokyo (1993) and Paris (2003), to wit:

Germany, Australia, Belgium, Brunei, Cambodia, Canada, Denmark, Egypt, Spain, the United States of America, the Russian Federation, France, Greece, Hungary, India, Indonesia, Italy, Japan, Laos, Luxemburg, Malaysia, Mexico, Norway, New Zealand, the Netherlands, the Philippines, Poland, the United Kingdom of Great Britain and Northern Ireland, the Republic of Korea, the People's Public of China, Singapore, Sri Lanka, Sweden, Switzerland, Thailand, Tunisia, Vietnam, the European Union, the Asian Development Bank (ADB), the United Nations Organization for Food and Agriculture (FAO), the International Monetary Fund (IMF), the International Centre for the Study of the Preservation and Restoration of Cultural Property (ICCROM), the International Council of Museums (ICOM), the International Council on Monuments and Sites (ICOMOS), the World Tourism Organization (WTO), the Southeast Asian Ministers of Education Organization and Regional Centre for Archaeology and Fine Arts (SEAMEO / SPAFA), the United Nations Organization for Education, Science and Culture (UNESCO), the United Nations Development Program (UNDP), the United Nations Volunteers program (UNV) and the World Monuments Fund (WMF).

States that were not participants at the Tokyo and Paris International Conferences may ask to attend meetings of the ICC as observers. In accordance with the Tokyo Declaration, non-governmental organizations, foundations, associations and individuals with an interest in the safeguarding and sustainable development of the historic site of Angkor may exceptionally be invited to attend meetings of the ICC as observers. Requests to attend must be sent to the Secretariat who will forward them for the prior approval of the Cochairmen and the APSARA National Authority at the quadripartite session.

ARTICLE 4: HONORARY CHAIRMAN



The ICC is placed under the honorary chairmanship of His Majesty King Father NORODOM Sihanouk Varman of Cambodia to whom the Tokyo and Paris Intergovernmental Conferences paid tribute for His initiative and personal commitment to national reconciliation and safeguarding Angkor.

A Senior Representative of His Majesty NORODOM Sihamoni, King of Cambodia, is routinely invited to attend the meetings of the ICC.

ARTICLE 5: COCHAIRMEN

Cochairmen of the ICC is assumed by France and Japan as represented by their respective ambassadors to Cambodia. The ambassadors may be represented at the Technical Sessions.

ARTICLE 6: SECRETARIAT

The Director-General of UNESCO provides moral, administrative and material support to the ICC through the provision of a Standing Secretariat coordinated by the UNESCO Representative in Cambodia.

The services of Secretariat are facilitated by a person designated by UNESCO to fulfill the duties of Scientific Secretary. The Scientific Secretary must possess the diplomatic and scientific qualifications required by this office.

The APSARA National Authority makes a representative available to the ICC Secretariat to share in the work cared for by the Secretariat and ensure liaison with the Cambodian side.

The role of the Secretariat is as follows:

- Care for the preparation, organization and logistics of the ICC meetings.
- Send invitations to the participants to attend the ICC meetings.
- Draw up the agenda of the meetings in consultation with the Cochairmen.
- Write up, distribute and follow through upon recommendations made at the ICC meetings;
- Report to the ICC on follow-up of recommendations made at previous meetings.
- Publish a general record of the ICC's meetings. The record of the Technical Session is published in English and French. The record of the Plenary Session is published in Khmer, English and French, and includes the annual activity report of the APSARA National Authority.

ARTICLE 7: PLENARY SESSION

The Plenary Session is cochaired by the ambassadors of France and Japan and usually meets once a year. Cambodia is represented by a member of the Royal Government.

The Plenary Session determines the main policy directions of the ICC in the presence of the ambassadors or their representatives and the ICC's member institutions that have decision-making authority. These members may support the projects presented by providing them with funding or technical assistance. The Plenary Session adopts the recommendations proposed by the Technical Session, decides upon matters to be dealt with at the next Technical Session and approves new scientific or development projects proposed for the Angkor site.

Contributors at the Plenary Session are official members of the ICC as mentioned in Article 3 hereof. An invitation signed by the Cochairmen is sent to them. Other participants are informed by the Secretariat.

Only participants on the list approved by the Quadripartite Session are entitled to make presentations at the Plenary Session. However, observers may join in the discussion sessions.

ARTICLE 8 : TECHNICAL SESSION

The Technical Session is cochaired by the representatives of the embassy of France and the embassy of Japan and is usually held once a year. It deals with specific technical matters carried forward from the Plenary Session or arising from scientific and technical issues presented and debated by national or international teams regarding the Angkor site and its monuments. The Technical Session drafts a set of recommendations that is forwarded to the Plenary Session for final adoption.

