

Indigenous Populations, Culture Heritage and Protected Areas Management ANGKOR: a Southeast Asian Case Study

Richard A. Engelhardt

I. Environmental Conservation, Culture Heritage, Preservation and Sustainable Development

Development - a process that alters the environment so that it caters more effectively for human needs - is essential if the world is to be free from poverty and squalor. Within the process of development, which is a *cultural* act, room must be found for nature. Nature is, in a very practical sense, the foundation of our lives. The processes of nature renew the oxygen in the air, maintain the cycles of essential elements, sustain the fertility of the land, and regulate the flow of rivers. Development, however, must be based on resources that regenerate naturally and can meet humankind's needs indefinitely. Humans turn to forests, lakes and seas for new crops and new drugs, as well as for the beauty that enriches life. In many parts of the world, wildlife has played a dominant role in developing the culture of indigenous peoples. In Southeast Asia, for example, tigers, elephants, crocodiles and large birds of prey have traditionally helped to define and have come to symbolise the relationship between people and nature, and even relations among different groups of people [McNeely and Wachtel 1988].

Conservation is commonly linked in the public mind with wildlife, but this idea is misleading. Since the earliest prehistoric times, humans have gradually occupied more and more of this planet, so that now

few completely natural habitats remain. Instead, our planet consists of a number of more-or-less anthropogenic habitats, originally occupied by people who developed cultural approaches to managing the resources of their local ecosystems in a reasonably sustainable fashion.

Cultural and biological diversity need to be conserved together if either is to prosper. The local knowledge that people have about their resources and how they should be managed provides a critical resource for all of humanity. Jeffrey McNeely, Chief Conservationist of the World Conservation Union, has suggested that the term "*bio-cultural diversity*" could be a useful phrase to describe conserving both biological and cultural elements to support the way people relate to their environments. [McNeely 1992]

The most effective way yet devised of conserving bio-cultural diversity is through a system of protected areas. However, gone are the days when protecting an area meant only drawing boundaries around a piece of land, erecting a fence to keep people out and calling the area a "national park." Modern conservation management now recognises the need for a typology of approaches to protected areas, differentiated by the degree of human activity and modification which is allowable for proper management. This approach, developed most extensively to date for nature conservation, is equally

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applicable for the conservation of cultural landscapes, historic monuments and archaeological sites.

Some protected areas are scientific reserves where the goal is to minimize or even exclude all human intervention in order to protect endangered species or fragile archaeological sites. At the other end of the spectrum are anthropological reserves where occupants of a protected area are encouraged to continue in their traditional ways of life exploiting the resources of the area in a way that has, over the years, developed a symbiotic equilibrium with the environment. Also included in this latter type of management strategy is the regulated use of protected areas for recreation and tourism, especially when the area concerned contains natural or historic features of interest and educational value for the general public.

Conservation is an issue which links preservation of the natural environment with the protection of cultural heritage, both of which are threatened by rapid economic development. In many parts of Southeast Asia today there remain, traditional management systems which have been effective for thousands of years, but unless these, too, are preserved *as part of the conservation process*, they can become obsolete within decades with the concomitant loss of both biological diversity and cultural diversity. [Engelhardt 1992; Engelhardt and Rogers 1994; McNeely and Wachtel 1988; Martin 1993]

This problem is not a new one. Archaeological research also suggests that the abandonment of Angkor (and perhaps some other complex urban states of ancient Southeast Asia,) was precipitated by over-

exploitation of the area's natural resources followed by the systemic collapse of the traditional environmental management practices, as the weakened state fell apart in the face of overwhelming economic and social competition from its neighbors. [See, *inter alia*, bibliographic references in Engelhardt 1994]

The problem of conservation - this is to say, of the sustainable management of natural resources - may be an old one, but in today's Southeast Asia, the issue has a renewed urgency. In virtually all countries of the region, the populations and economies - both of which require more land and more resources - are growing at some of the most rapid rates in the world.

Alarming, history has taught us that over-exploitation is to be expected in times of very rapid culture change or economic expansion. One reason for this is that technologically and capital-dominant forces can move easily from one resource area to the next and have no reason to invest in sustainable exploitation which characterized the traditional land-use practices.

