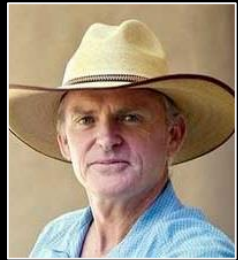


An aerial photograph of the Angkor Wat archaeological complex in Cambodia. The image shows the dense, green forested landscape with the intricate stone structures of the temple complex visible. Several rectangular areas are highlighted with white boxes, likely indicating specific sites of interest. The background is a solid black bar at the top and bottom of the slide.

# Angkor: Urbanism and Political Economy

Miriam T. Stark  
University of Hawai'i  
at Mānoa, USA

Center for Khmer Studies  
January 21, 2022



Thanks to colleagues for  
participating in our  
broader collective



Context

Place

Urbanism

Economy

Bodhisattva Avalokiteshvara, 7<sup>th</sup> – 8<sup>th</sup> century CE  
Southern Vietnam (Musée Guimet)



Context

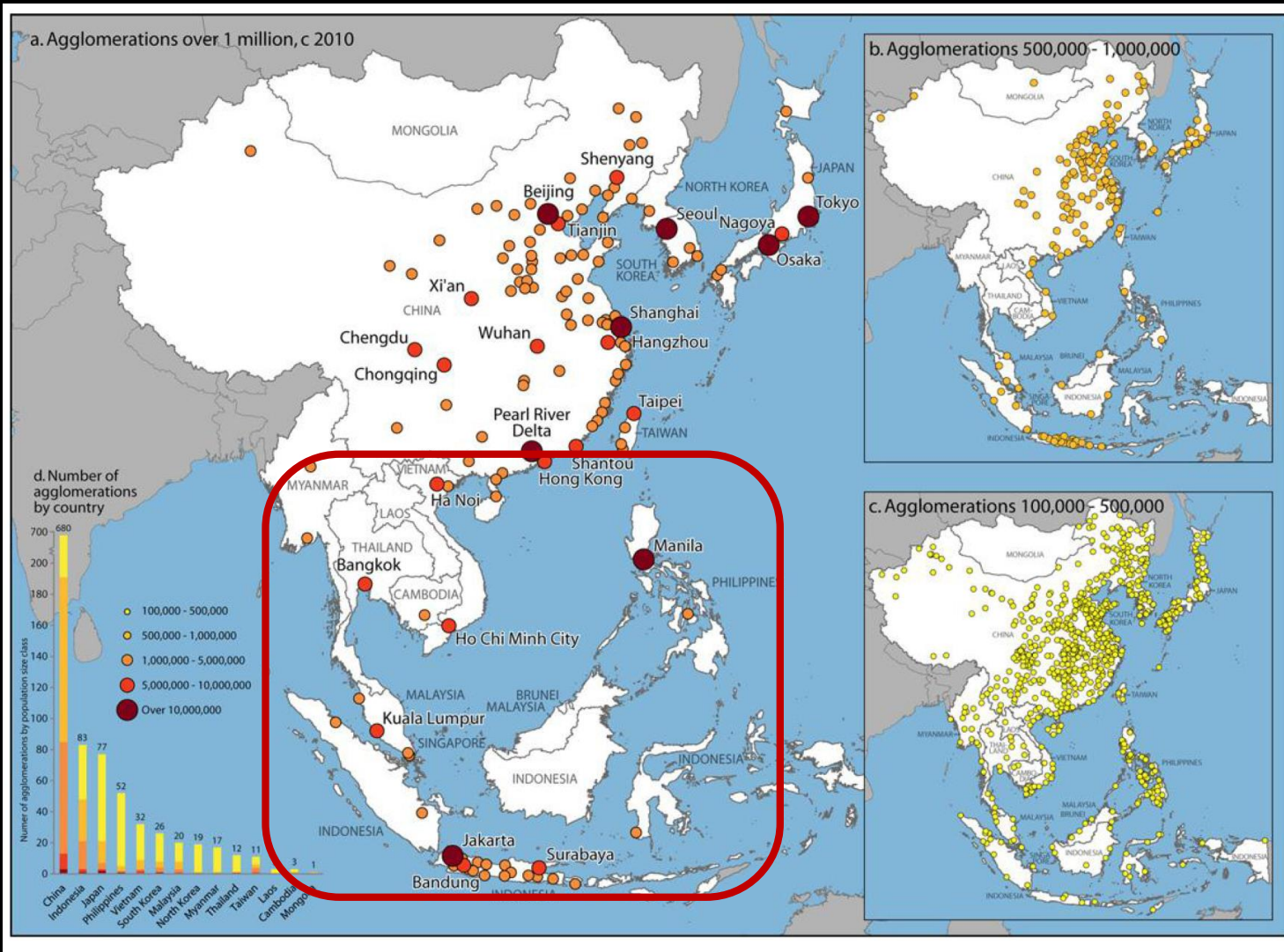
Premodern Southeast Asia, the  
Lower Mekong Basin, and  
Angkor

