

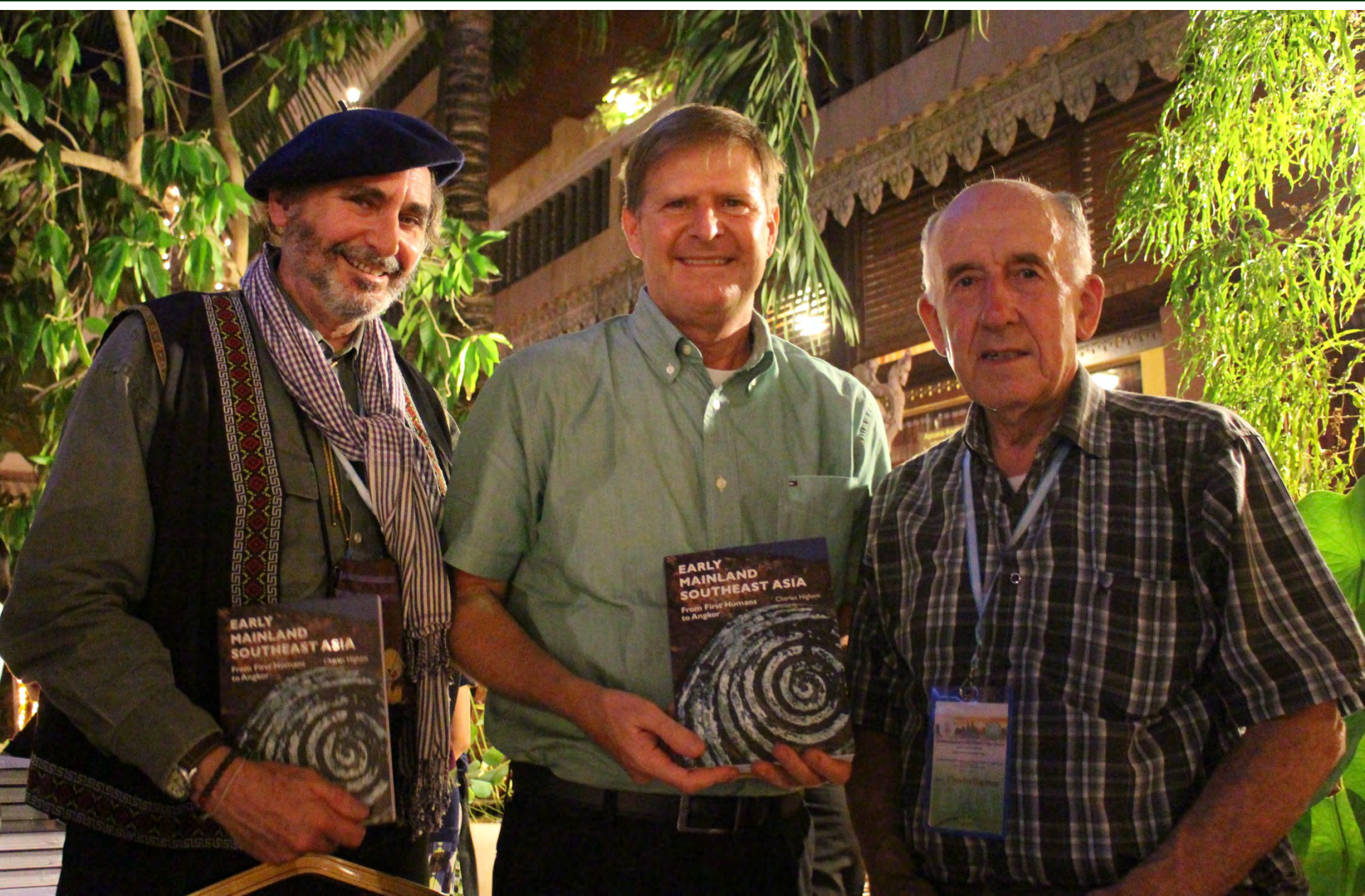


Introduction to the
Khmer Empire
*with emphasis on regional
historical geography and
archaeology*

SOUTHEAST ASIAN CIVILIZATION

Steven Andrew Martin, PhD • Faculty of International Studies • Prince of Songkla University

David Blundell, Steven Martin, Charles Higham





Water – Stone – Iron – Fire

www.magazine.fis.psu.ac.th/?p=251

Martin, S. A. (2015). A brief introduction to the historical geography of Cambodia. *Faculty of International Studies E-Bulletin*.

A Brief Introduction to the Historical Geography of Cambodia



Text and Photos by Steven Martin, PhD

Cambodia is a small country with an awe-inspiring history, where natural resources and the opportunities presented by geography played a leading role in the development of one of the world's greatest historical civilizations, the Khmer.

Water, Stone, Iron and Wood



The natural abundance of fresh water has always been the basis of agriculture and transport systems, thanks to the Mekong River (Mother of Waters) and the Tonle Sap (Great Lake), two of the world's greatest hydrologic systems. Meanwhile, ready access to stone, mainly rusty-red laterites and pastel sandstones, provided the building blocks of early civilization in the region. Emboldened with hardwood forests, iron ore deposits, and the mastery of fire, the Khmer were empowered to build houses, fire kilns, and smelt ores and forge the tools and weapons of the largest ancient empire in mainland Southeast Asia.

The Mekong River

The Mekong is one of the longest rivers in the world, and is the symbolic heart of tropical mainland Southeast Asia. Seasonal flooding brings silt and nourishment to the land, and nutrients and freshwater fish to the Tonle Sap, producing two ecologically vibrant outcomes, the floodplain and the



ANGKOR WAT



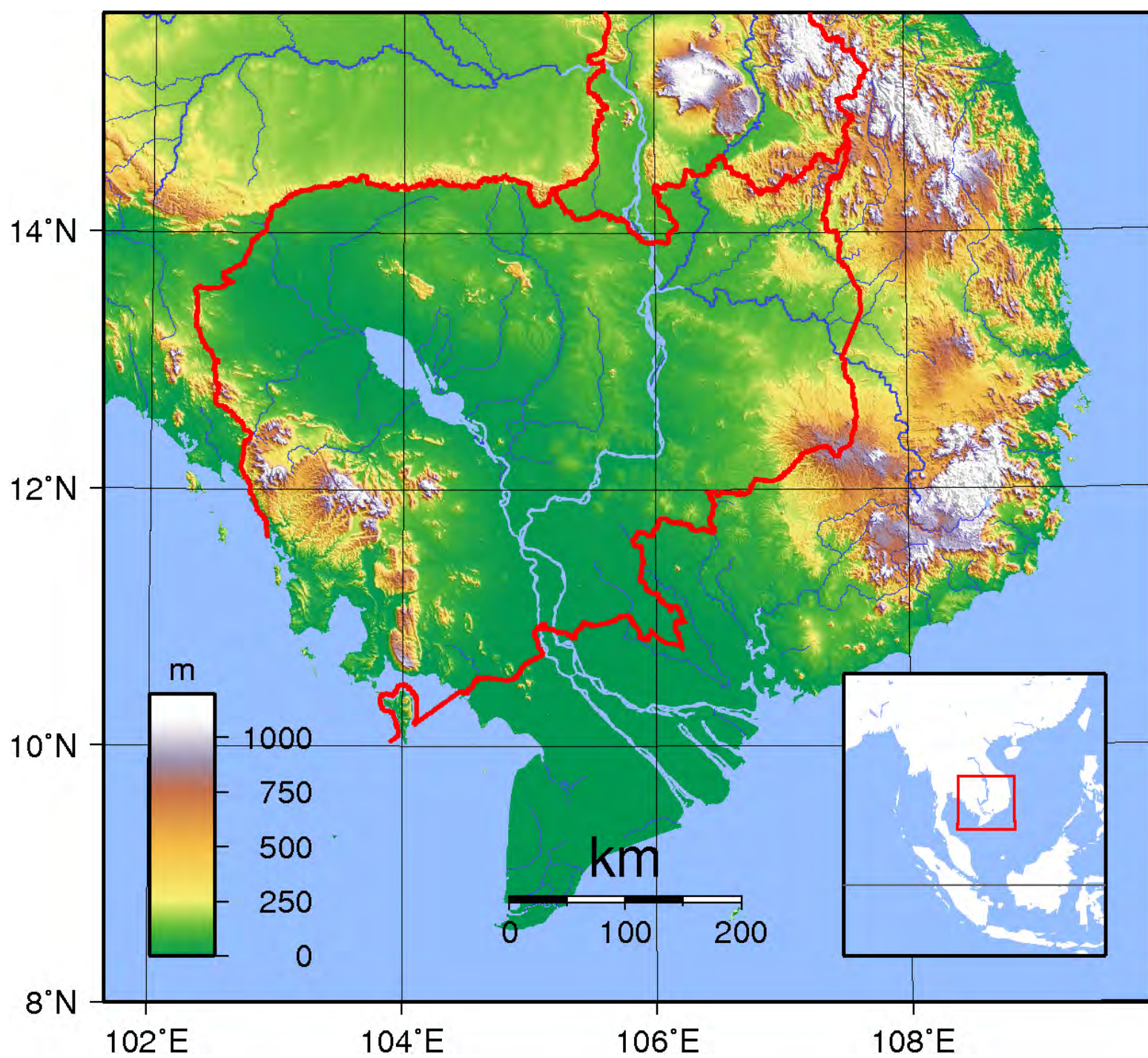
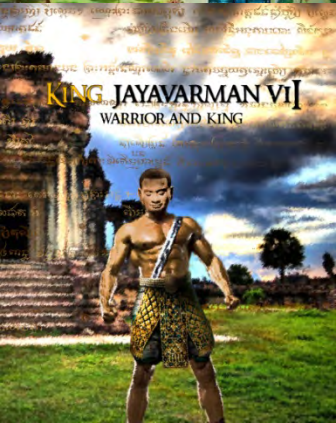
The largest
religious structure
in the world!