Communities within or next to protected areas too frequently must bear the cost of lost access to resources with inadequate compensation in return, in the form of new economic opportunities. People living on the boundaries of parks and other protected areas tend to be poor and may perceive protected areas as restricting their ability to earn a living. Modern approaches to protected area management must acknowledge this conflict of interest and stress the critical link between the designation of protected areas and the creation of new economic opportunities for

people displaced or denied access to resources which they formerly could exploit without restriction.

One of the most successful ways of creating this economic link for the people living in or near a protected area is to promote carefully regulated tourism. International tourism is, after all, part of an international trade, the success of which is based on the exploitation of cultural and natural resources.

Culture and nature tourism can be an important part of an economic development strategy generating for developing countries world-wide more than \$12 billion a year [Aderhold 1993]. Local people may be employed directly in the management of the park area, or may benefit indirectly by providing support services for the tourists.

However, the sustainability of income from culture and nature tourism depends directly on assuring that a high quality of environmental protection is guaranteed and that the carrying capacity of a site is scrupulously observed. Tourists will not continue to visit areas to which they were initially attracted by their natural and historic value, if these very values have been degraded through over-use or poor management.

II. International Action to Promote Conservation

The 1992 United Nations Conference on Environment and Development (UNCED) held in Rio de Janeiro underscored the essential role which the international academic and aid communities have to play in the effort to conserve the world's bio-cultural diversity.

This role for the international community is a relatively new one. Five hundred years ago, the Renaissance first reminded the world of the existence of ancient civilizations. However, it was not until the mid-19th century when the Romantic movement with its emphasis on nature, coupled with the advances of scientific theory in genetics, anthropology and geochronology, brought about through global exploration, that any concrete action took place to conserve what was left of mankind's heritage.

The first act of international significance in the field of heritage conservation took place in 1831 when Prosper Merimee was appointed as France's first "inspector of historic monuments". Then in 1872, Yellowstone in Wyoming in the United States became the world's first national park. Shortly thereafter, in 1925, Angkor was declared to be Asia's first national park.

These actions in favour of a systematic protection of cultural and natural properties were taken on a strictly national basis and, in fact, were often intended to enhance national prestige. At that time, efforts made to unravel archaeological sites in foreign countries or to explore new wilderness territories were often based on the desire for riches which the exploitation of these sites might offer.

Such was the prevailing situation until only 20 years ago. Then, recognising that human society has necessarily developed in — and taken its inspiration from — specific environmental contexts, the international effort to conserve both cultural and natural sites united under the 1972 *UNESCO Convention Concerning the Protection of the World Cultural and Natural Heritage*.

This international convention, which has been adopted by more States Parties than any other international legal instrument, provides a unified international framework for the conservation of both cultural and natural sites.

The concept of "*world heritage*" is based on the recognition that parties to the convention share responsibility for protection of sites of universal value, an idea which is innovative in international law, because it involves immovable property. The Convention expresses the revolutionary view that the whole of humanity must act as trustee for the great landmarks of the natural and cultural history of the globe; that each country may hold a part of its own territory in trust for future generations; and that each country has an obligation to support other countries in discharging this trust. [Batisse 1992]

The relationship between environment and development is fundamental to the World Heritage Convention. By regarding the heritage as both cultural and natural, the Convention reminds the international community — and each State Party — of the interaction between humanity and nature and of the fundamental need to preserve the balance between humanity and the environment.

Sites where the conservation of heritage is associated with maintenance of human activity fit well with present ideas about reconciling the environment and development with the need to integrate heritage values into regional planning and the life of the community.

In adhering to the Convention, States Parties agree to "adopt a general policy

which aims to give the cultural and natural heritage a function in the life of the community and to integrate the protection of that heritage into comprehensive planning programmes". In particular, States Parties agree to identify and nominate properties of exceptional universal value that are within their territories for inscription on the World Heritage List and thereby accept the responsibility for protecting these properties. States Parties also agree to refrain from "any deliberate measures which might damage directly or indirectly the cultural or natural heritage....situated on the territory of other States Parties to the Convention" and to "take the appropriate legal, scientific, technical, administrative and financial measures" necessary to identify and protect their own sites. [UNESCO 1972]

The World Heritage Convention embodies the international community's highest level of management objectives for protected areas, underscoring the intimate link between environmental conservation, cultural preservation and sustainable economic development.

III. Zoning of the Angkor Cultural Landscape

In southeast Asia, this approach may be best exemplified by Angkor, Asia's oldest national park and now a World Heritage Site. Here concepts of zoning and environmental management are being planned to allow for intensive tourism and sustainable exploitation by local populations while preserving the bio-cultural integrity of the area.