Angkorian Urbanism: History,  
Scale

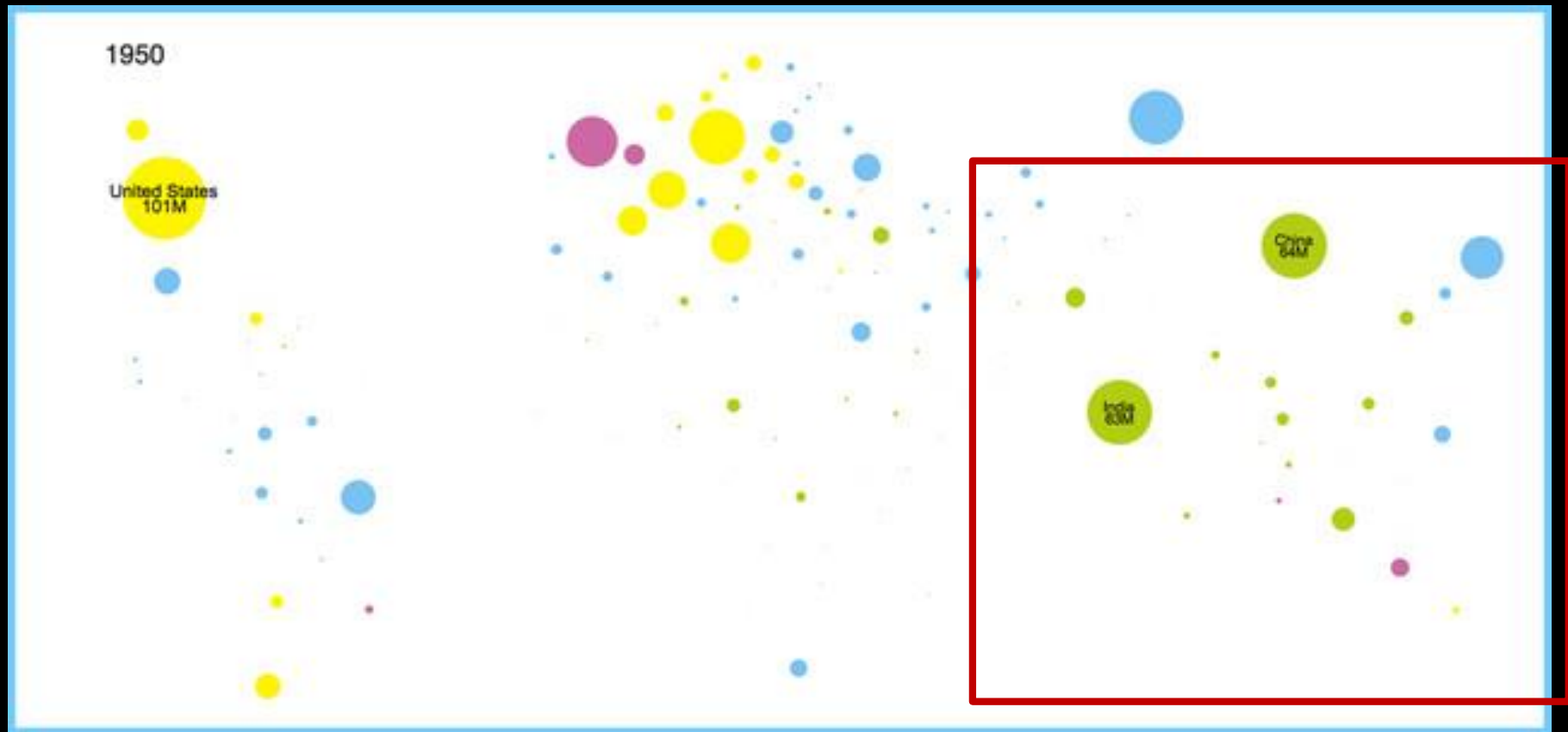
Angkorian Economy



Southeast Asia

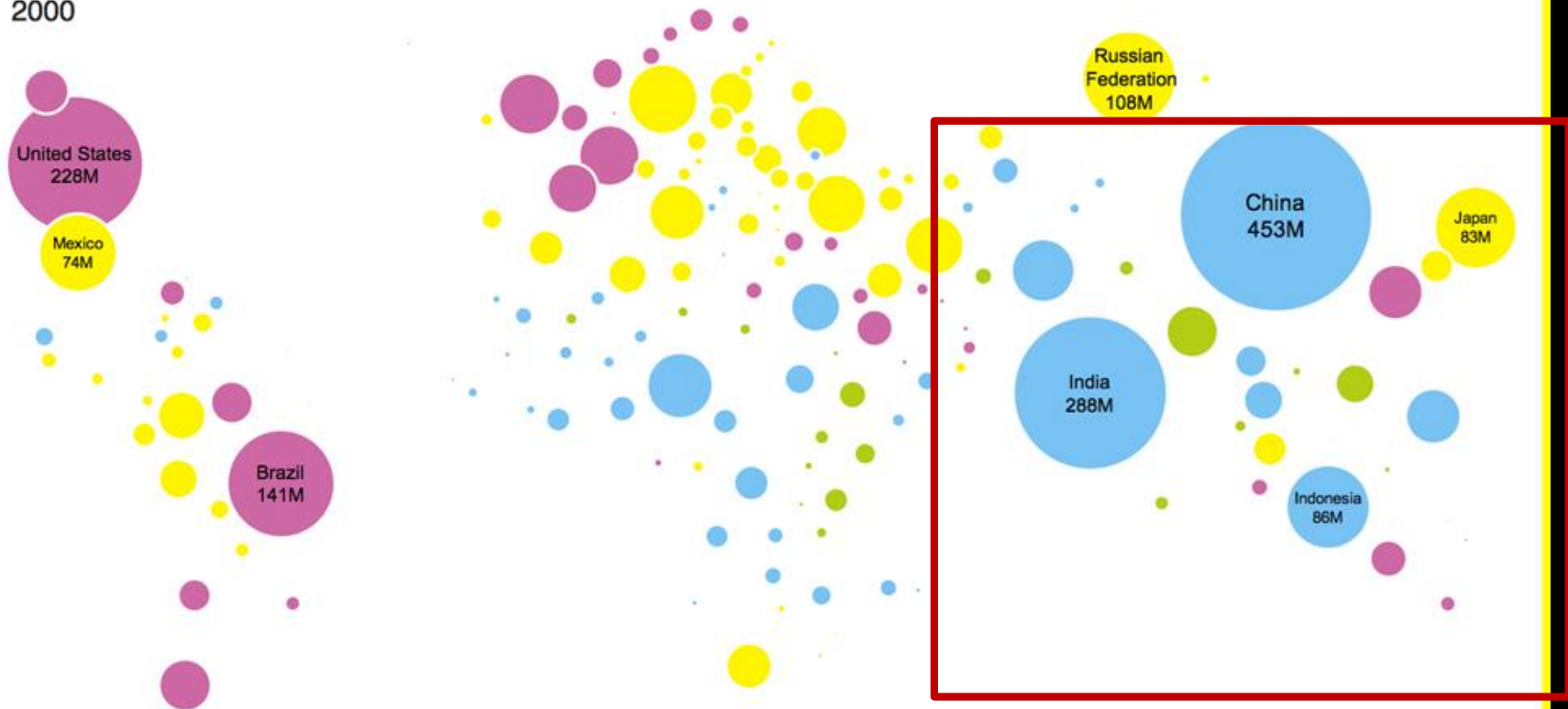


# Southeast Asian Urbanism



East, South and Southeast Asia

2000



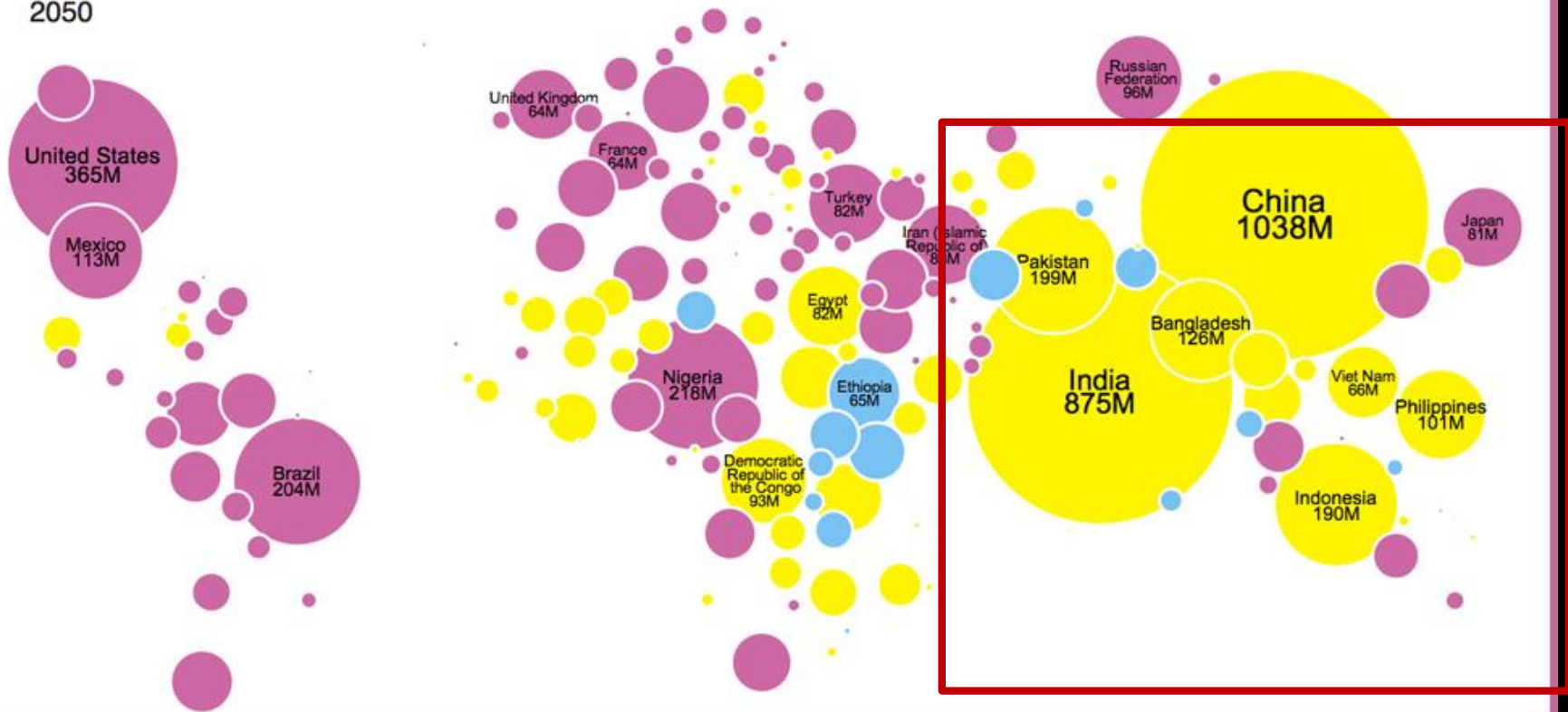
East, South and Southeast Asia



Ho Chi Minh City, Vietnam  
8.93 million residents



2050



Countries in East, South and Southeast Asia will have 5 of top 10 most populous nations ([source](#))



Context

Premodern Southeast Asia, the  
Lower Mekong Basin, and  
Angkor

Angkorian Urbanism: History,  
Scale

Angkorian Economy

# Chronological frame



The Neolithic Revolution

Dependency on Natural Resources  
Before: Shared with their food supply  
After: Store and spend on for later  
Government  
Before: Families (small)  
evolutionary, kin family is village  
city  
After: Chief with council  
Sovereignty  
Before: No real economy  
After: Barter system  
Technology  
Before: Stone tools  
After: Farming, baking and long  
pottery, specialized tools, bronze tools  
and weapons

During the neolithic era, or the stone age there were several transitions happening. For example the stone age was ending and now agriculture and farming was on the rise and so was the iron age and also the domestication of animals was happening as well as population increase. Now that they had agriculture they had stable homes so they began to have bigger families since they didn't have to go on long journeys with small children. The transition of prehistoric to neolithic is so important because they learned how to farm which was so significant because without it we'd not have to move around to get food and other necessities.



**The Hellenistic Age**  
This is the time when Alexander the Great conquered the last of the major kingdoms of the Hellenistic world. After his death in 323 B.C. his empire was divided into several kingdoms. This was the end of the Hellenistic Age. The Hellenistic Age was a time of great cultural achievement. It was a time when the Greeks began to think of themselves as a world community. This was the beginning of the Hellenistic Age. It was a time when the Greeks began to think of themselves as a world community. This was the beginning of the Hellenistic Age. It was a time when the Greeks began to think of themselves as a world community. This was the beginning of the Hellenistic Age.



India is ruled by the Gupta Empire. While the Gupta Empire is in power, Hinduism becomes the major religion.



**BUDDHISM**  
563-483 B.C.E.

**India**  
320 B.C.E.