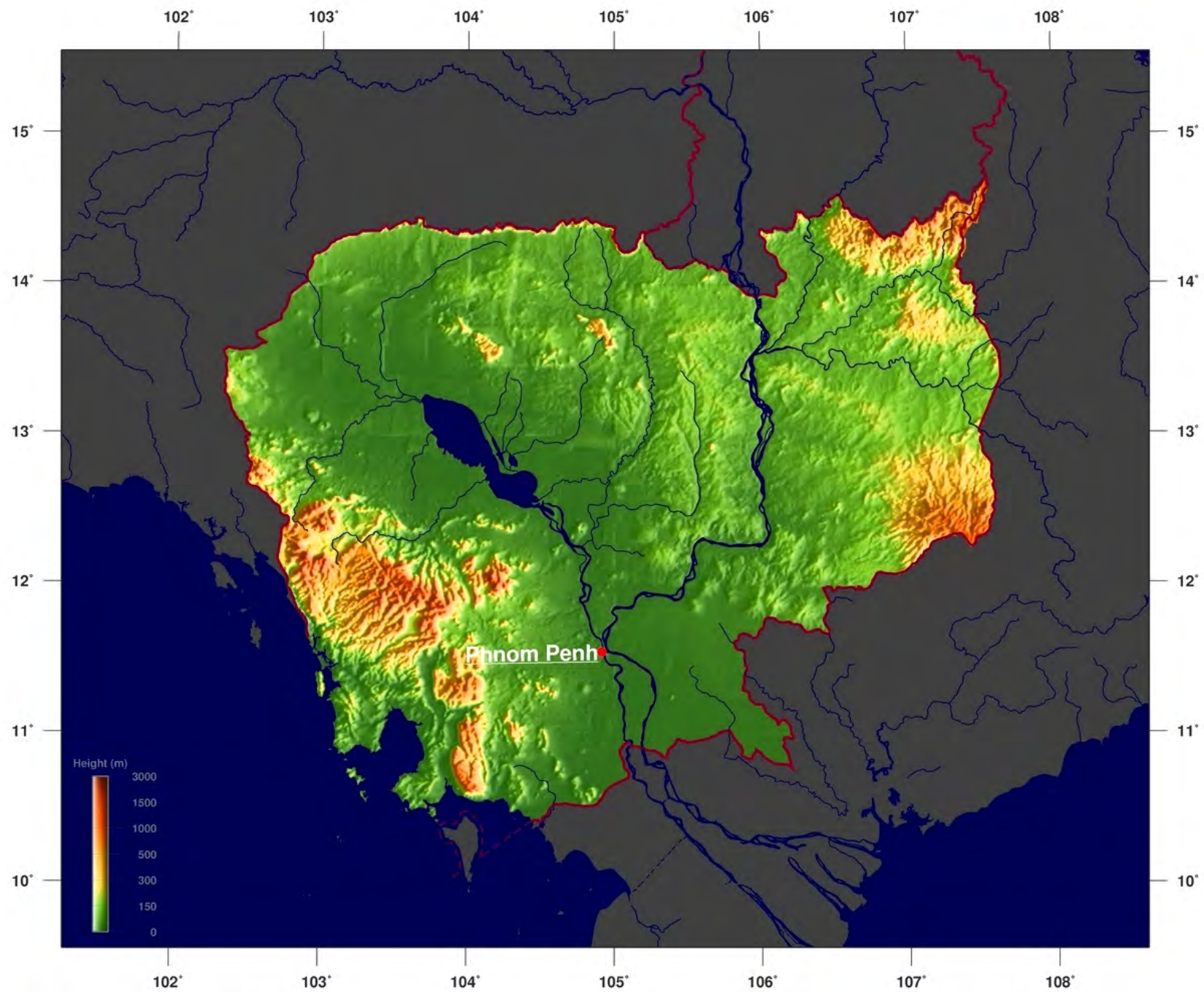


THE KINGDOM OF CAMBODIA



CAMBODIA





OVERVIEW OF FLOOD WATERS ALONG TONLE SAP LAKE, CAMBODIA

Flood Analysis with ENVISAT ASAR WSM imagery recorded on 28 August, 27 & 30 September, 27 October 2011 over Tonle Sap Lake, Cambodia

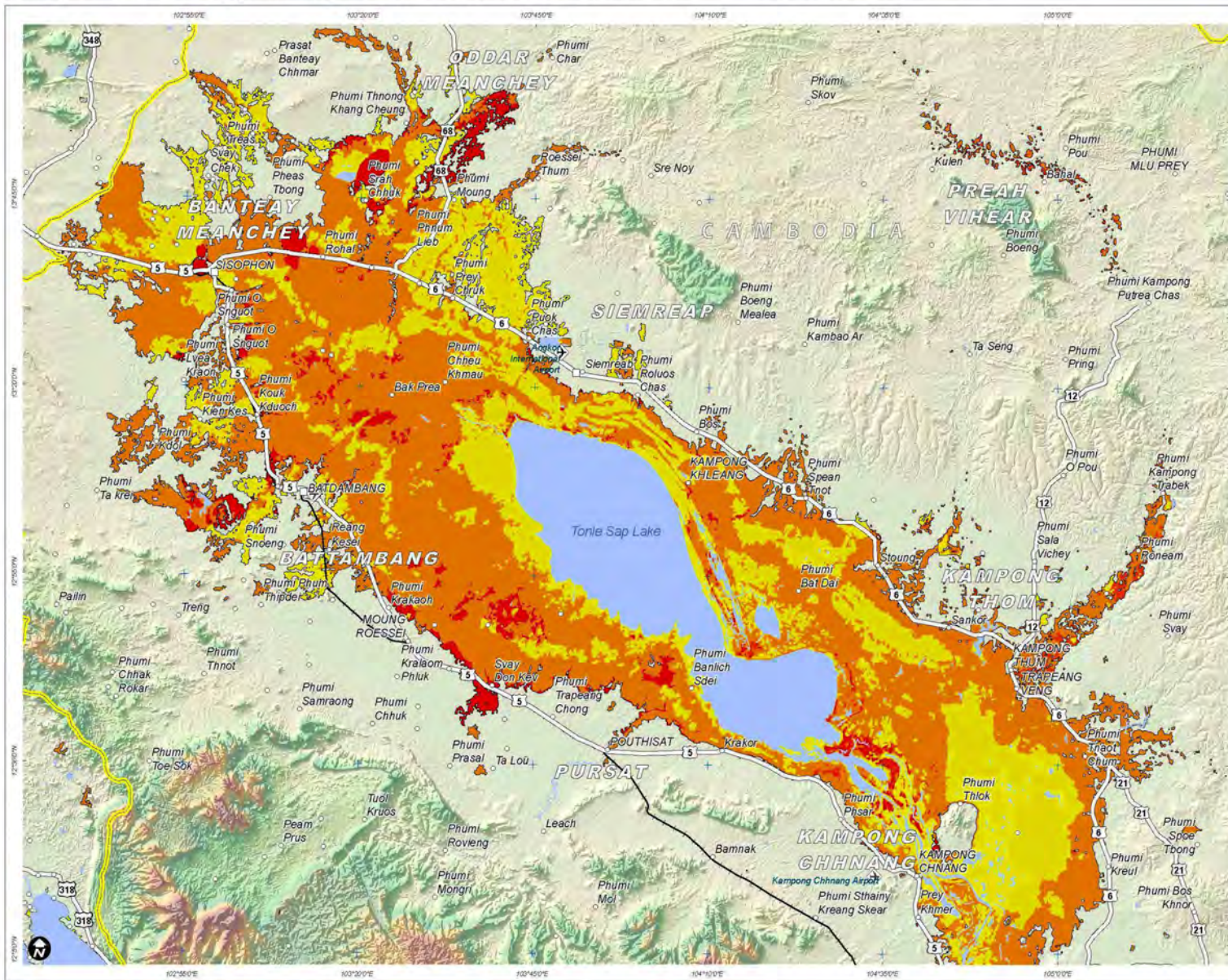
This map presents potential standing flood waters/ flood affected land over the affected area surrounding Tonle Sap Lake, Cambodia following recent heavy rainy season. This analysis indicates that flood waters have expanded in the lake area between 26 August and 27th October 2011. Please note that the exact limit of the flood waters is uncertain because of the relatively low spatial resolution of the satellite sensors used for this analysis. Detected water bodies likely reflect an underestimation of all flood-affected areas within the map extent. This analysis has not yet been validated in the field. Please send ground feedback to UNITAR / UNOSAT.

Disaster coverage by the International Charter 'Space and Major Disasters'. For more information on the Charter, which is about assisting the disaster relief organizations with multi-satellite data and information, visit www.disasterscharter.org



Flooding Production Date:
10/11/2011



Version 2.0

UNOSAT Activation:
FL20111012KHM

Thailand



Legend

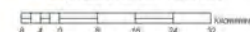
- ☐ Major Towns/ City International Boundary
☐ Towns/ Villages  Railway Line
 Airport / Airfield Primary Roads

FLOOD WATER EXPANSION ANALYSIS

Relative Increase in Flood Water Extent

-  Probable Flood Water Expansion
27 October 2011
 Probable Flood Waters Expansion
30 September 2011
 Probable Flood Water Expansion
27 September 2011
 Estimated Flood Water Extent
28 August 2011
 Pre-Crisis Water Extent

Map Scale for A3: 1:945,000



Satellite Data(1) : ENVISAT ASAR WSM
Imagery Dates: 28 August, 27 & 30 September, 27
October 2011
Resolution : 150 m
Source: ESA 2011
Road Data : Google Map Maker 2011
Other Data: ESRI, USGS, NGA
Analysis : UNITAR / UNOSAT
Production: UNITAR / UNOSAT
Analysis conducted with ArcGIS v10
This work by UNITAR/UNOSAT is licensed under a
Creative Commons Attribution-NonCommercial-
ShareAlike 3.0 Unported License.

Coordinate System:
WGS 1984 UTM Zone 48N
Projection: Transverse Mercator
Datum: WGS 1984
False Easting: 500,000.0000
False Northing: 0.0000
Central Meridian: 105.0000
Scale Factor: 0.9996
Latitude of Origin: 0.0000
Units: Meter

The depiction and use of boundaries, geographic names and related data shown here are not warranted to be error-free nor do they imply official endorsement or acceptance by the United Nations. UNOSAT is a program of the United Nations Institute for Training and Research (UNITAR), providing satellite imagery and related geographic information, research and analysis to UN humanitarian & development agencies & their implementing partners.