The Angkor cultural landscape stretches from the Kulen Mountain Plateau in the north down to and including the Tonle Sap

flooded forests in the south - an area which is congruent with the catchment area of the ancient site of Angkor. This 10,000 sq km area is a relic cultural landscape - an environment which has been intensively engineered by human activity over time.

Rivers were turned into canals by the ancient inhabitants of the site and the water collected in great gravity-controlled reservoirs. The monsoon flood waters were trapped behind a system of dikes hundreds of kilometres long. As the Tonle Sap river reversed its flow and quadrupled the capacity of the Great Lake, flooding the forests and bringing a bounty of fish, hundreds of thousands of people swarmed to the lake shores to harvest one of the world's richest biological phenomena which provided the Empire's protein for the next twelve months until the phenomenon repeated itself in annual cycle.

In the north, the Kulen Plateau rises to define and shelter the Angkor monuments and city site. Up until quite recently, the Kulen Plateau was left largely covered by ancient forests thus assuring its continued role as source of the water needed to irrigate rice fields and fill the city's transportation canals year-round. Eventually, the importance of preserving this watershed resulted in the Kulen being perceived as a "sacred site" from which flowed the very origin of the Khmer civilisation. To ensure this concept was not forgotten and the natural resources of the mountain conserved, a bas-relief of Vishnu, Protector God of the Empire, was sculpted on the rock under the principal spring emerging from the Kulen escarpment. In such ways for much of human history, the natural world has been protected from the most disruptive human influences by relatively simple (if

sometimes extensive) technology, or by eco-cultural factors such as use taboos to prevent over-exploitation of an important, but scarce resource; tribal warfare that kept wide areas as wilderness "buffer zones" between groups; ownership by ancestors or lineages rather than individuals; relatively sparse human populations and many other community-based resource management practices.

Recognising the enormous conservation problems facing the Angkor site, the States Parties to the World Heritage Convention asked UNESCO to assist the Cambodian authorities in meeting this challenge. Therefore, since late 1992, UNESCO, in cooperation with several international academic research institutions, has been carrying out inter-disciplinary surveys to establish a Zoning and Environmental Management Plan (ZEMP) for the Angkor Cultural Landscape. The aim of these studies is the formulation of a long-term framework for sustainable and environmentally sound management of the archaeological sites and natural resources of the Angkor area by delimiting zones for different levels of protection and exploitation for agricultural, forestry and tourism related activities.

The data generated by the ZEMP research team has been compiled into a computerised geographical information system (GIS) for retrieval, analysis and decision-making based on quantifiable values. (Refer to Illustrations 1-4)

In addition to defining protected/restricted areas and surrounding buffer zones, the ZEMP project has developed zoning regulations and management guidelines, not only for the archaeological

monuments, but for the 10,000 sq km cultural landscape surrounding the monuments wherein development activities may have adverse effects on conservation.

IV. Financing of Conservation

Angkor, like many other World Heritage Sites and sites in Southeast Asia, is one example of how a former society used natural and cultural resources to develop into a complex and prosperous civilization. By understanding how this process evolved we may be better able to control the ways in which the modern socio-economic systems of the region exploit similar environmental resources and thus to build a sustainably prosperous future on the foundations of past conservation management practices.

The building blocks are in place for the protection and management of the most valuable historic and cultural sites of Southeast Asia *within and together with* a very comprehensive natural environment. It will be of the utmost importance to take strict measures to ensure that the natural environment around significant cultural sites is not degraded, thus ruining the value of the site both for tourism and for academic research.

Adequate management services for the conservation and presentation of protected areas such as Angkor and the many other sites throughout Southeast Asia are therefore essential and will be costly. Fortunately, financing is potentially available from the revenues generated by the tourist industry. The potential for the cultural and natural resources of the region to generate tourist revenues is almost unlimited.

Where a market exists for cultural and natural resources, conservation can and should be paid for by those who benefit, i.e. through "user fees." These can take the form of entry fees to monuments; hotel and travel taxes; vendors permits; or fishing, logging or other licenses to exploit certain natural resources within the reserve. The more direct the connection between fees and conservation, the easier it is to appreciate the economic value of protection, the benefits of proper management and the costs of measures necessary to maintain the sustainability of resources.