The Roman Empire began to decline during this time due to various factors beginning to influence the citizens. Events like foreign invasions started to gain a space for outside religions like Christianity to begin to spread and Rome there it was Christianity.

**Roman Empire**  
88-31 B.C.E.



**Muhammad's Death**  
632 C.E.

The Islamic Empire covered almost the entire Middle East, Persia, Afghanistan, North Africa, Spain, Turkey, Constantinople, and even some of Southeast Asia. The empire later split into smaller empires and caliphates due to internal conflicts which mostly had to do with the succession but Muslims still spread through trade.

**Islamic Expansion**  
750 C.E.



The Crusades begin: Pope Urban II of Rome calls for all Christians to expel Muslims from Jerusalem and its surrounding region (considered Holy Land as it was the area in which Jesus Christ lived) and from the Byzantine Empire.

**Crusades**  
1096

Arabs establish regular trade caravans from across northern Africa; they gradually extend routes across the Sahara desert into the west African kingdoms of Mali and Ghana for the gold and salt trade. Arab trade networks become very prosperous and facilitates the exchange of ideas and technologies among countries with which they trade. Sahara Trading 800-1100 C.E.

**Mongols sack Baghdad, killing the caliph and many Muslims, and of the Abbasid caliphs.**  
Mongols @ Baghdad 1258



As king, Musa encouraged agriculture, industry, and trade. The empire gained most of its wealth through its control of the trade routes that passed through its territory. Gold and salt were the most important products that moved along the routes. Because of the wealth of the Mali Empire, a large army was needed to protect the empire from attack. This army also made sure that traders and merchants were safe during their journey through the lands of the empire. Musa was a Muslim, or follower of Islam.

**Mansa Musa**  
1324

**800 C.E.**  
**Charlemagne**  
Charlemagne, also known as Charles the Great or Charles I, was the King of the Franks from 768, the King of Italy from 774, and from 800 the first emperor in western Europe since the collapse of the Western Roman Empire three centuries earlier. This is known to be the revival of Europe from the dark ages and they encouraged culture and intellectual revival.



**1187 C.E.**  
**Rise of the Mongols**  
The Crusaders had been defeated and Jerusalem liberated in 1187, the Ismaili Fatimids had finally been removed from Jerusalem. Muslim world in the mid 1100s, and a powerful Khwarezmian Empire had emerged in Persia. However, all that would soon turn around when the ruthless Mongols would make their way into Southwest Asia.