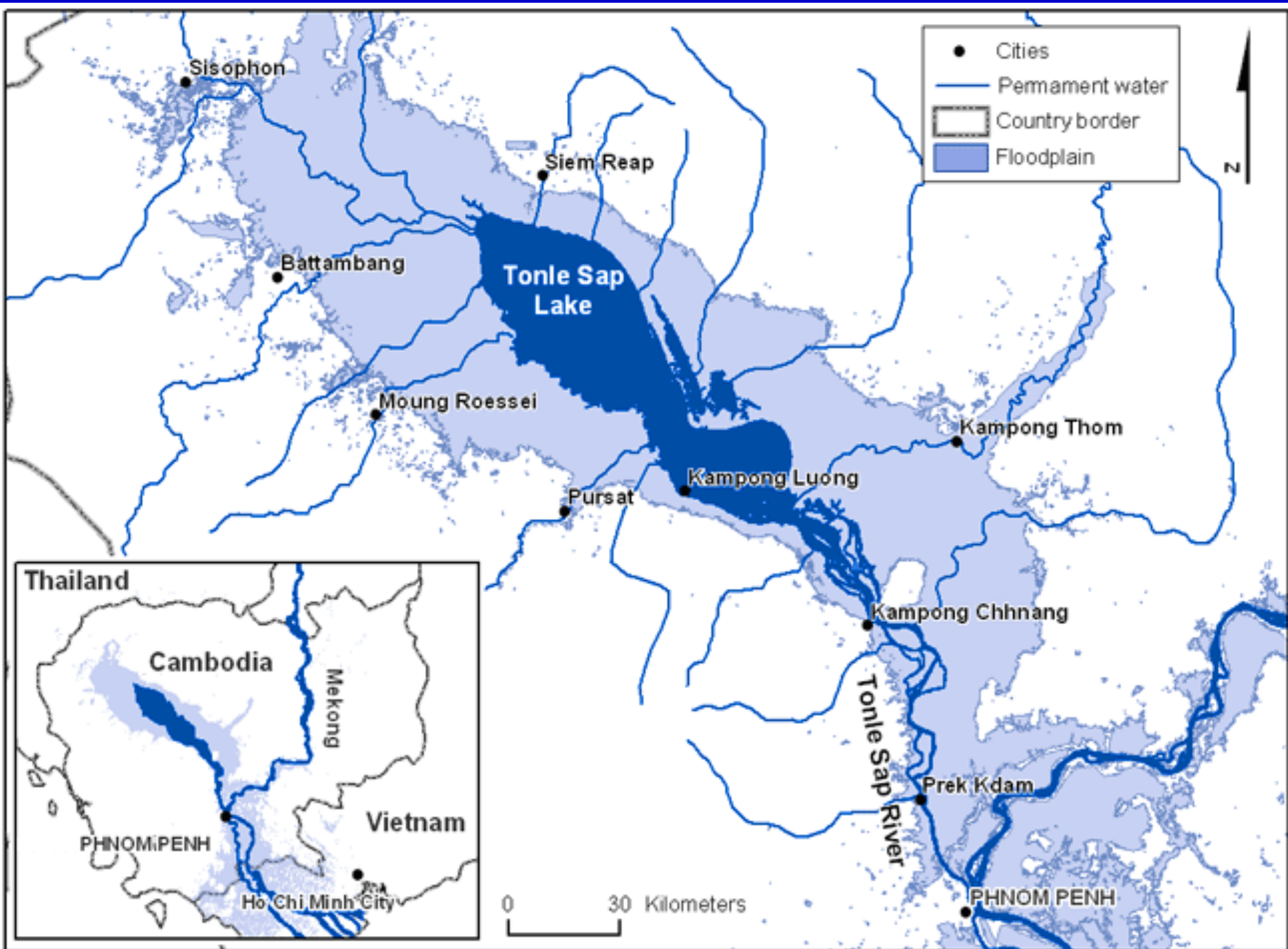
unitar
United Nations Institute for Training and Research

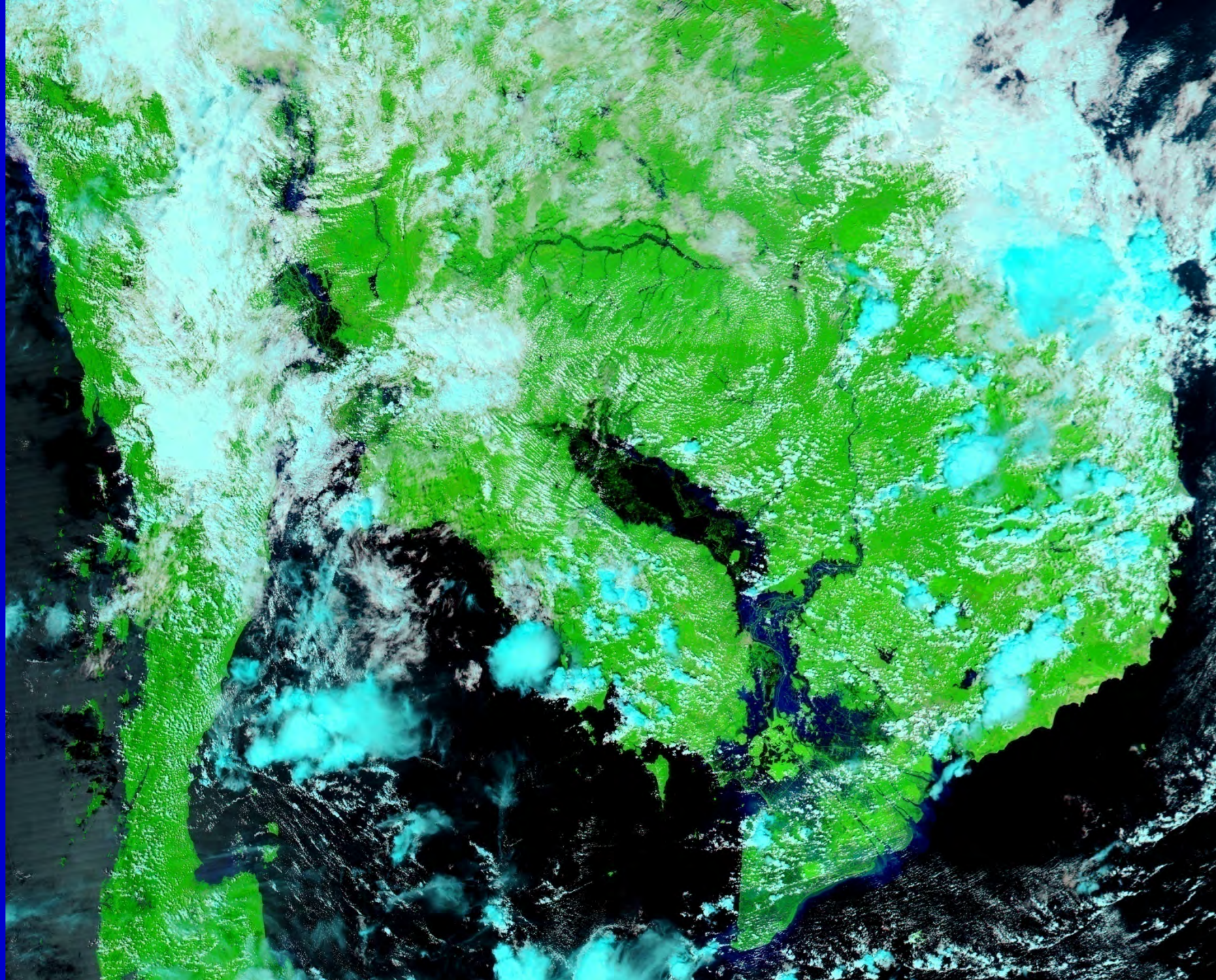
UNOSAT

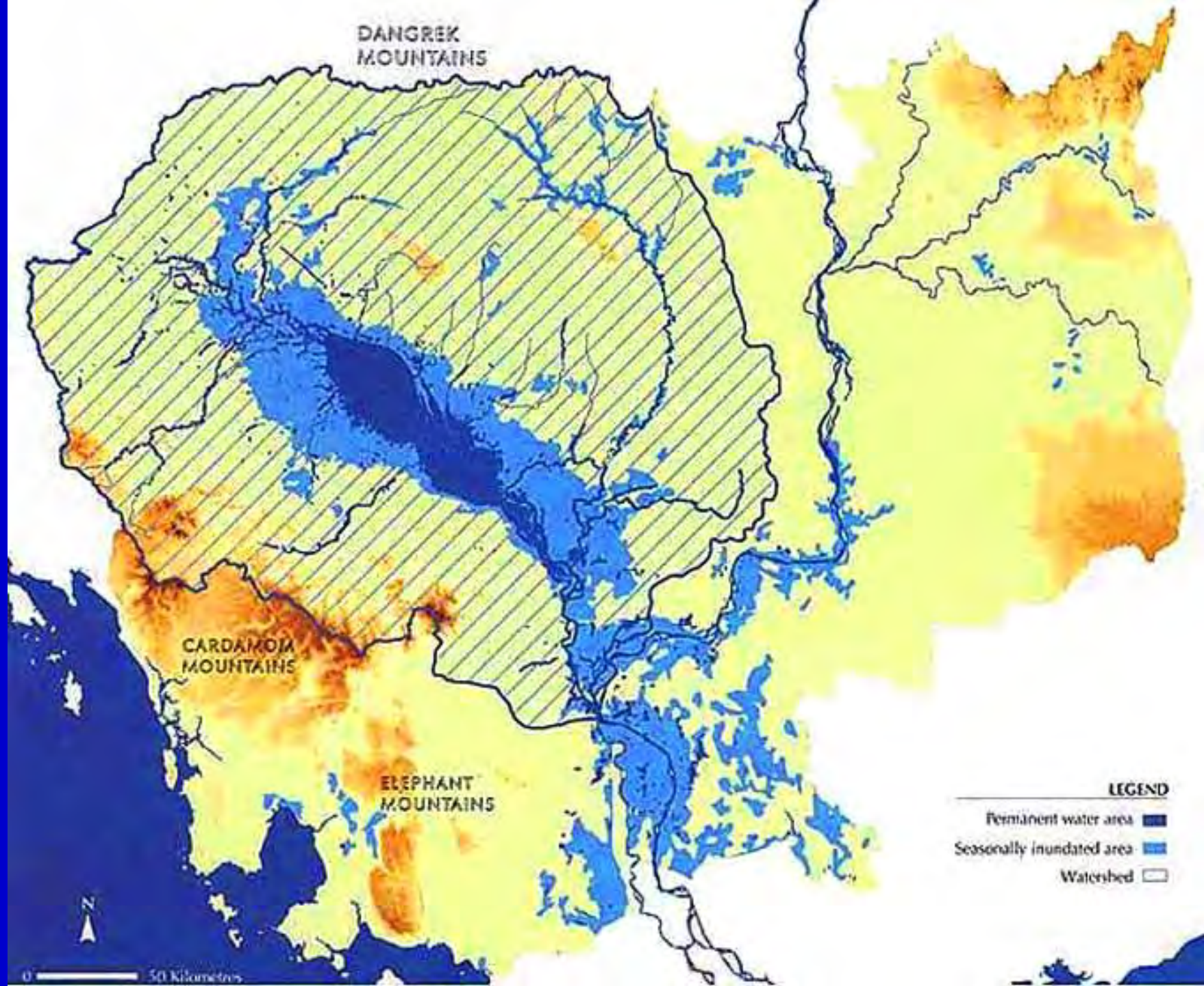
**Contact information: unosat@unitar.org
24/7 Hotline: +41 76 487 4998
www.unitar.org/unosat**



**“Kingdom of
Water”**







THE KINGDOM OF CAMBODIA

Contemporary Factoids

Physical Geography



Area

181,035 sq km

Coastline

Total: 433 km

Land boundaries

Total: 2,530 km

Border countries: Laos 555 km;
Thailand 817 km; Vietnam 1,158 km

Natural resources

Oil and gas, timber, gemstones, iron ore, manganese, phosphates, hydropower potential

Climate

Tropical, rainy,
monsoon season
(May to November);
dry season
(December to April);
little seasonal
temperature
variation

THE KINGDOM OF CAMBODIA

Contemporary Factoids Human Geography



Population

15,458,332

Ethnic Groups

Khmer 90%, Vietnamese 5%,
Chinese 1%, other 4%

Languages

Khmer (official) 96.3%, other 3.7%

Religion

Buddhist (official) 96.9%, Muslim
1.9%, Christian 0.4%, other 0.8%

Literacy

*(i.e., age 15 and over can read
and write)*

total population: 73.9%

male: 82.8%

female: 65.9%

Urbanization

Urban population: 20%

<https://www.cia.gov/library/publications/the-world-factbook/>



ETHNIC GROUPS

AUSTROASIATIC

- Khmer (Cambodian)
- Khmer Loeu (Tribal)
- Vietnamese

MALAYO-POLYNESIAN

- Cham
- Mountain Cham

TAI

- Lao

NOTE: Chinese are located mainly in urban centers

- **Austroasiatic**
 - Khmer
 - Vietnamese
- **Austronesian**
 - Cham
- **Thai**
 - Lao

HISTORY & TIMELINE

900 CE

1050 CE

1300 CE



c. 400

Sage-prince Kambu of the Cambodian legends, who belonged to the Kamboja lineage sailed from Indian subcontinent (the west coast of India) and established a small Kamboja kingdom in the Mekong Basin.