Archaeological and cultural heritage, like water or rights to wildlife, are a kind of common property and therefore difficult to put a price tag on. In traditional market economies, common property is often used freely and exploited according to its relevance to an individual rather than to society as a whole. Public management of common property requires values to be placed on it in order to make rational judgements about uses and to overcome the misunderstanding that such resources are "free." Management of World Heritage sites has taught us that people and a nation will respect features being conserved if the value of heritage is expressed in economic term as well as in the more usual abstract intellectual and emotional terms. Interdisciplinary academic research made accessible to political decision-makers through the medium of modern management technologies such as UNESCO's ZEMP/GIS are important tools to inform conservation and influence the development process.

E. = 420,000
N. = 1,520,000

ZONING AND ENVIRONMENTAL
MANAGEMENT PLAN FOR
ANGKOR

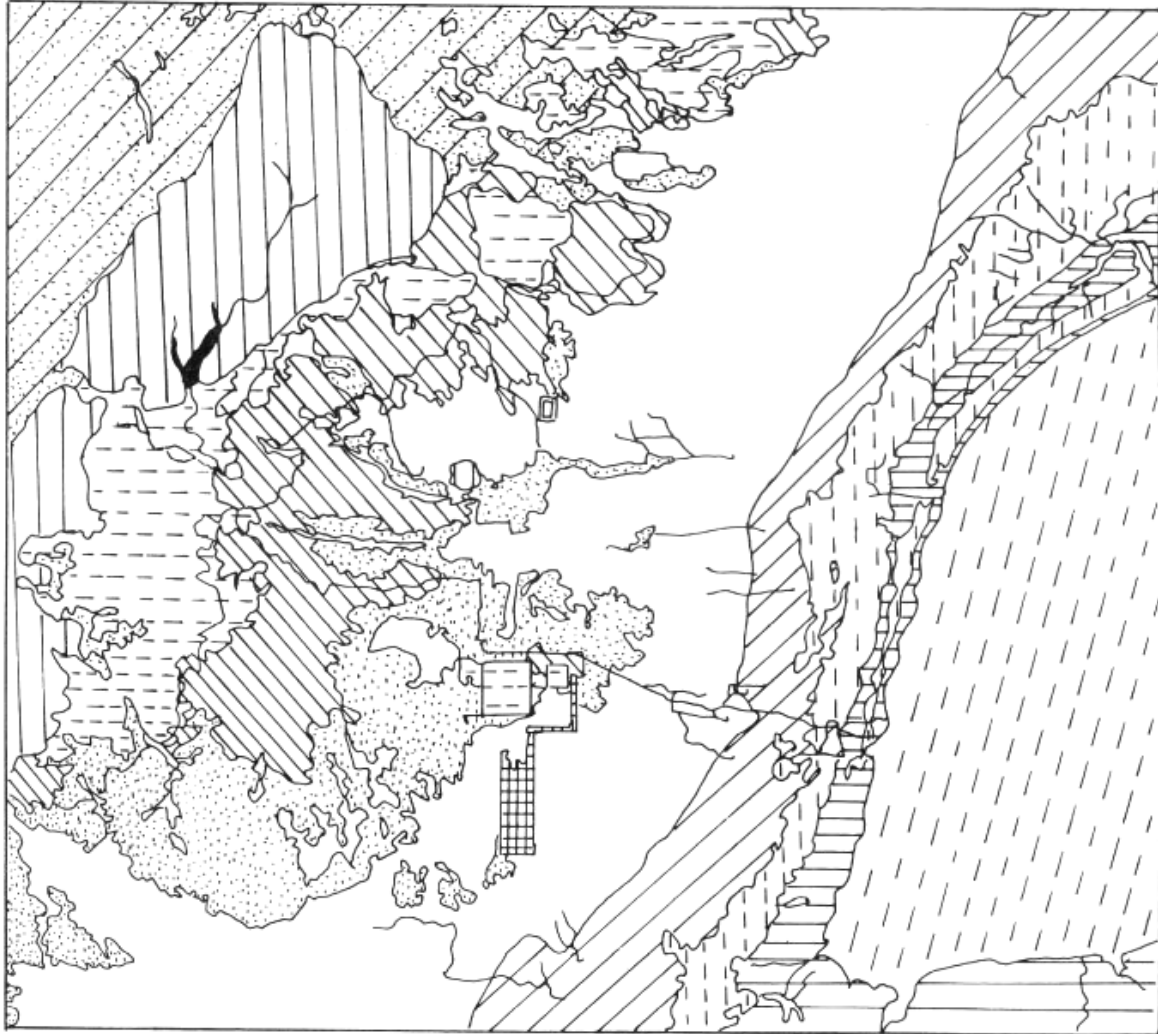
UNESCO - ZEMP PROJECT

HABITATS

Legend

	FFn	flooded forests (natural)
	FFd	flooded forests (disturbed)