**1200**  
**Genghis Khan**  
Genghis was the leader of the Mongols he lived from 1162-1227. He united the nomadic tribes of central Asia and China. His descendants expanded the empire even further, advancing to places such as Poland, Vietnam, Syria and Korea. Genghis Khan died in 1227 during a military campaign against the Chinese kingdom of Xi Xia.



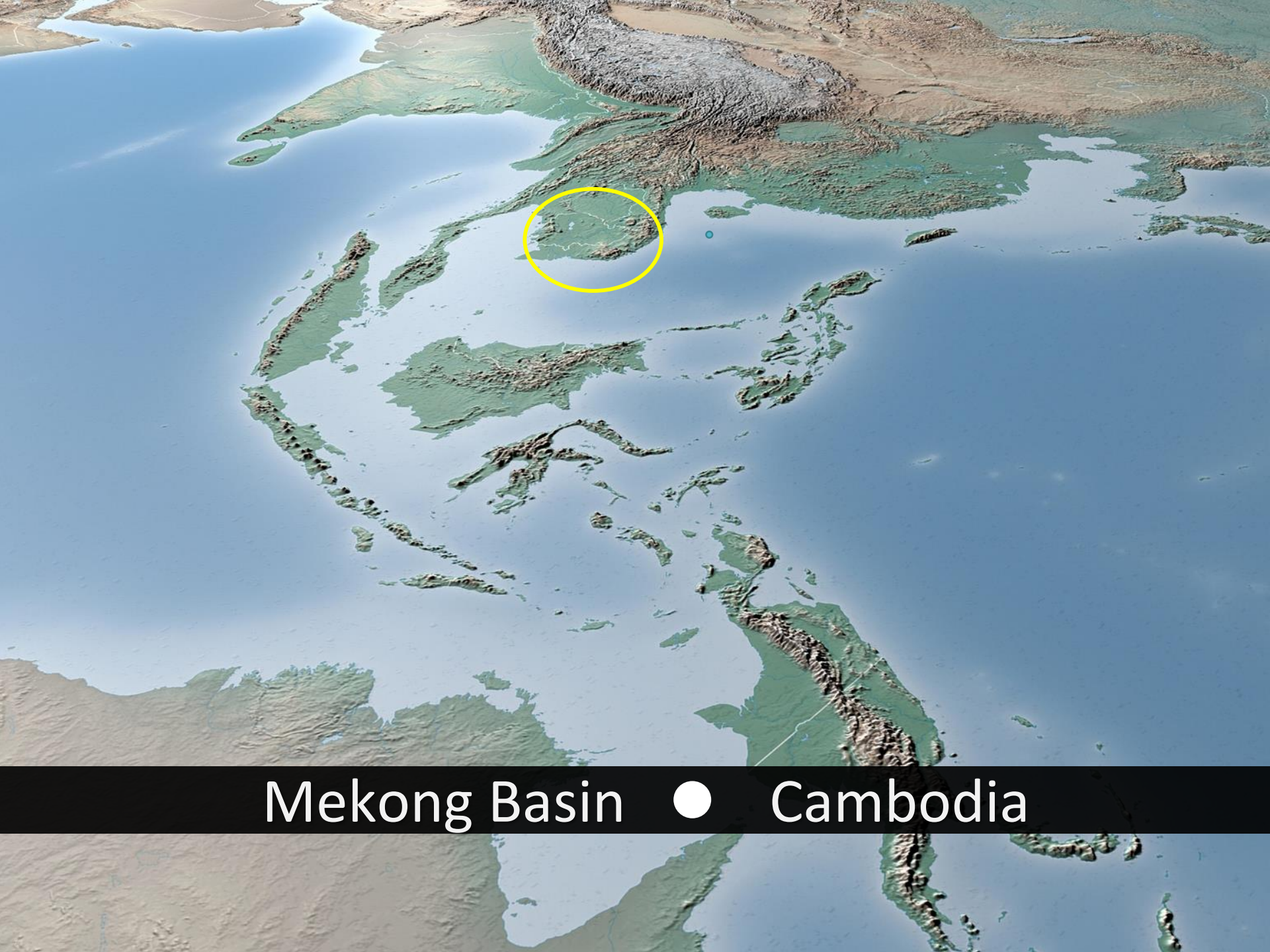
**1291 C.E.**  
**Crusades**  
It is known that the first crusade in 1095 with the stated goal of restoring Christian access to the holy places in and near Jerusalem but it all ended when Muslims defeated Christians and remained in Holy Lands.



**1349**  
**Black Death**  
The Black Death is the most devastating pandemics in human history, resulting in the deaths of an estimated 75 to 200 million people and peaking in Europe in the years 1348-50 C.E. People viewed the plague as a punishment. For this reason people looked into religion for protection.

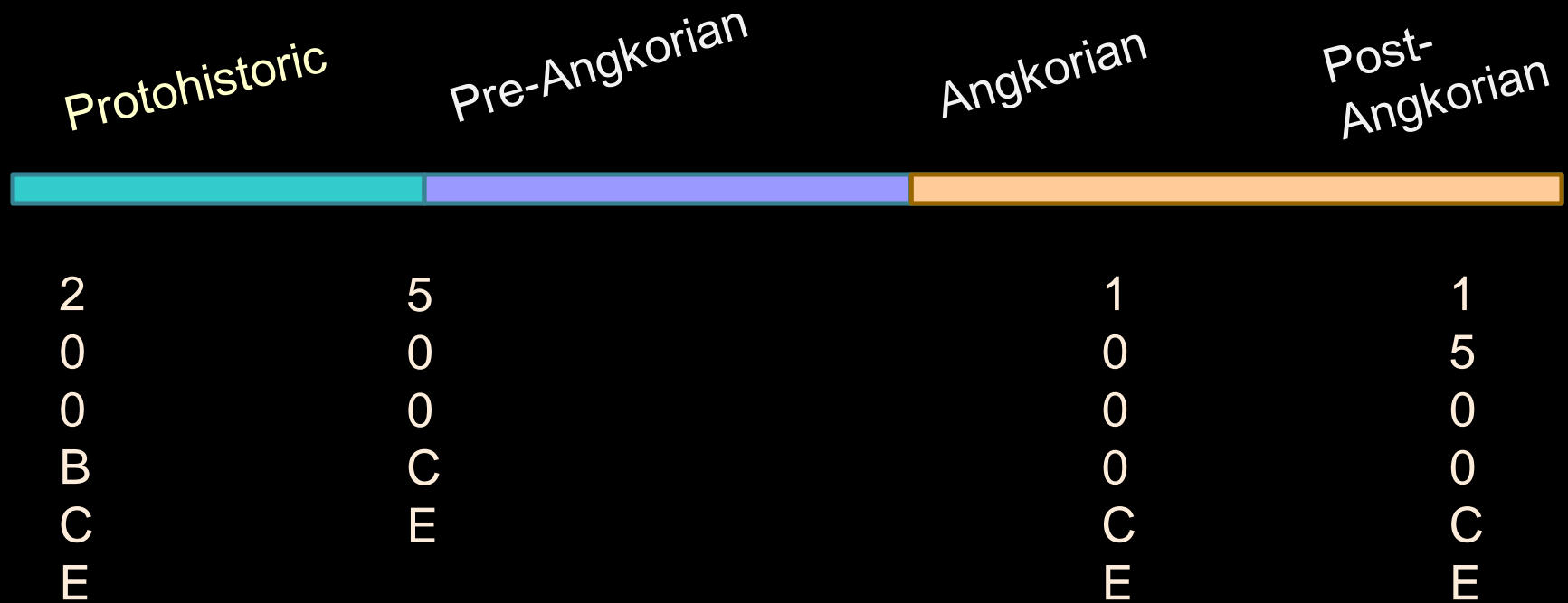
As well as any other Empire of group the amount of mongols began to decline because it was becoming too powerful. They had conquered so much that one way or another they were going to become overpopulated which then leads to the decline of an empire. Decline of Mongols