The first Khmer or king (Kambu) founded Kambujadesa (The Sons of Kambu) (i.e., Kambuja).

611

At **Angkor Borei** (Cambodia) the earliest known Khmer inscriptions date to this time.

802

Jayavarman II proclaimed himself a "universal monarch" in a ritual that united religion and politics (Cambodia) and gave rise to the cult of the Devaraja (deified king). **He declared the region's independence from Java.**

KEY HISTORICAL DATES

The Khmer Kingdom flourished from the 6th to 15th centuries AD

889-1324

The Khmer Empire's include much of present-day Laos and Cambodia (reached its zenith during the Angkor period) (889-1434 AD).

c. 1100-1200

The Khmer empire reached its peak under King Jayavarman II in the 12th century.

1150

Suryavarman II, Khmer ruler (Cambodia) died. He commissioned the building of Angkor Wat. Trade with China

KEY HISTORICAL DATES

c. 1000-1400

Angkor Thom, capital of the Khmer empire, reached its apogee during this period --- It included the religious monument of Angkor Wat.

1186

The temple monastery of Ta Prohm at Angkor was consecrated.

- Inscriptions say that 79,365 servants were required to for its upkeep.
- It was paid by funds from over 3,000 villages.

1191

Preah Khan was dedicated on the site where the Khmer defeated their eastern neighbors the Cham.

- The central temple was dedicated by Jayavarman VII to his father (King Dharanindravarman II) in the name of Lokeshvara (a god who embodies the compassionate qualities of the Buddha).
- The temple covers 140 acres.

1415-1439

The city of **Angkor Wat** went into rapid decline as a period of severe drought extended over South East Asia.

1431

Thai armies invaded and plundered the Khmer civilization at Angkor Thom. The court moved south of the great lake Tonle Sap and later to Phnom Penh.

The Khmer Empire declined with invasions from neighboring Thailand

THE KHMER KINGS

King	Reign	Temples begun, rebuilt or added to
Jayavarman II	790-835	Rong Chen on Phnom Kulen, earlier shrine on the site of Kutisvara
Jayavarman III	835-877	Prei Monti, Trapeang Phong, Bakong
Indravarman I	877-c.886	Preah Kô, sandstone cladding of Bakong, Indratataka <i>baray</i>
Yasovarman I	889-c.915	Lolei, Bakheng, Prasat Bei, Thma Bay Kaek, earlier shrine on the site of Phimeanakas, Phnom Krom, Phnom Bok, East Baray
Harshavarman I	c.915 -923	Baksei Chamkrong, Prasat Kravan
Isanavarman II	923-c.928	
Jayavarman IV	c.928-c.941	Koh Ker site
Harshavarman II	c.941-944	
Rajendravarman	944-968	Pre Rup, East Mebon, Bat Chum, Kutisvara, Banteay Srei, earlier temple on the site of Banteay Kdei, Srah Srang, Baksei Chamkrong
Jayavarman V	968-c.1000	Ta Keo
Udayadityavarman I	1001-1002	
Jayaviravarman	1002-1010	North Khleang, continuation of Ta Keo
Suryavarman I	1002-1049	South Khleang, Preah Vihear in the Dangrek Mountains, Phimeanakas and the Royal Palace, Suryaparvata at Phnom Chisor, Preah Khan at Kompong Svay, West Baray, Wat Phu
Udayadityavarman II	1050-1066	Bapuon, West Mebon
Harshavarman III	1066/7-1080	
Jayavarman VI	1080-c.1107	Phimai in present-day Thailand
Dharanindravarman I	1107-1112	
Suryavarman II	1113-c.1150	Angkor Wat, Thommanon, Chao Say Tevoda, Banteay Samré, Phnom Rung in present-day Thailand, Beng Mealea, Beng Mealea, Chao Say Tevoda, Banteay Samré, Bakong
Yasovarman II	c.1150-1165	
Tribhuvanadityavarman	c.1165-1177	
Jayavarman VII	1181-c.1220	Ta Prohm, Preah Khan, Jayatataka baray, Neak Pean, Ta Som, Ta Nei, Banteay Chhmar in NW Cambodia, Angkor Thom, Prasats Chrung, Bayon, Elephant Terrace, Ta Prohm Kel, Hospital Chapel, Krol Kô, Srah Srang, Royal Palace
Indravarman II	c.1220-1243	Prasats Suor Prat, Ta Prohm, Banteay Kdei, Ta Som, Ta Nei
Jayavarman VIII	c.1243-1295	Mangalartha, Preah Palilay?, Bayon, Ta Prohm, Preah Khan, Prasats Chrung, Angkor Wat, Bapuon, Chao Say Tevoda, Banteay Samré, Beng Mealea, Terrace of the Leper King, Elephant Terrace, Preah Pithu, Royal Palace
Srindravarman	1295-1307	Ta Prohm, Preah Pithu, Preah Palilay
Srindrjayavarman	1307-1327	
Jayavarman Paramesvara	1327-	

- Jayavarman II
 - 790-835
 - Phnom Kulen
- Suryavarman II
 - Angkor Wat
 - Beng Mealea
- Jayavarman VII
 - Ta Prohm
 - Angkor Thom

Suryavarman II (Built Angkor Wat)



Suryavarman II on a fresco in Angkor Wat – towering over his subjects.

Above the congregation are parasols; and right and left are fans.

Khmer fight against the Cham occupation by Jayavarman VII in 1181 CE

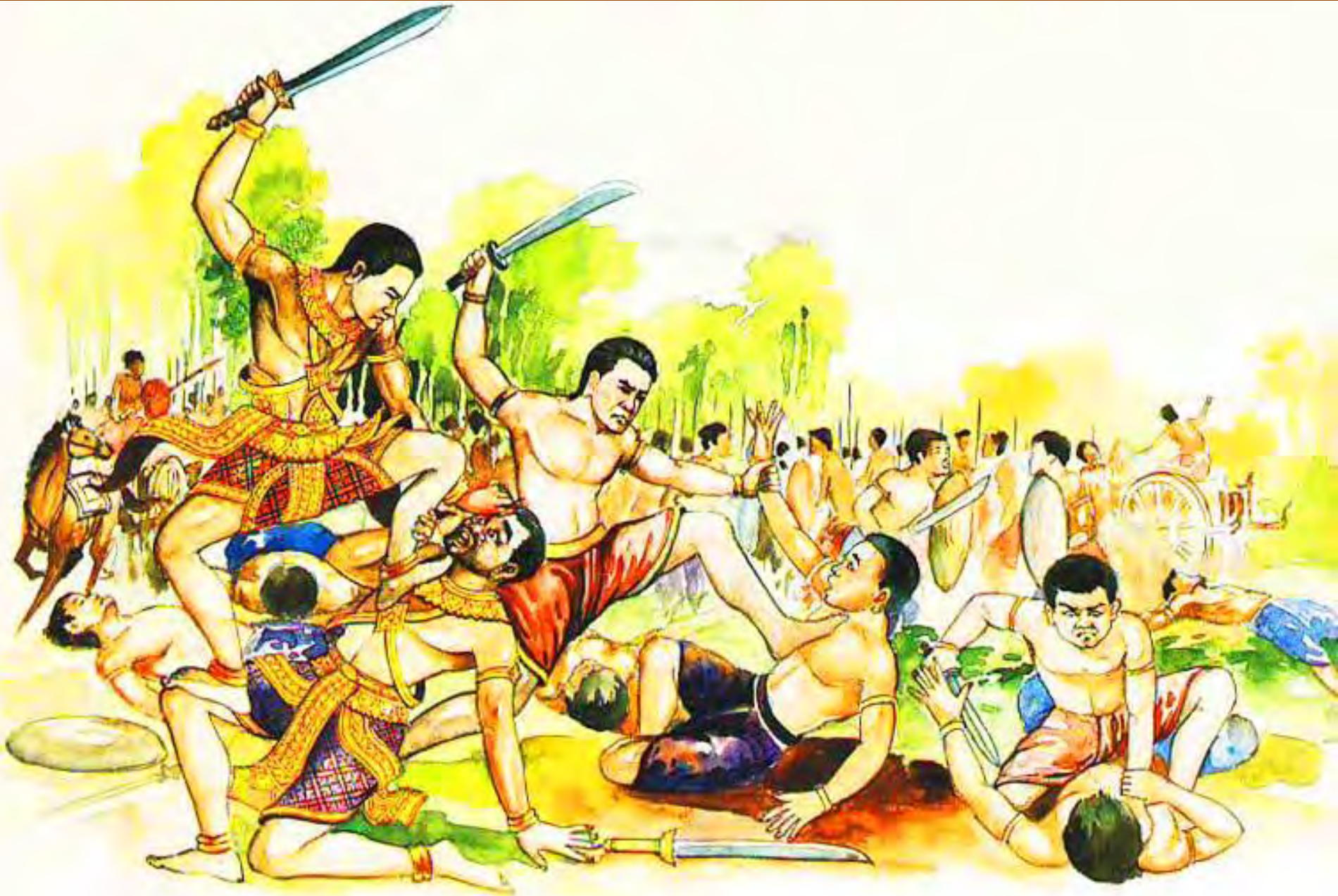


The illustration shows two war canoes, fighting in the uprising against the Cham occupation, which was led by **Jayavarman VII in 1181 CE**. The left canoe is Khmer, the right one is Cham. In the foreground is one of the Siamese Crocodiles to see, who appear on contemporary Khmer depictions in Angkor Thom. They were keen to attack anybody who was thrown out of one of the vessels.