	FFa	flooded forests (agricultural)
	FM	shrublands/grasslands/wetlands
	FR	flooded ricefields
	FC	canals
	W	wetlands
	DR	dryland rice, other crops
	OS	open shrublands
	CS	closed shrublands
	SD	dense secondary forests
	SDs	swidden secondary forests
	SDe	enroached secondary forests
	SSs	sparse secondary forests
	TF	temple forests
	LEu	undisturbed evergreen forests
	LEus	undisturbed evergreen forests - streams
	LEm	modified disturbed evergreen forests
	LD	deciduous forests
	LS	semi-deciduous forests
	UR	upland stream courses
	UU	undisturbed upland forests
	UUp	undisturbed upland forest plateaus
	UUs	undisturbed upland forest slopes and ridges
	USs	secondary upland forests - swidden
	USo	secondary upland forests - other

— Contours, 50 m
— Permanent streams, barays, moats



Scale 1 : 300 000

E. = 345,000
N. = 1,445,000

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Z E M P

Fig. 1 Natural Habitats. Zoning and Environmental Management Plan for Angkor Cultural Landscape. UNESCO, 1993.

E. = 420,000
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ZONING AND ENVIRONMENTAL
MANAGEMENT PLAN FOR
ANGKOR

UNESCO - ZEMP PROJECT

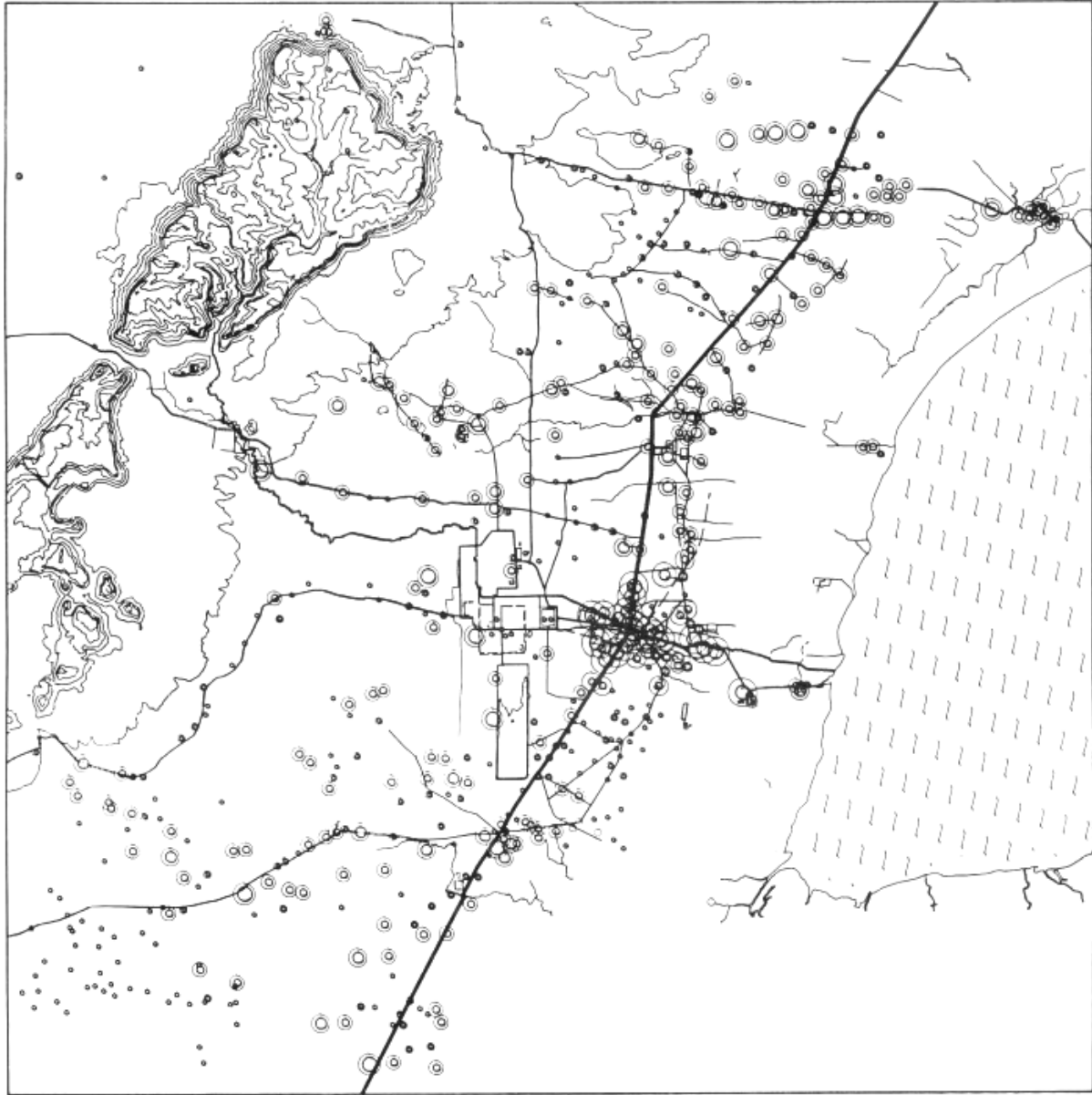
PRESENT AND
PROJECTED POPULATION
FOR 2005