**1450**



Mekong Basin ● Cambodia

# Premodern Mekong Basin



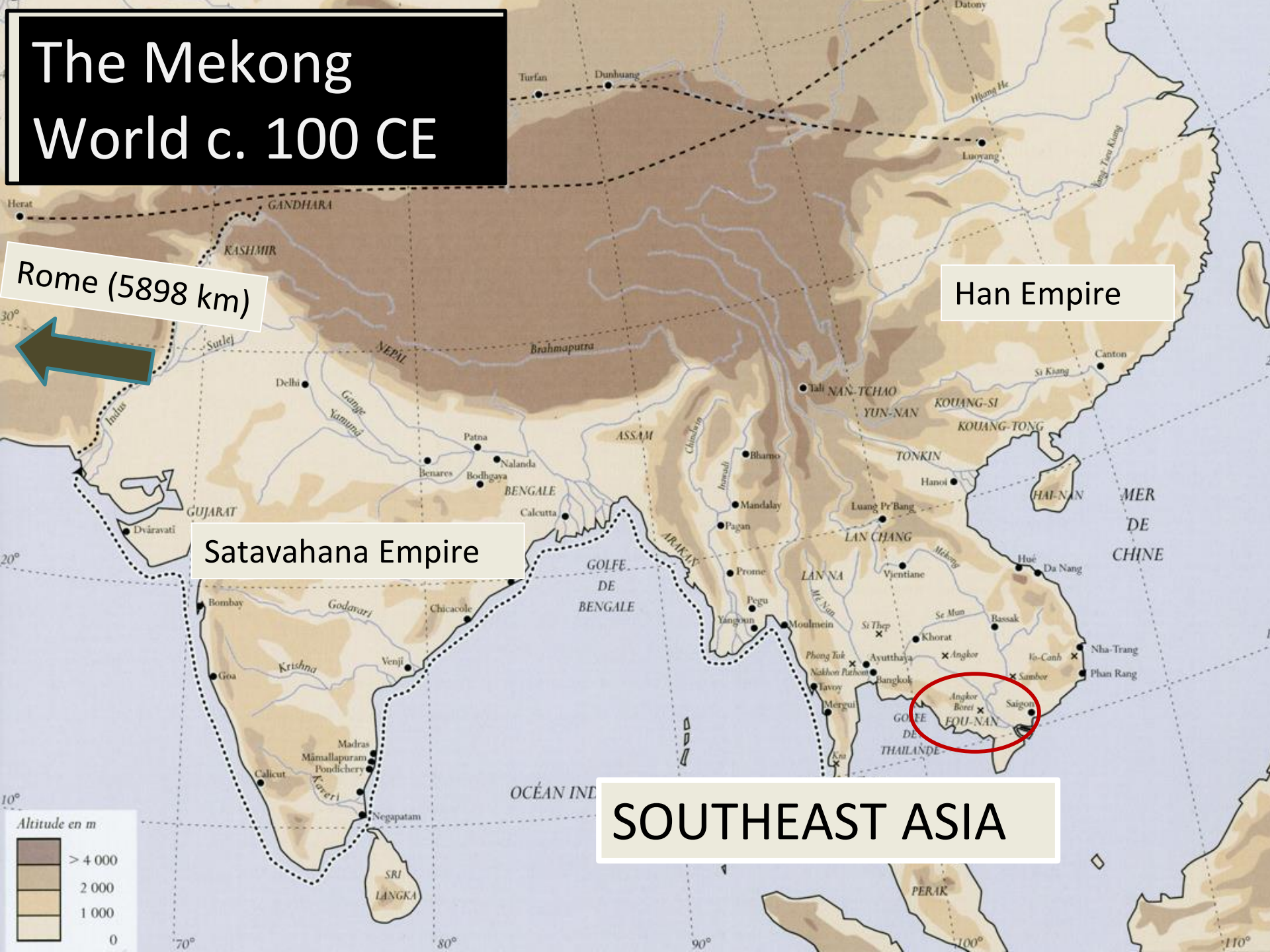
# The Mekong World c. 100 CE

Rome (5898 km)