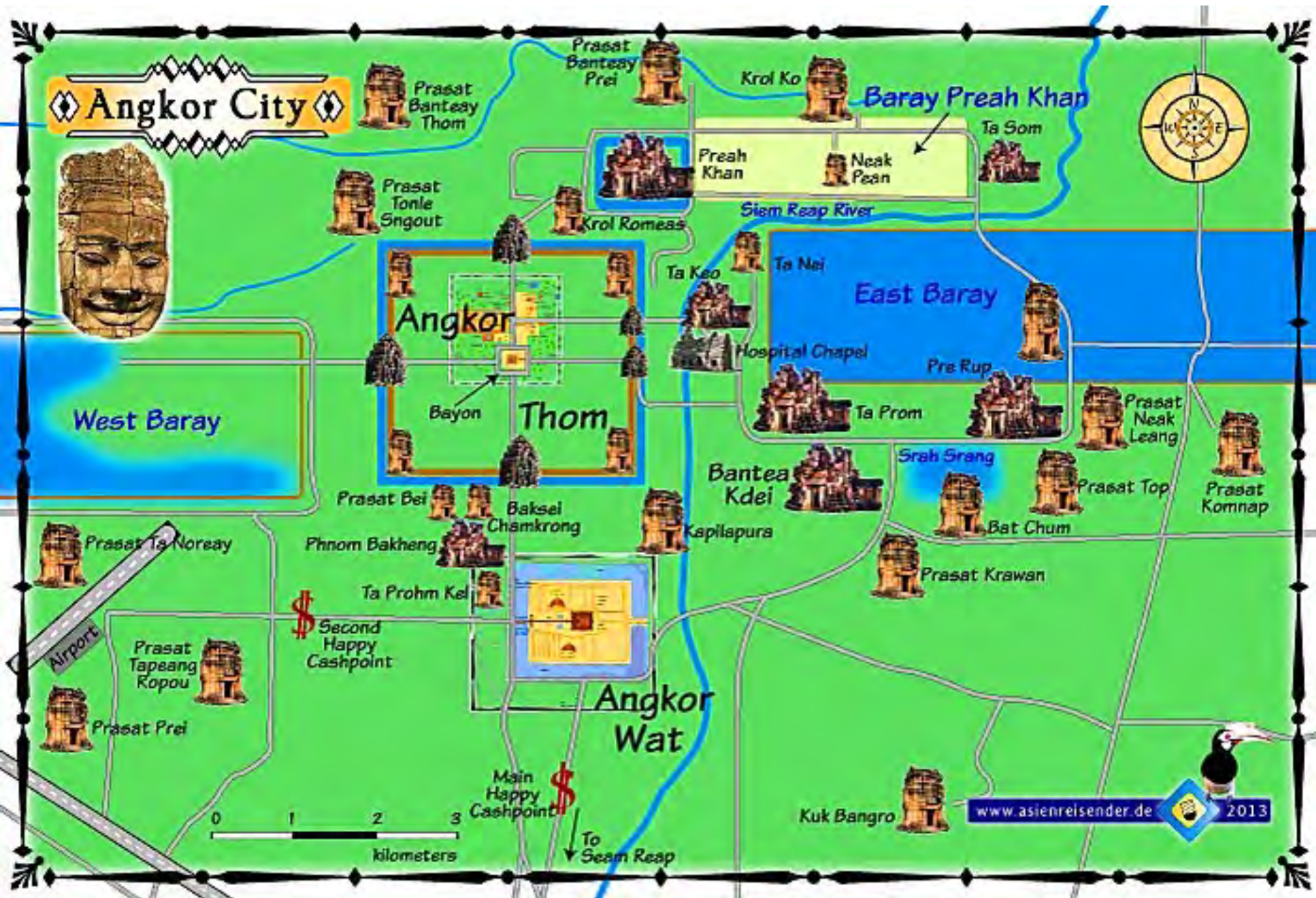
The Khmer Empire at War with the Thai Kingdoms



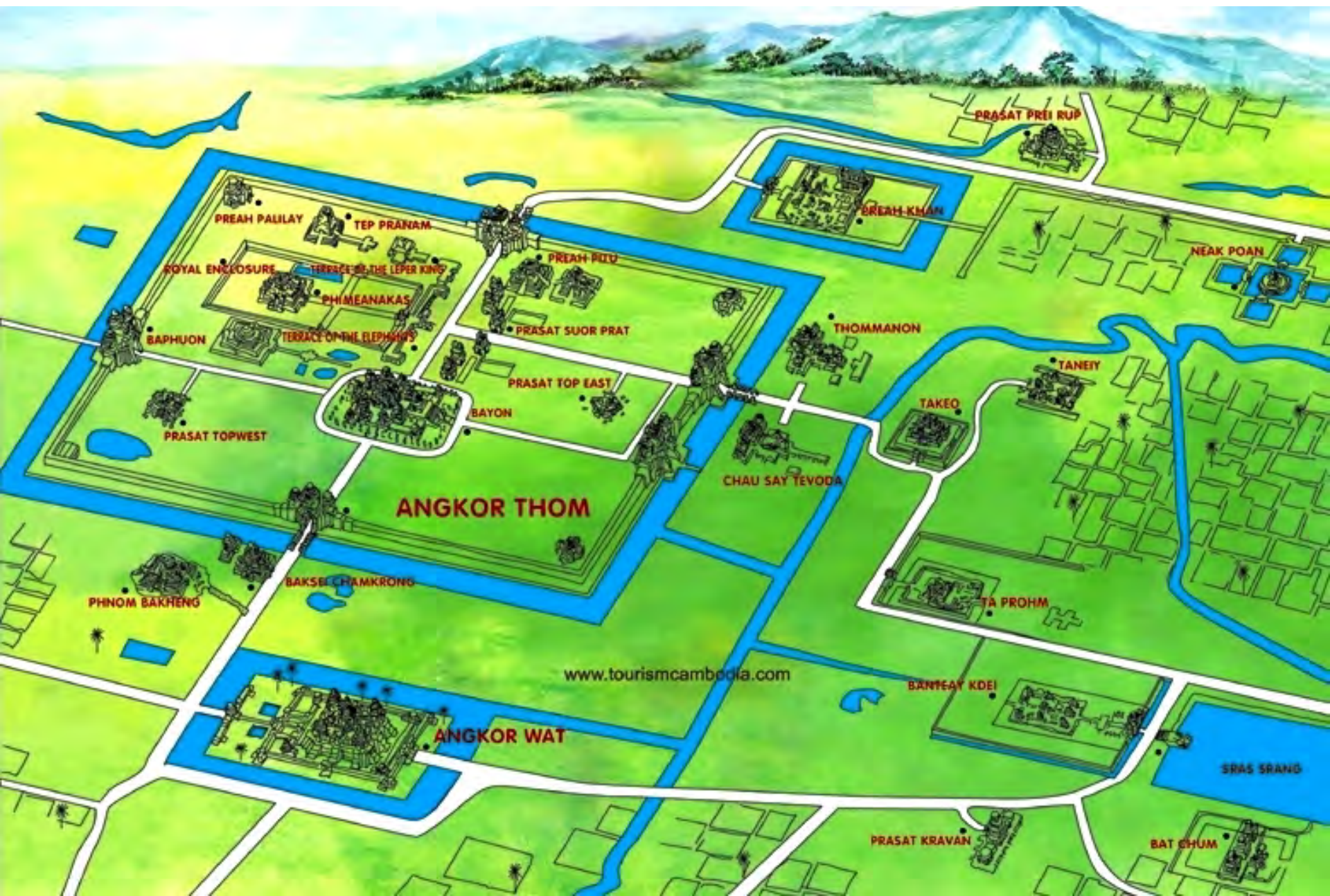
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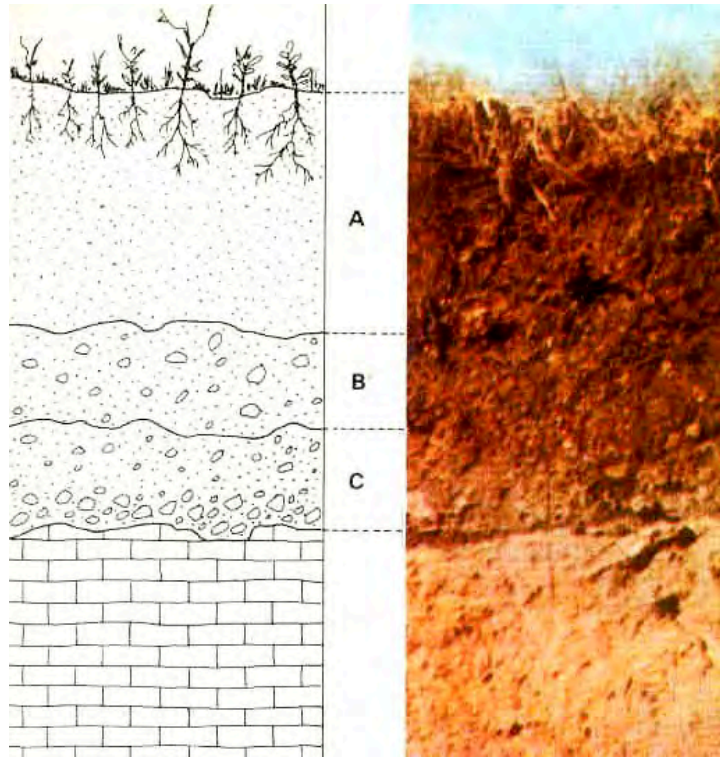
Siem Reap (ANGKOR CITY)



ANGKOR THOM AND ANGKOR WAT



LATERITE(s)



A = soil

B = laterite
(a regolith)

C = saprolite
(a less-weathered regolith)

D = bedrock

Soil types rich in iron and aluminum
Formed in hot and wet tropical areas
Rusty-red because of iron oxides



LATERITE(s)

Factoids

- Soil types rich in iron and aluminum
- Formed in hot and wet tropical areas
- Rusty-red because of iron oxides
- Develop by intensive and long-lasting weathering of the underlying parent rock
- Tropical weathering (laterization) is a prolonged process of chemical weathering which produces a wide variety in the thickness, grade, chemistry and ore mineralogy of the resulting soils.