Legend

- Below 600
- 600 - 900
- 900 - 1200
- Over 1200

Black circles represent present population and
red circles project population at 2005.

- Contours, 50 m
- Permanent streams, barays, moats, canals
- National road
- Provincial roads
- Minor roads



E. = 345,000
N. = 1,445,000

Scale 1 : 300 000

Z E M P

Fig. 2 Archaeological Values, Zoning and Environmental Management Plan for Angkor Cultural Landscape, UNESCO, 1993.

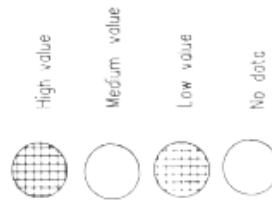
E. = 420,000
N. = 1,520,000

ZONING AND ENVIRONMENTAL
MANAGEMENT PLAN FOR
ANGKOR

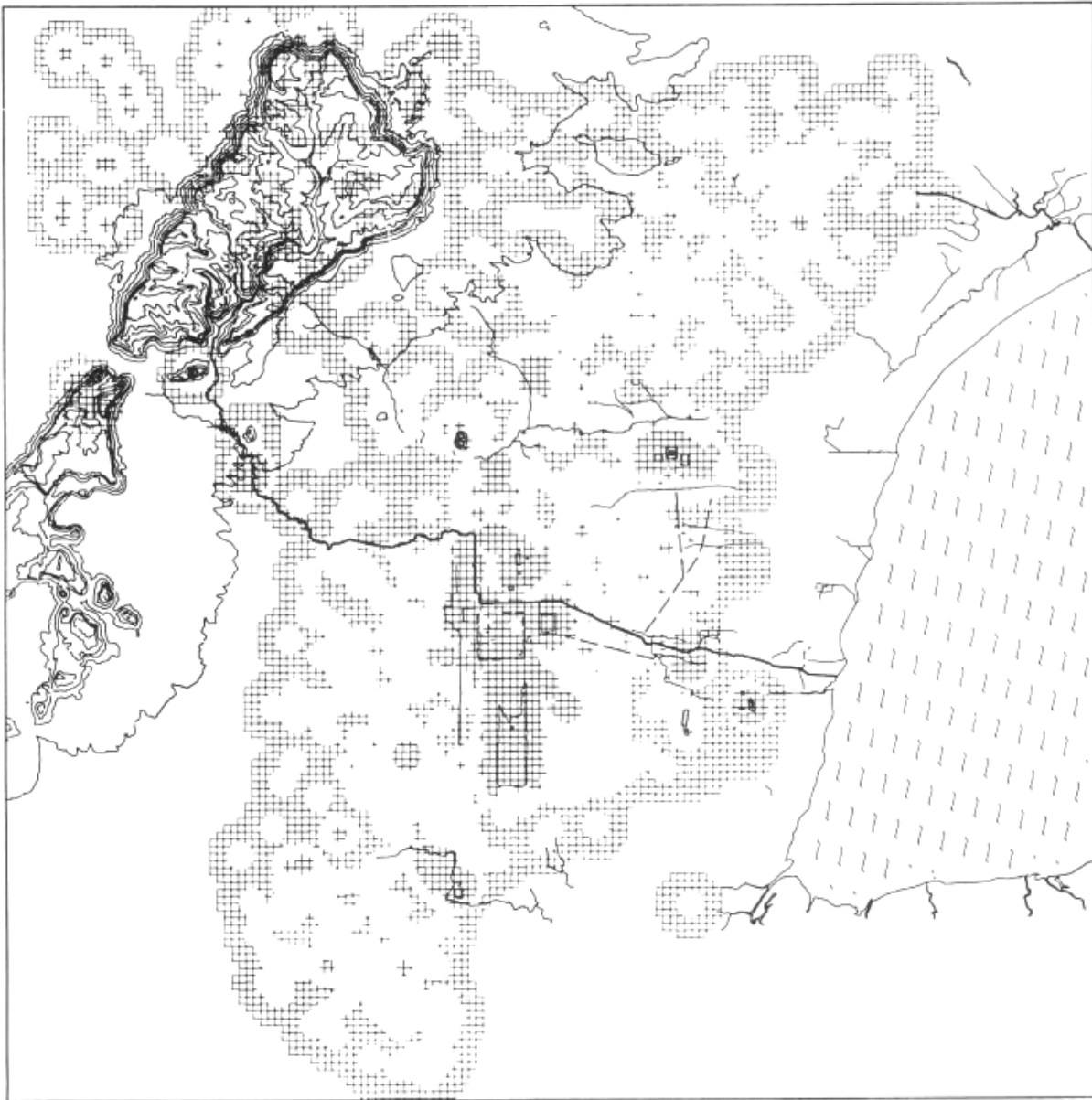
UNESCO - ZEMP PROJECT

ARCHAEOLOGICAL
VALUES

Legend



Contours, 50 m
Permanent streams, barays, moats



Scale 1 : 300 000

E. = 345,000
N. = 1,445,000

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Z E M P

Fig. 3 Surface Map, Archaeological Values in the Study Area. Zoning and Environmental Management Plan for Angkor Cultural Landscape. UNESCO, 1993.

Archaeological Values