Han Empire

Satavahana Empire

SOUTHEAST ASIA



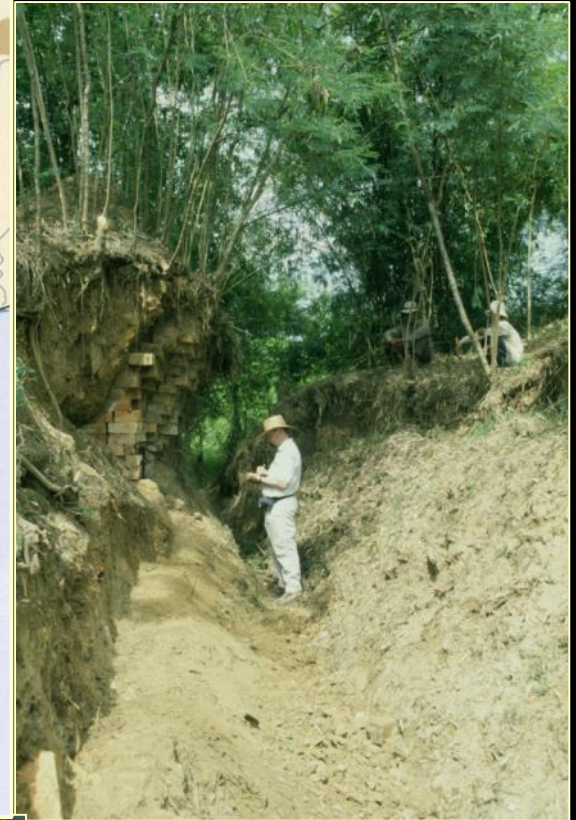
# Sources



right: kraing, vean and sastra

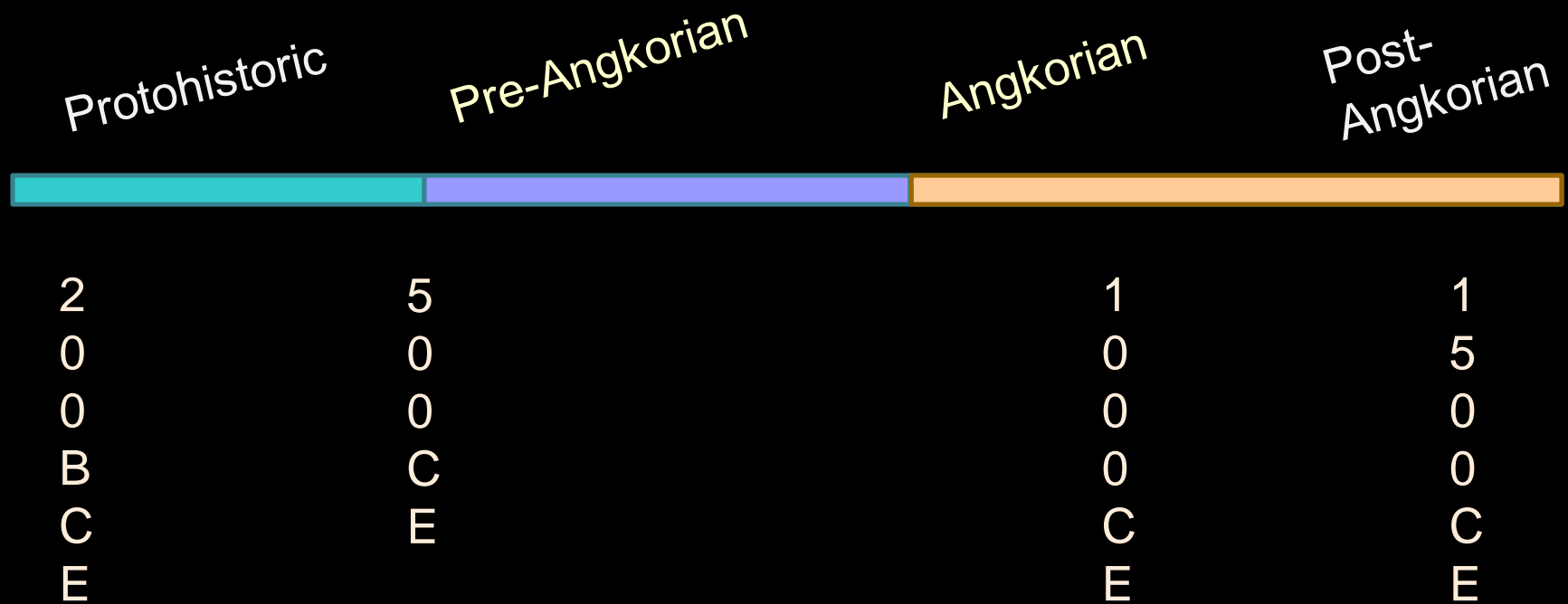
Alessandro Marazzi Sassoon

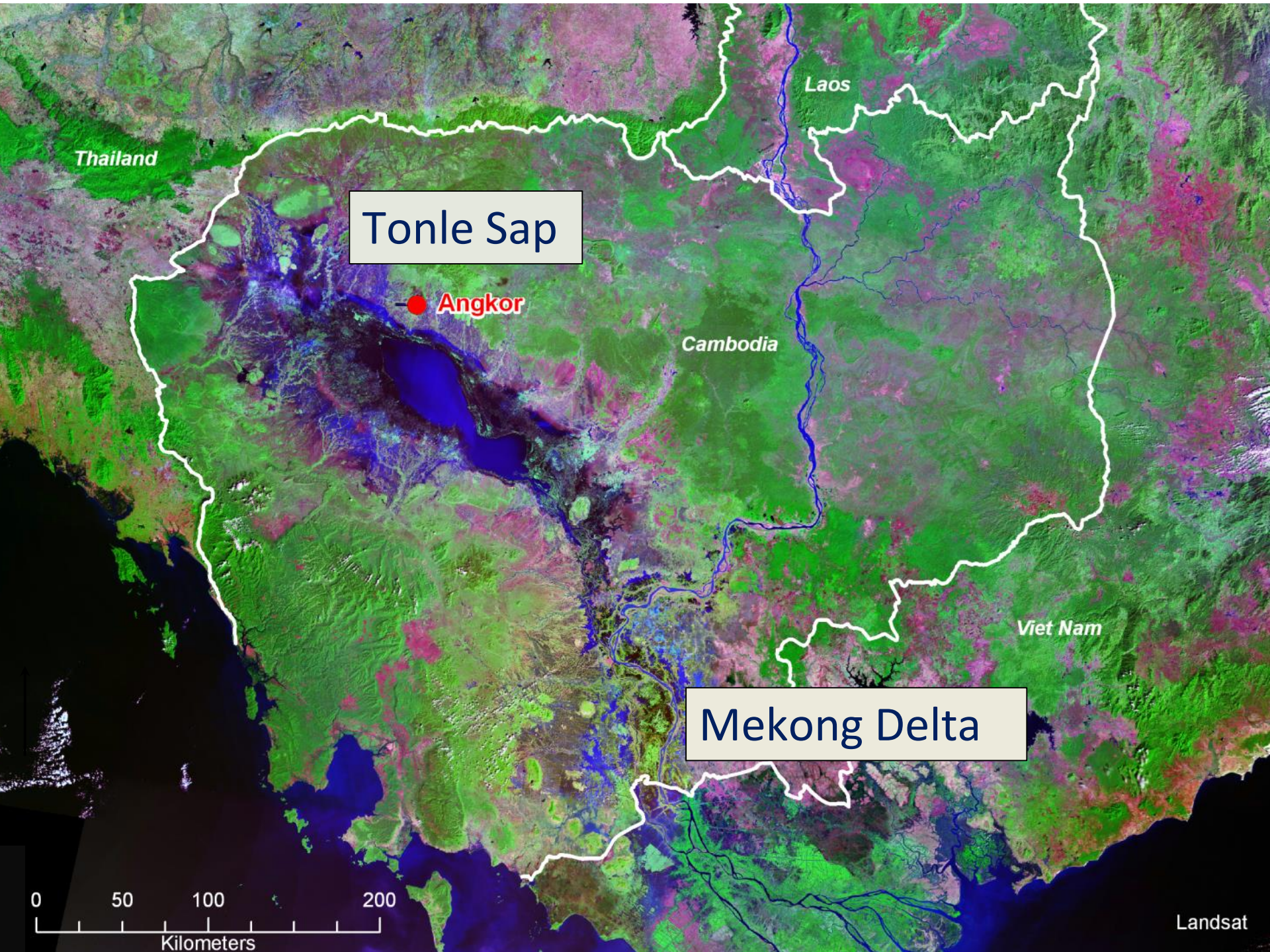
# Early cities in the Mekong Delta



Angkor Borei  
(Cambodia)