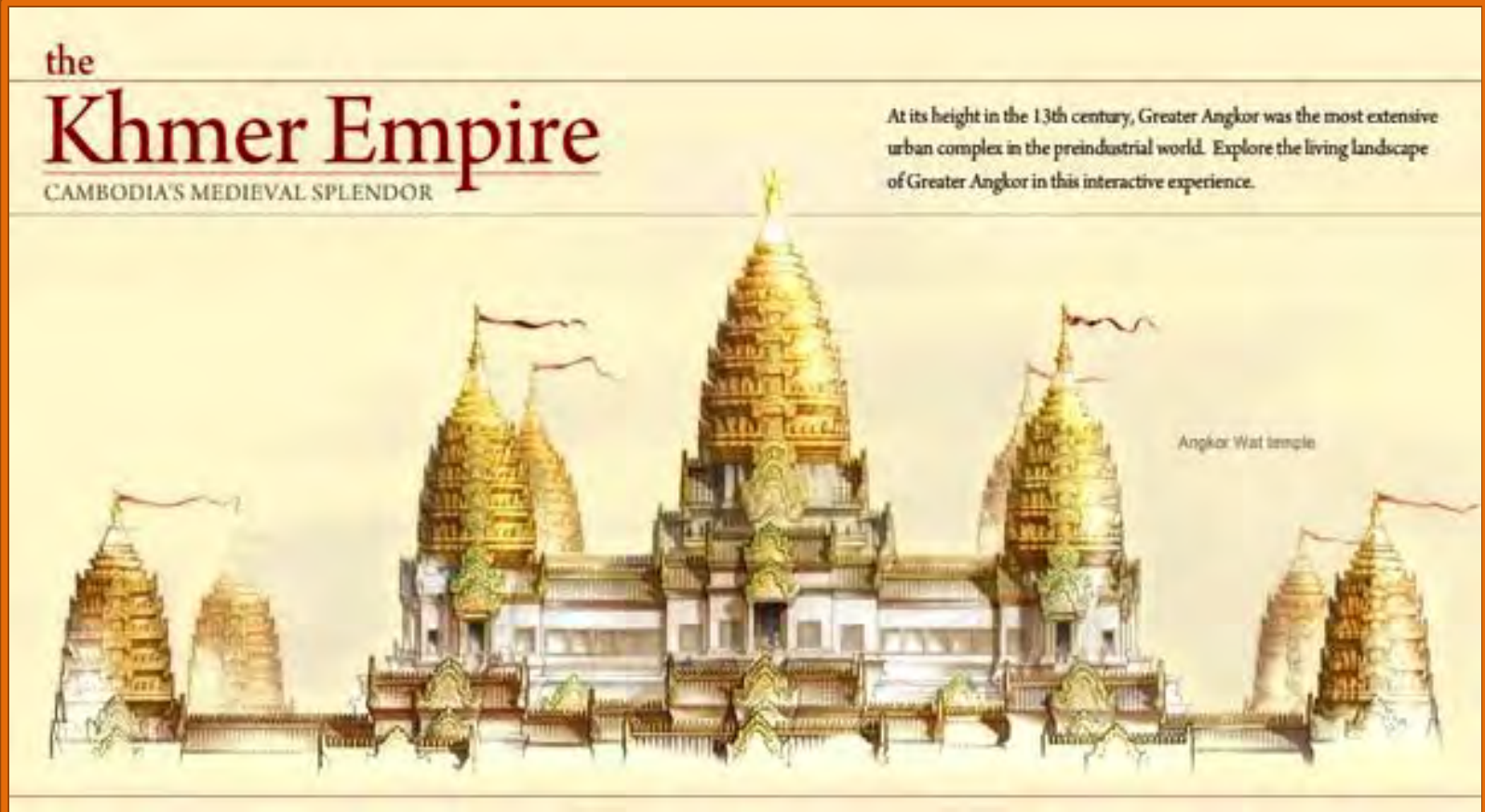
- Named from the Latin word 'later', meaning 'brick'
- Highly compacted and cemented soil
- Easily cut into brick-shaped blocks for building
- Mined while it is below the water table while wet and soft
- Upon exposure to air it gradually hardens as the moisture between the flat clay particles evaporates
- Larger iron salts lock into a rigid lattice structure and become resistant to atmospheric conditions
- The art of quarrying laterite material into masonry is suspected to have been introduced from the Indian subcontinent

SANDSTONE

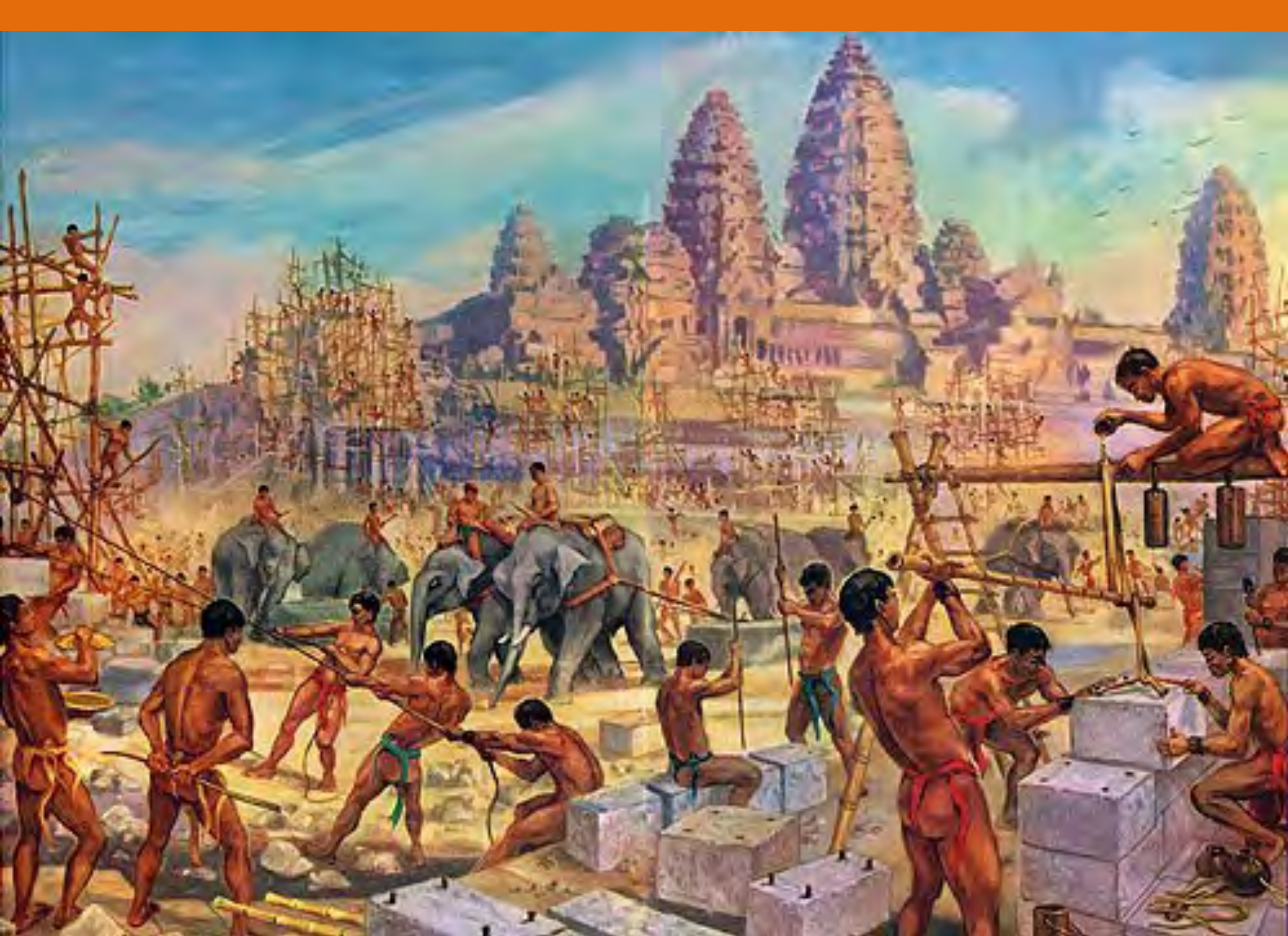
Quarried from the Phnom
Kulen Mountains



Angkor Wat



At its Height in the 13th century



The Bayon



The Bayon (c. late 12th century)



Built in the late 12th or early 13th century as the official state temple of the Mahayana Buddhist King Jayavarman VII

Ta Phrom 1186 A.D (Rajavihara)



Built by Jayavarman VII
Rajavihara – “Monastery of the king”
Ta Prohm – “Ancestor Brahma”
Constructed Rajavihara in honor of his family The temple's main image was modelled on the Jayavarama VII' mother and reprints Prajnaparamita (the personification of wisdom)

Ta Phrom



THANK YOU!