Contributors at the Technical Session are official members of the ICC as mentioned in Article 3 hereof. An invitation signed by the Cochairmen is sent to them. Other participants are informed by the Secretariat.

Only participants on the list approved by the Quadripartite Session are entitled to make presentations at the Technical Session. However, observers may join in the discussion sessions.

Occasional contributors may make presentations at the Technical Session. The content of their presentations must involve the Angkor site and areas placed under the jurisdiction of the APSARA National Authority. Occasional contributors must submit an application along with a summary in English or French to the Secretariat.

The application is subject to the prior approval of the Cochairmen and the APSARA National Authority at the Quadripartite Session. If the application is approved, the contributor will be so advised by the Secretariat.

The full version of the presentation must be forwarded to the Secretariat no later than 30 days prior to the ICC meeting.

All contributors must keep within their time allotment on the agenda. Any exception to this must have the prior approval of the Cochairmen.

ARTICLE 9: QUADRIPARTITE SESSION

The Quadripartite Session is attended by the Cochairmen and representatives of Cambodia and UNESCO. It is a closed-door session to which no observers are invited.

The Quadripartite Session is held regularly prior to each ICC meeting at a date decided upon by its members. It is generally organizational in nature and approves:

- Applications to attend the Plenary and Technical sessions of the ICC submitted by observers.
- The list of participants who will make presentations during the upcoming ICC meeting.

A Quadripartite Session may be called when necessary as a regular meeting or an extraordinary meeting upon the express request of its members to deal with a specific problem requiring special group attention.

ARTICLE 10: AD HOC GROUP OF EXPERTS

An ad hoc group of experts is appointed to assist the ICC for study of the scientific and technical aspects of project proposals submitted to it and technical issues relating to the Angkor site and its monuments.

The area of jurisdiction of the ad hoc group of experts includes conservation (archaeology, architecture, engineering and related fields) and sustainable development (anthropology, environment, economics, tourism and the like).

The members of the ad hoc group of experts are appointed by the Cochairmen and the representative of Cambodia on the proposal of the Scientific Secretary. However, they remain independent and no challenge to their conclusions is allowed on an individual basis.

This group is an agency of the ICC to which it reports on the evaluation visits it makes to sites as organized prior to the meetings. Only the Cochairmen and members of the Secretariat are authorized to accompany the ad hoc experts during their visits.

The reports made by the ad hoc experts are included in the ICC's general report prepared by the Secretariat.

When an emergency situation arises, the ad hoc group of experts may be immediately apprised of the situation by the Secretariat in order to gather the technical input needed by the competent authorities to initiate appropriate measures. The Secretariat informs the Cochairman. Only if authorized by the Cochairmen or the APSARA National Authority may anyone have access to the content of the technical input provided by the ad hoc group of experts.

ARTICLE 11 : STUDY AND RESEARCH ACTIVITIES ON THE ANGKOR SITE

The monuments and civilization of Angkor are often the subject of research projects. Applicants must comply with the following conditions:

1 License to carry out research:

- Independent researchers desiring to carry out research in the fields of archaeology, architecture, anthropology, sociology, ethnology or any other field relating to Angkorian culture or civilization must receive prior authorization from the APSARA National Authority, which will inform the ICC.
- Only projects from large-scale academic or specialized institutions are submitted to the ICC for approval on the basis of an ad hoc expert appraisal.

2/ Research findings:

- All researchers working individually or as part of an academic or institutional team must supply a copy of the findings of their research to the APSARA National Authority which retains the right to use them, exclusive of scientific rights.

ARTICLE 12: FUNDING OF ACTIVITIES

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The operations and organization of the ICC are co-funded by:

- Contributions remitted by the countries of the two Cochairmen (France and Japan), within the limits of their respective budgetary appropriations, to the UNESCO office in Phnom Penh.
- The regular budget of UNESCO (Culture Sector).
- Regular contributions from the Royal Government of Cambodia through the APSARA National Authority.

After consultation, the two Cochairmen may authorize the remittance of extraordinary donations or contributions for the funding of the ICC's activities.

ARTICLE 13: IPUBLIC INFORMATION

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A press release is issued at the conclusion of each of the two annual sessions. A press conference may be held at the conclusion of the annual Plenary Session.

ARTICLE 14: REVISION OF THESE INTERNAL REGULATIONS

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These internal regulations are subject exclusively to the approval of the two Cochairmen. They may authorize the Secretariat to forward a copy to official members of the ICC for their information.