# Premodern Cambodia





Thailand

Laos

Tonle Sap

● Angkor

Cambodia

Viet Nam

Mekong Delta

0 50 100 200

Kilometers

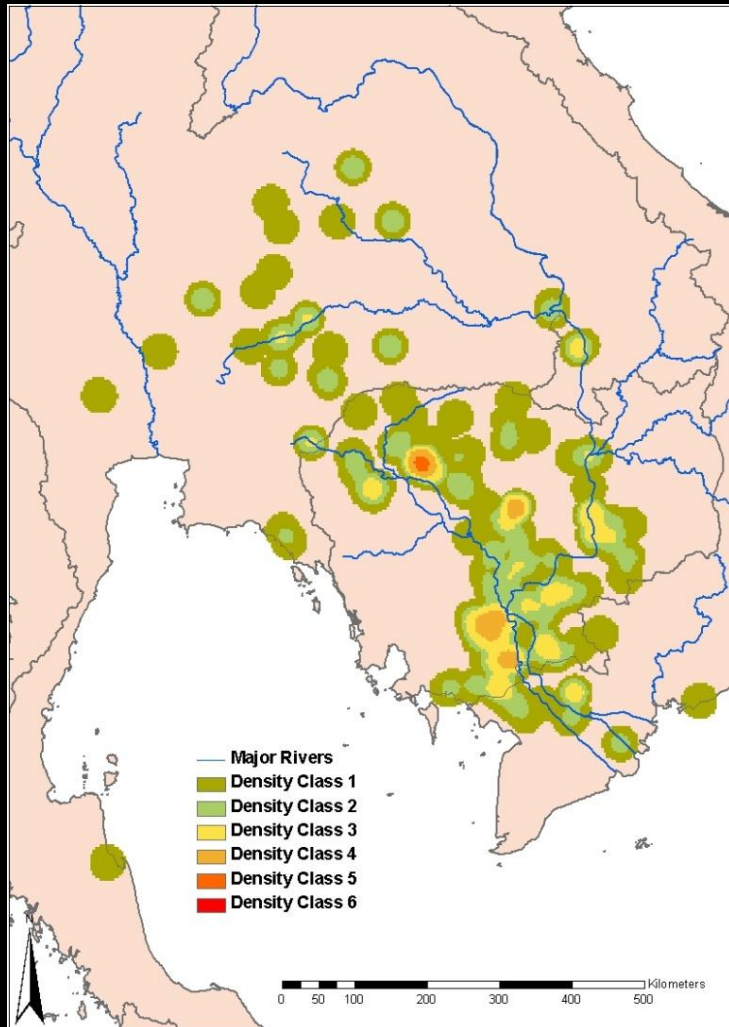
Landsat

# Introduction to Angkor

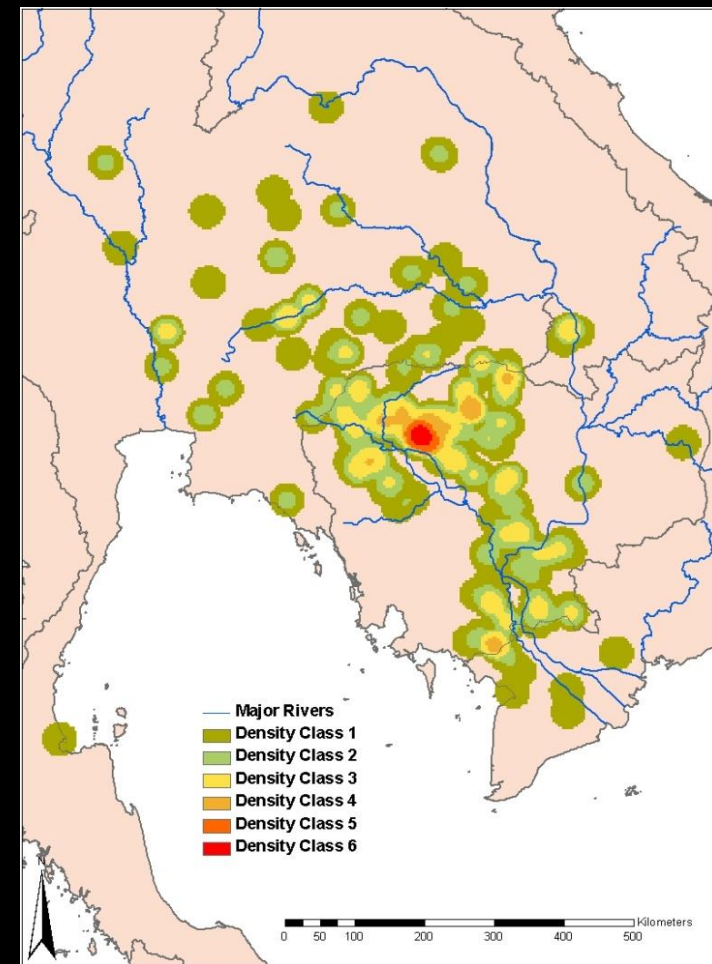


ANGKOR WAT (VISNULOKA)