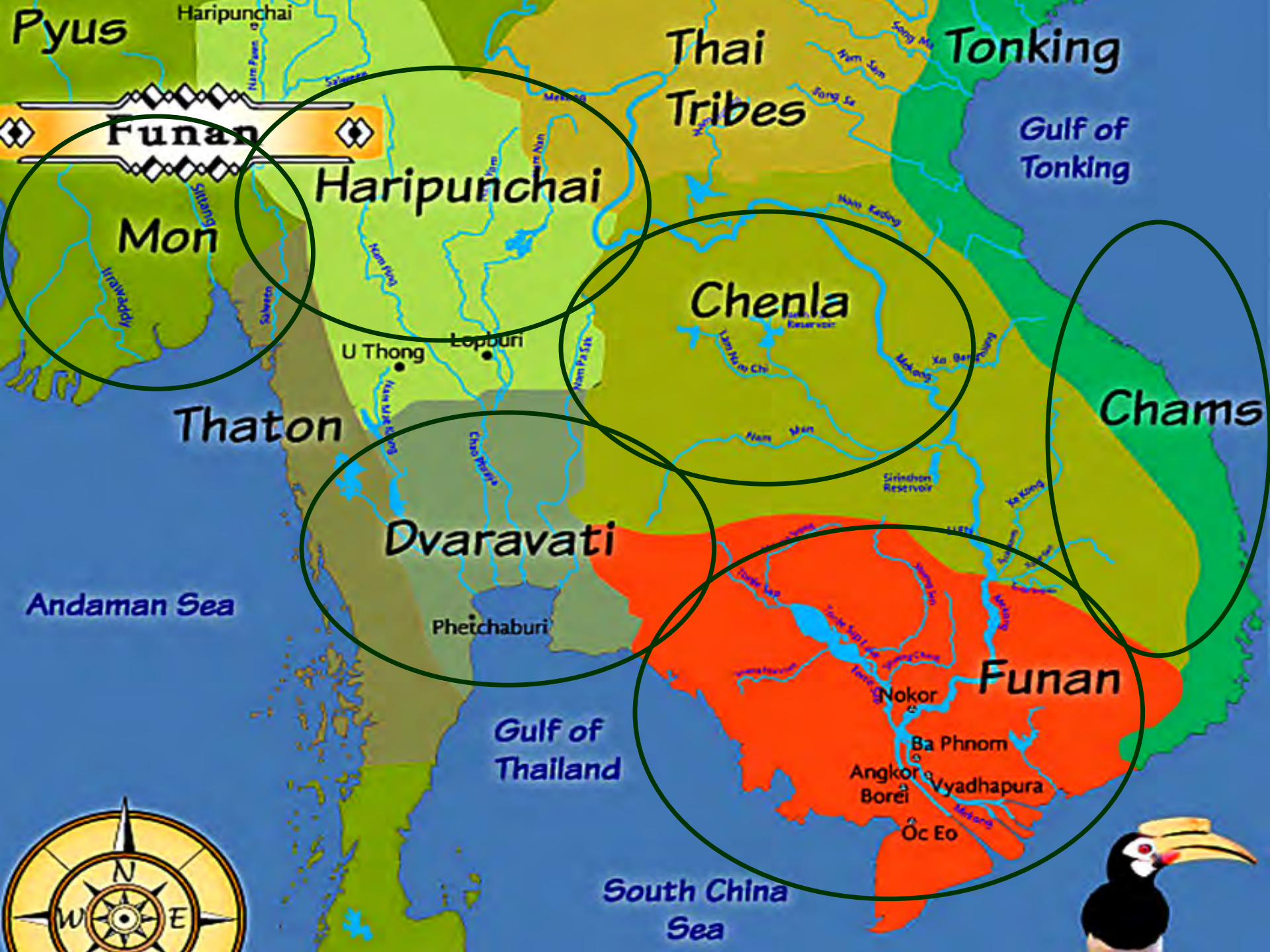
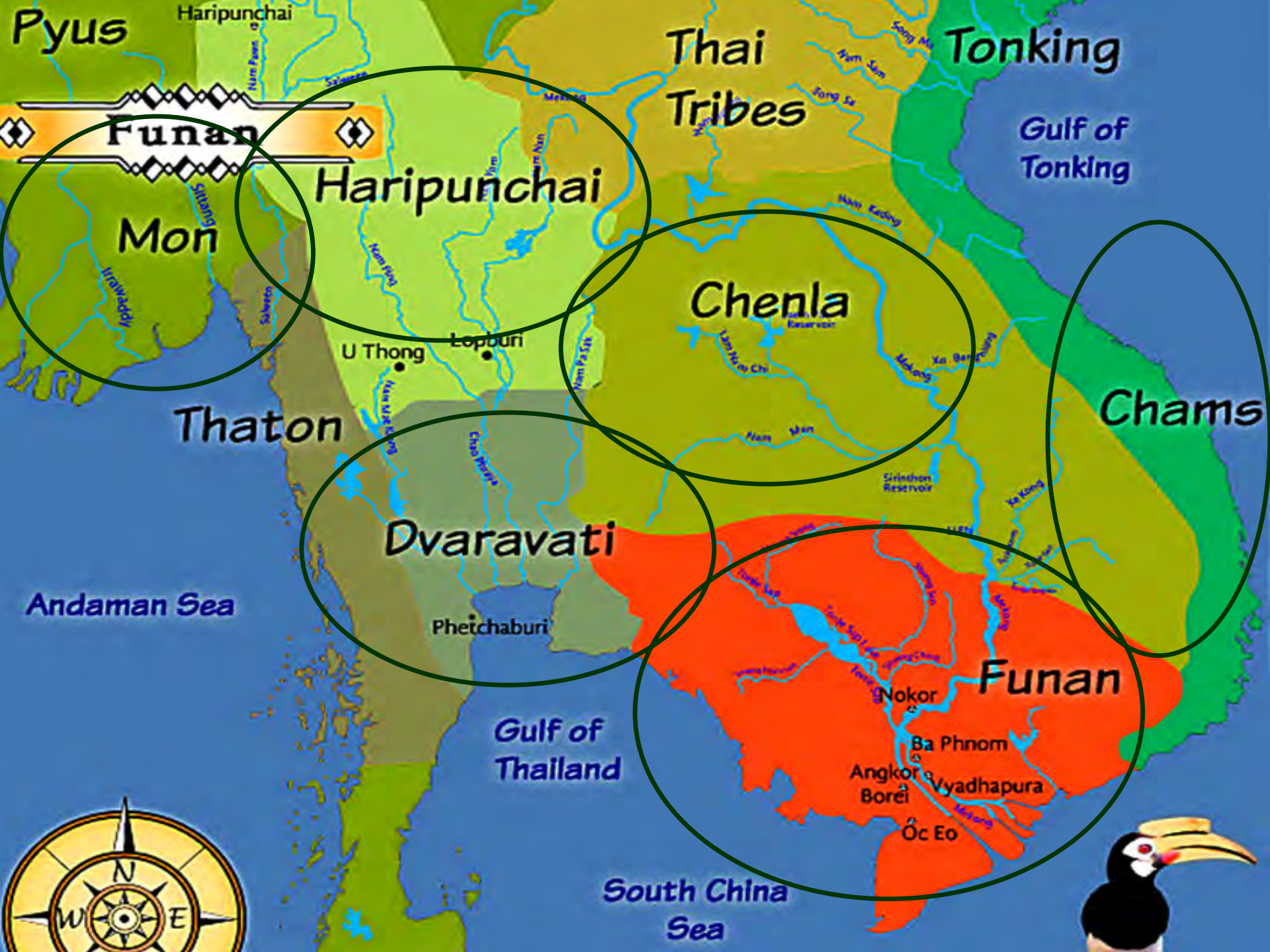


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**808-466 SOUTHEAST ASIAN
CIVILIZATION**

Steven Andrew Martin, PhD
Faculty of International Studies
Prince of Songkla University
THAILAND

APPENDICES

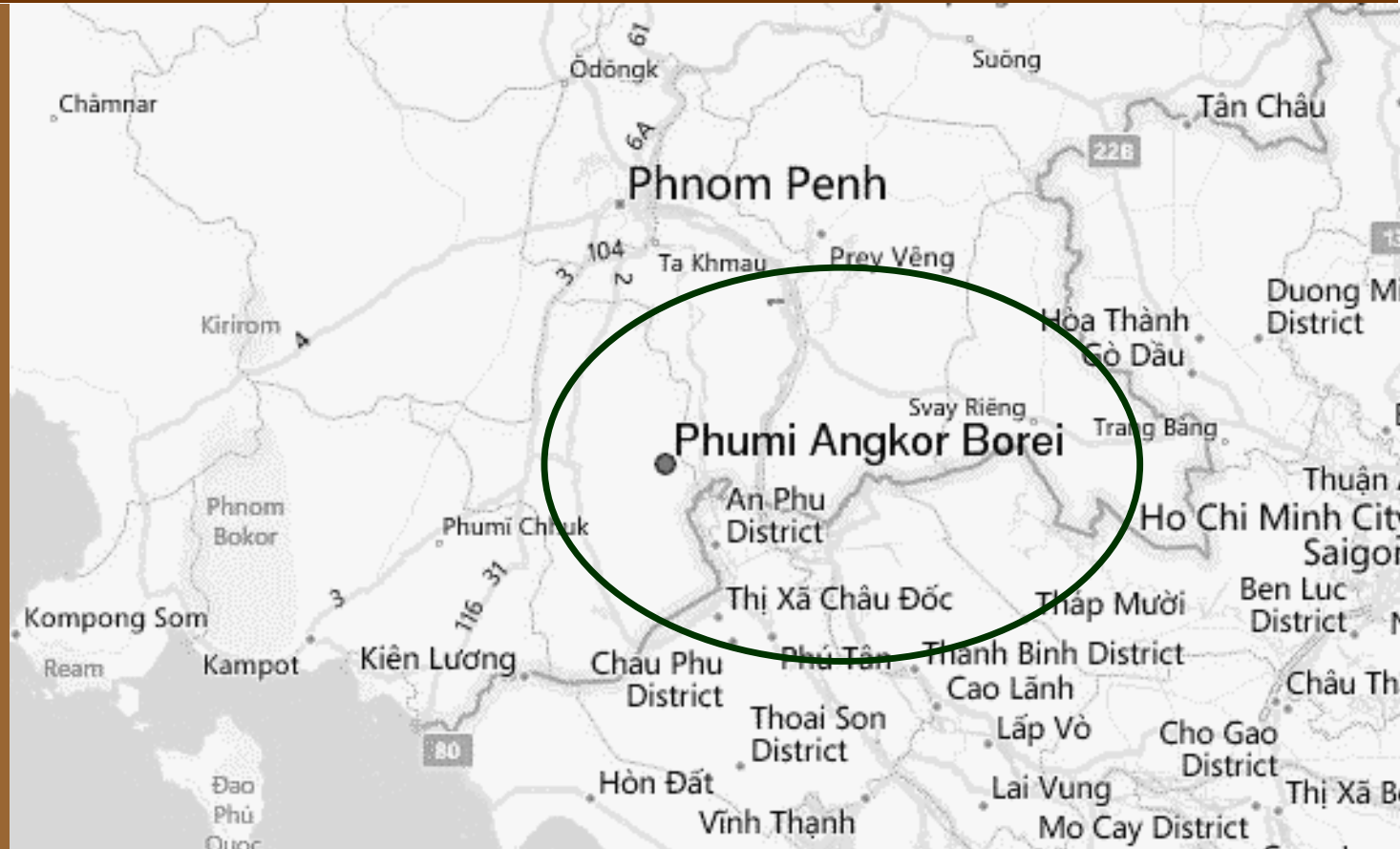


Angkor Borei (500 BE - 500 CE)

Angkor Borei

Capital of the Funan empire for a short but important period.

Important link between the maritime Funan and agricultural Chenla cultures.



Capital of ancient Funan (?)

Maritime trade networks with India

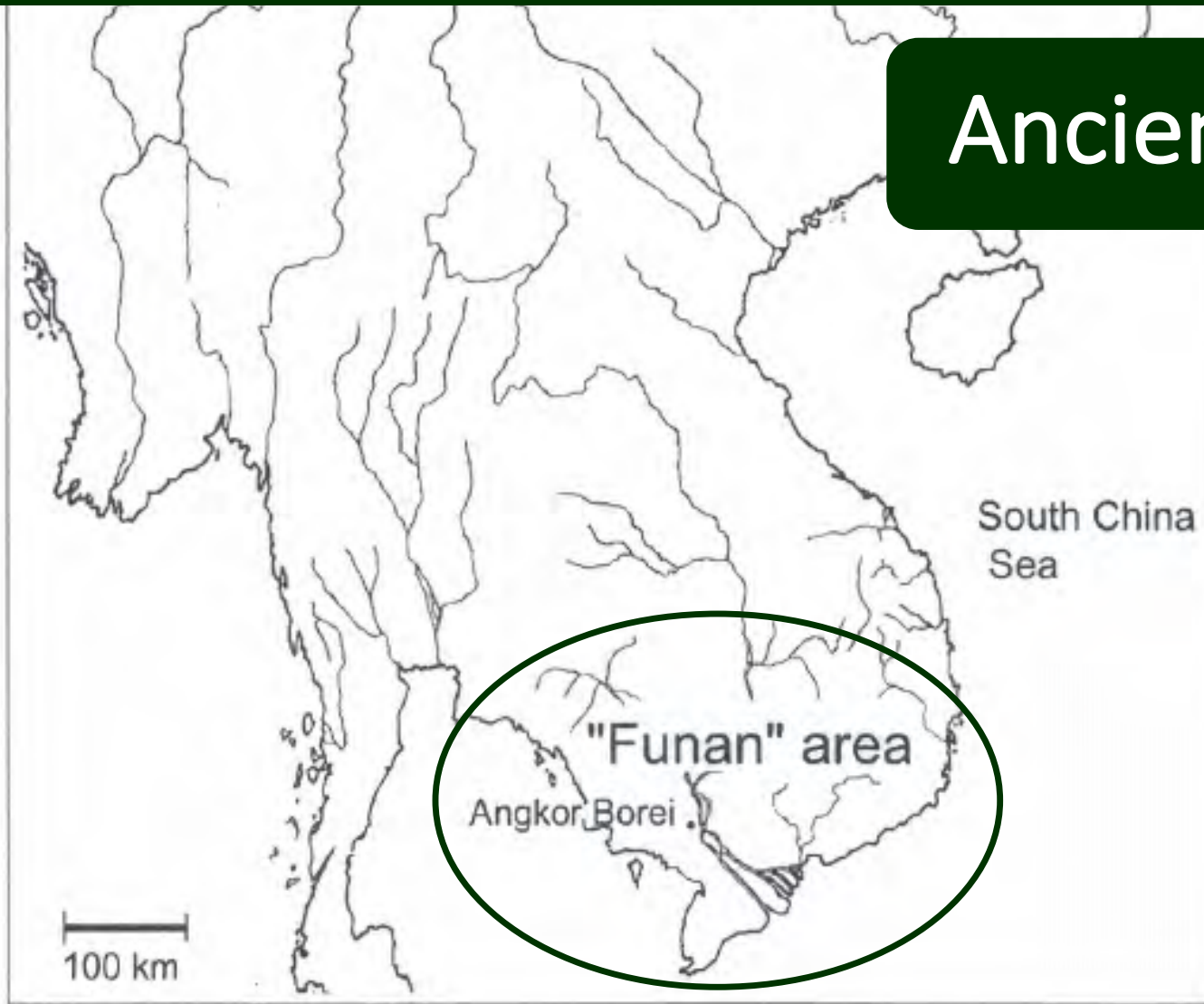
Maritime trade networks throughout Southeast Asia

Important site when studying the Kingdom of Funan

First known inscription in Khmer language (611 CE) (early Chenla period)

KINGDOM OF FUNAN (68–550 CE)

Ancient Funan



Funun Buddha at the
Angkor Borei Museum

Figure 10.1 Mainland Southeast Asia during the early first millennium AD (after Hall 1985).