in the Study Area



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Fig. 4 Present and Projected Populations for 2005. Zoning and Environmental Management Plan for Angkor Cultural Landscape. UNESCO, 1993.

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土著、文化和文物保護區的管理

吳哥－東南亞研究案例

Richard A. Engelhardt

【摘要】

時代日趨進步，但傳統文化漸見式微，自然生態亦不斷受到破壞，地球資源日漸貧乏，已成為全球關注的問題。古物古蹟與生態環境關係密切，二者的保護工作定要同時進行才能事半功倍。不同的保護對象要用不同的處理手法，才符合今天科學管理的原則。故此，有些文物與環境要減少接觸，避免人為破壞，而另一些則鼓勵保持現狀，維持與環境的共生均衡，並善用其旅遊及教育資源。

近年東南亞地區經濟高速發展，文物與生態廣受威脅，雖然拯救工作刻不容緩，但舊有的一套保護管理已不合時宜，恐怕難起作用。有謂昔日吳哥終淪為廢墟，亦與環境管理不善有關。經濟利益與文物保護常產生矛盾，如何能二者兼顧是現時保護工作的重要課題。其中一個上佳的解決辦法是將受保護地點開發為旅遊區，妥為管理，既無礙經濟發展，又令文物得到適當保護，一舉兩得。

1992年在巴西舉行的聯合國環境及發展會議(UNCED)指出環境保護是迫切的世界性問題，全球學術界及援助機構應加入響應。事實上，早在1972年，已有類似會議(UNESCO)喚起世人對文物與自然環境保護的關注，宣揚所有文物及自然環境都是人類的共有財產這個革命性訊息，促請各國為境內重要文物及環境負起受托人的責任，好好地保護和管理。會議並將首要文化遺址及地點一一列出，作重點保護。

柬埔寨吳哥是世界上最古老的國家公園，亦是這份清單上重點遺址之一。吳哥古城有大規模的灌溉系統，河道縱橫，面積遼闊。1992年，UNESCO與多個國際學術研究機構一起為吳哥制定了一個規劃環境保護計劃(ZEMP)，展開長遠的而艱鉅的保護工作，資金來源有賴當地旅遊業。