The two Cochairmen may take the initiative to revise these internal regulations (amendment and/or addition).

A large, abstract geometric pattern composed of various shades of teal and green triangles and squares, forming a complex, crystalline structure. The pattern is positioned on the left side of the page, with a diagonal line separating it from the white background on the right.

LIST OF
THE ICC-ANGKOR
STANDING SECRETARIAT
MEMBERS



Azedine BESCHAOUCH has served as the Scientific Secretary for the ICC-Angkor since 1993. An archaeologist and heritage manager, he has been elected twice as President of the World Heritage Committee, where he also served as Rapporteur for several terms. Professor Beschaouch was a member of the World Heritage Committee from 1979 to 1993. Since 1997 he has been a member of the Academy of Inscriptions and Belles-Lettres, France.



Anne LEMAISTRE pursued both legal and heritage studies. She worked from 1988 to 1991 in Peru for the safeguarding of the region's cultural heritage, and from 1993 to 2004 for the International Programme for the Protection and Development of Angkor, before being appointed in 2011 as Representative of UNESCO in Cambodia.



Philippe DELANGHE completed a Master's degree in history, archeology, and anthropology. He first joined UNESCO at its office in Jakarta, Indonesia as an expert partner for Culture at the beginning of 1994, and then assumed the role of Programme Specialist for Culture in Jakarta, Amman. Since 2007, he has served as Programme Specialist for Culture in Phnom Penh.

Former members
of the ICC-Angkor Standing
Secretariat:

Richard A. ENGELHARDT
Khamliène NHOUYVANISVONG
Bruno LEFEVRE
Etienne CLEMENT
Teruo JINNAI
Tamara TENEISHVILI
Sébastien CAVALIER
Keiko MIURA



CHAU SUN Kérya completed a Master's degree in Mediation and Territorial Culture and Tourism Engineering. She was awarded in 2011 the Medal of Officer of the Order of Arts and Letters. She has represented the APSARA National Authority in the ICC-Angkor Standing Secretariat since 2005.



Blaise KILIAN graduated from the *Institut d'Études Politiques* of Paris in 1996. He also completed a degree in International Economics and received a Diploma in Khmer. He joined the UNESCO Office in Phnom Penh in 2006, and immediately became involved in the ICC-Angkor Standing Secretariat.



LIM Bun Hok has a degree in Linguistics and conservation of built heritage from ICCROM. He has been working with medical and cultural organizations prior to joining the Secretariat of the ICC-Angkor in 2006. His knowledge of French has made him an invaluable go-between with the Royal Government of Cambodia.



PROM Chak studied geology before starting his professional career at the Ministry of Industry of Cambodia while also being involved with a local organization specializing in performing arts. He entered the UNESCO office in Phnom Penh in 2000 as a volunteer and joined the ICC-Angkor secretariat in 2007.



ACKNOWLEDGEMENTS

If one could skip the rhetoric and leave aside the conventions of the diplomacy, the acknowledgement list could fill many pages.

So many personalities (especially, the successive chairs of the Plenary and Technical Sessions), numerous experts (some have been along us for two decades from the EFEO, Waseda and Sophia Universities, GACP, ASI, and not forgetting Professor Claude Jacques, Professor Ang Choulean); the ICC-Angkor ad hoc experts, the staff of the Phnom Penh UNESCO Office (representatives of Cambodia and successive members of the Culture Unit), have all greatly contributed to the activities undertaken at Angkor over the past twenty years.

Their partnership with the APSARA National Authority has been exemplary.

They would all deserve to be on the roll of this unforgettable undertaking for conservation, enhancement and sustainable development of Angkor

These acknowledgements obviously extend to all countries and scientific and cultural institutions that have contributed to the rise of Angkor.

1	AUSTRALIA
2	CAMBODIA
3	CHINA
4	CZECK REPUBLIC
5	FRANCE
6	GERMANY
7	HUNGARY
8	INDIA
9	INDONESIA
10	ITALIA
11	JAPAN
12	NEW ZEALAND
13	POLAND
14	SINGAPORE
15	SWITZERLAND
16	THAILAND
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18	UNITED STATES
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21	UNDP



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**UNESCO OFFICE
IN PHNOM PENH**

Tel: (+855) 23 72 30 54 /
23 72 50 71 / 23 21 72 44

Fax: (+855) 23 42 61 63 /
23 21 70 22

E-mail: phnompenh@unesco.org

P.O. Box 29
38, Samdech Sothearos Blvd.,
Phnom Penh, Cambodia

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