Early Records of Funan

Chinese records dating from the 3rd century CE

- The Sānguó zhì 三國志 (Records of the Three Kingdoms)
 - Completed in AD 289 by Chén Shòu 陳壽 (233–297)
 - Record the arrival of two Funanese embassies at the court of Lǚ Dài 呂待
- Liáng shū 梁書 (Book of Liang) of Yáo Chá 姚察 (533–606) and Yáo Sīlián 姚思廉 (d. 637)
 - Completed in 636 and discuss the mission of the 3rd-century Chinese envoys Kāng Tài 康泰 and Zhū Yīng 朱應 from the Kingdom of Wu to Funan



- The writings of these envoys, though no longer extant in their original condition
- Preserved in the later dynastic histories and form the basis for much of what is known about Funan

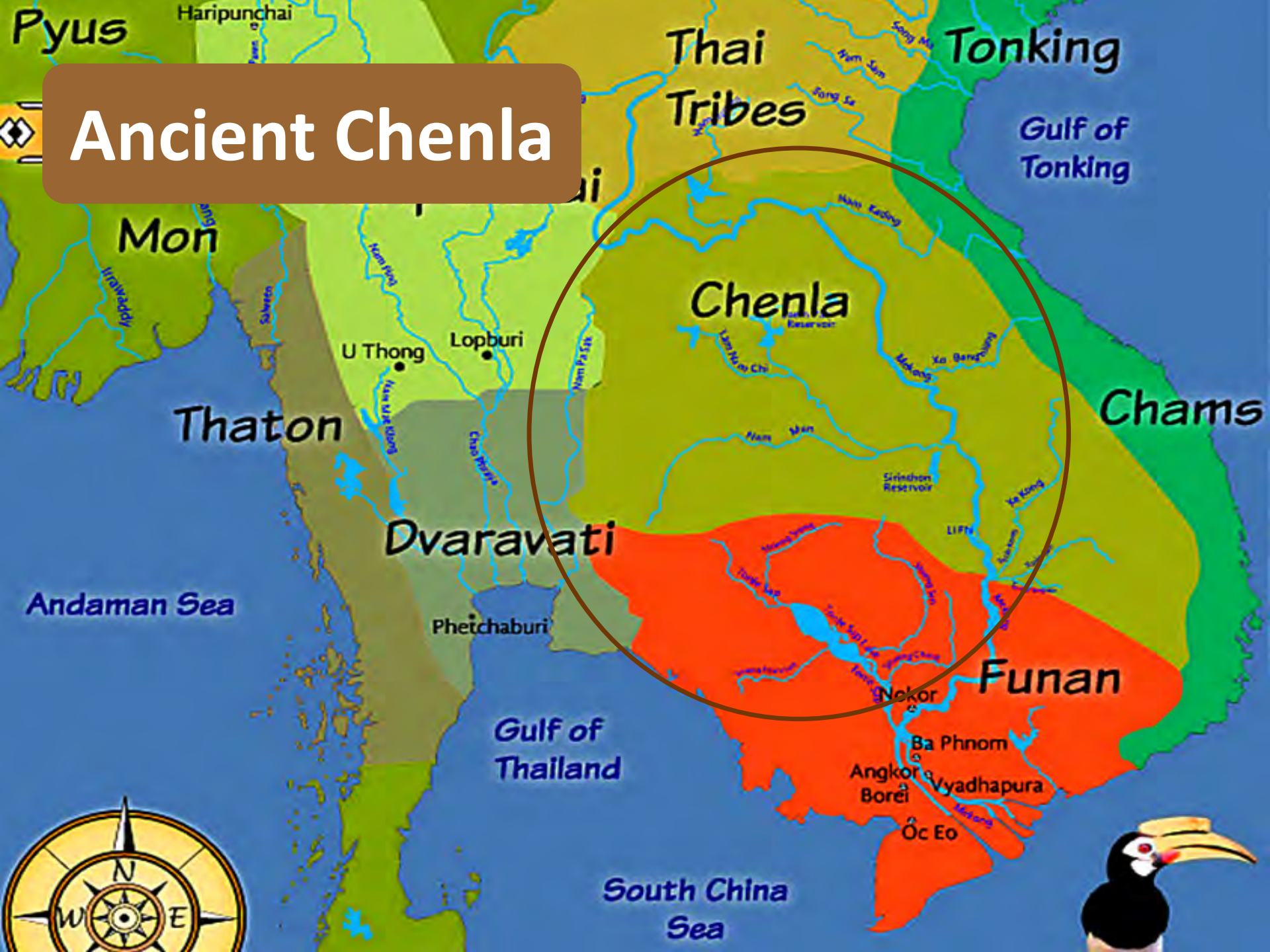
Paul Pelliot – 1903 Publication

The first modern scholar to reconstruct the history of the ancient polity of Funan

- “**Le Fou-nan**” (1903) – drew solely on Chinese historical records
- Set forth the sequence of documented events connecting the foundation of Funan in the 1st century CE with its demise by conquest in the 6th to 7th century
- Archeological excavation in Vietnam and Cambodia, especially excavation of sites related to the Óc Eo culture, have supported and supplemented his conclusion

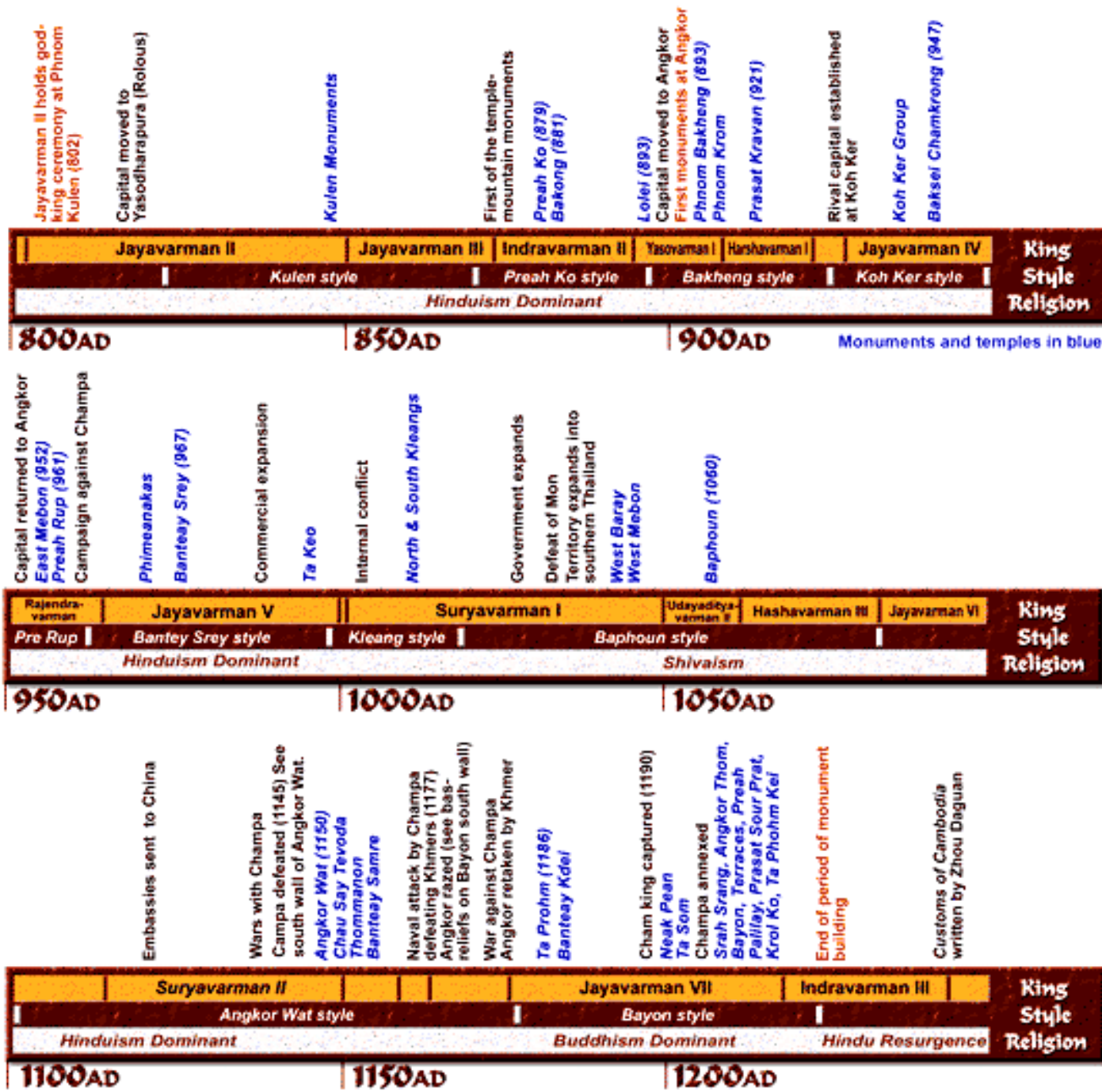


Ancient Chenla



ANCIENT CHENLA (550 –706 CE)

- **The core area of Chenla** principalities was the Mekong Basin between today's southern Laos and Phnom Penh.
- **Funan** is one of the first and most significant indianized cultures outside India
 - 1st to 6th century CE
 - **Chenla** culture is a successor of the maritime Funan empire
 - Dominated trade between India and China
- **Mainland Southeast Asia's earliest inscriptions**
 - Sanskrit inscriptions found in southern Vietnam
 - Peoples were potentially early Khmer, Cham, Mon
 - Indian and Indonesian traders during the Funan era
 - The most important Funan town was Oc Eo (Vietnam)
 - Near Angkor Borei (Cambodia) (near the boarder w/Vietnam)



800 AD

—

1200 AD