# Population hotspots through time (inscriptions)



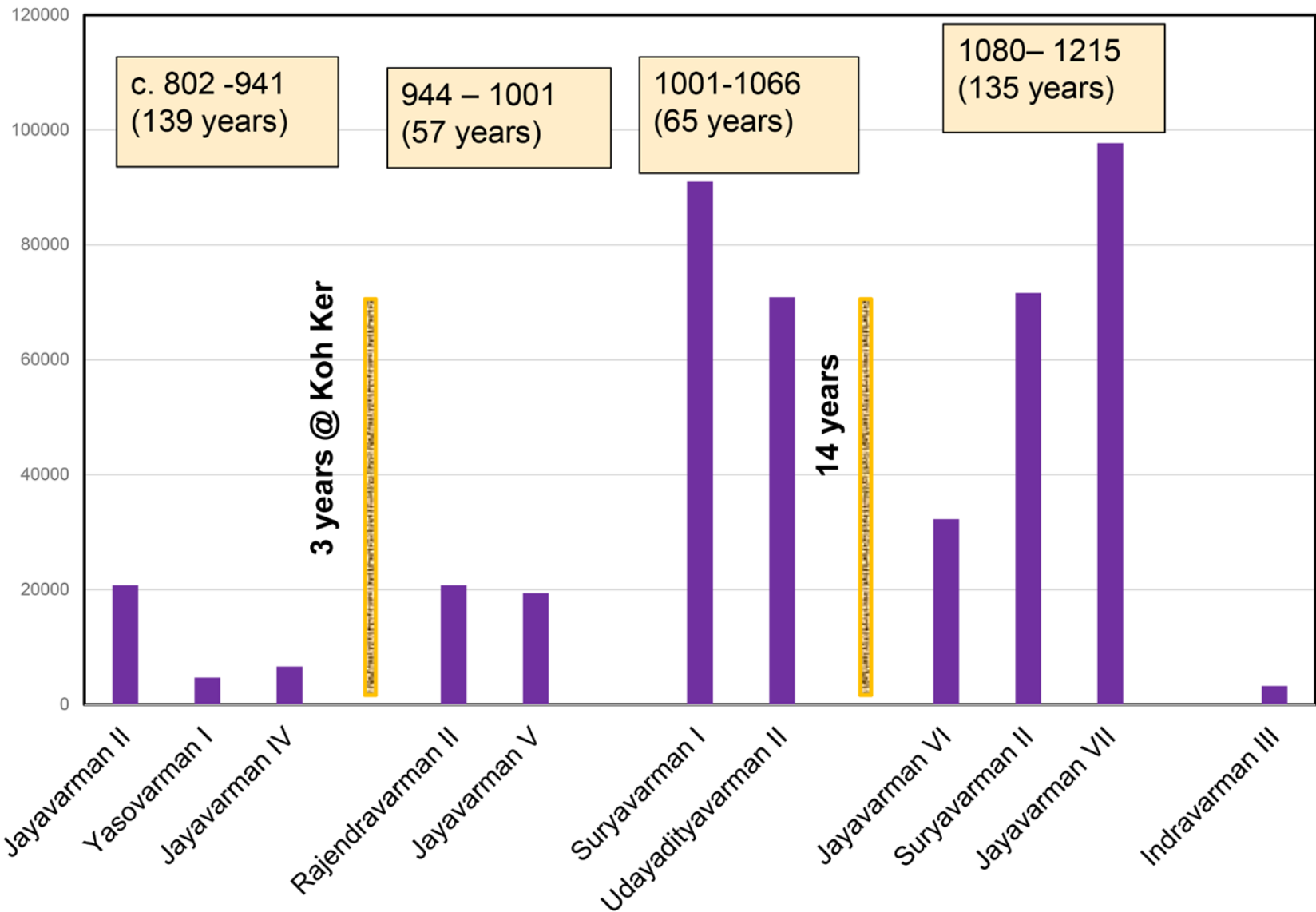
Pre-  
Angkorian  
6<sup>th</sup>-8<sup>th</sup> c. CE



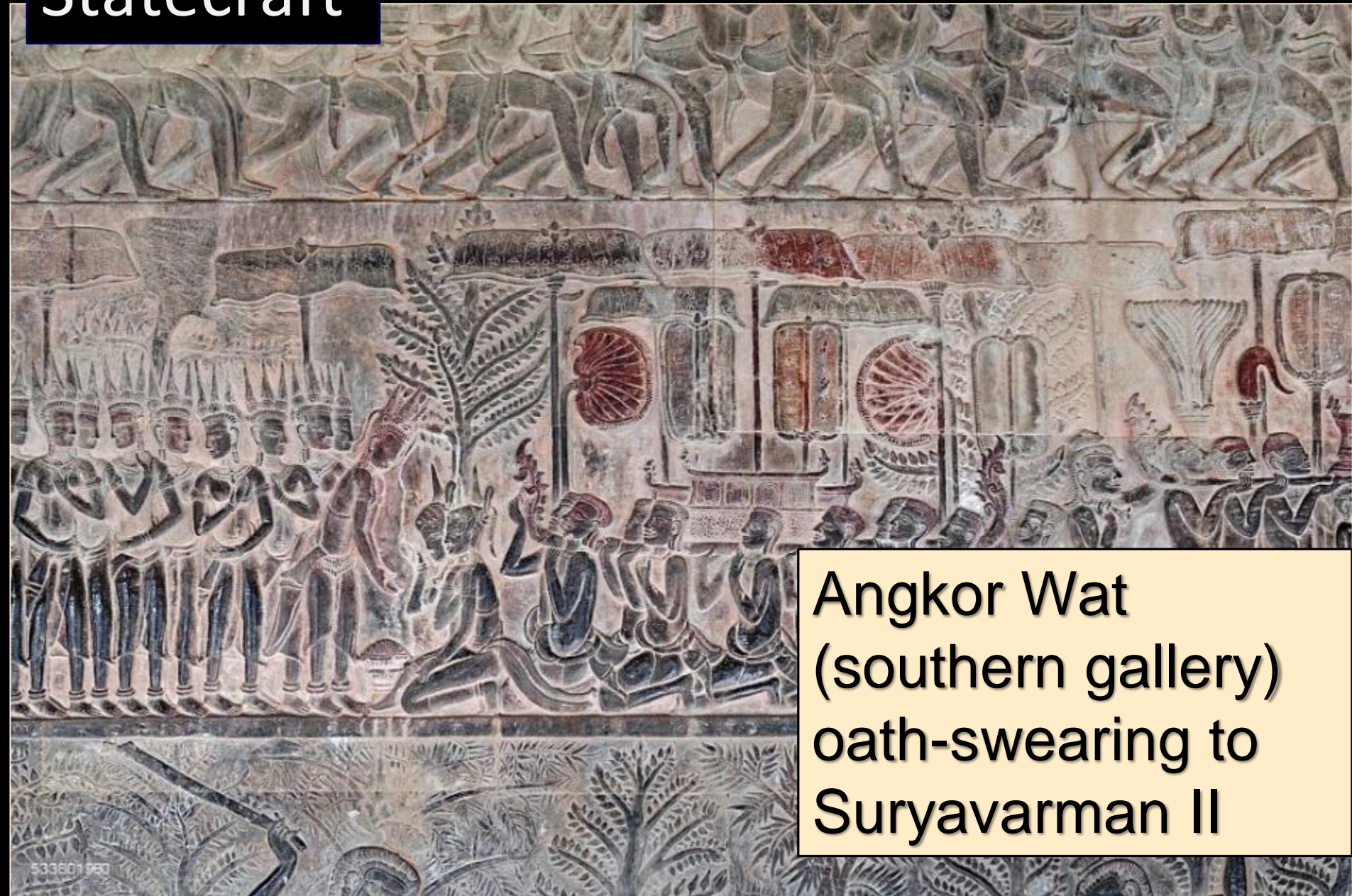
Angkorian  
9<sup>th</sup>-15<sup>th</sup> c CE

Lustig 2009

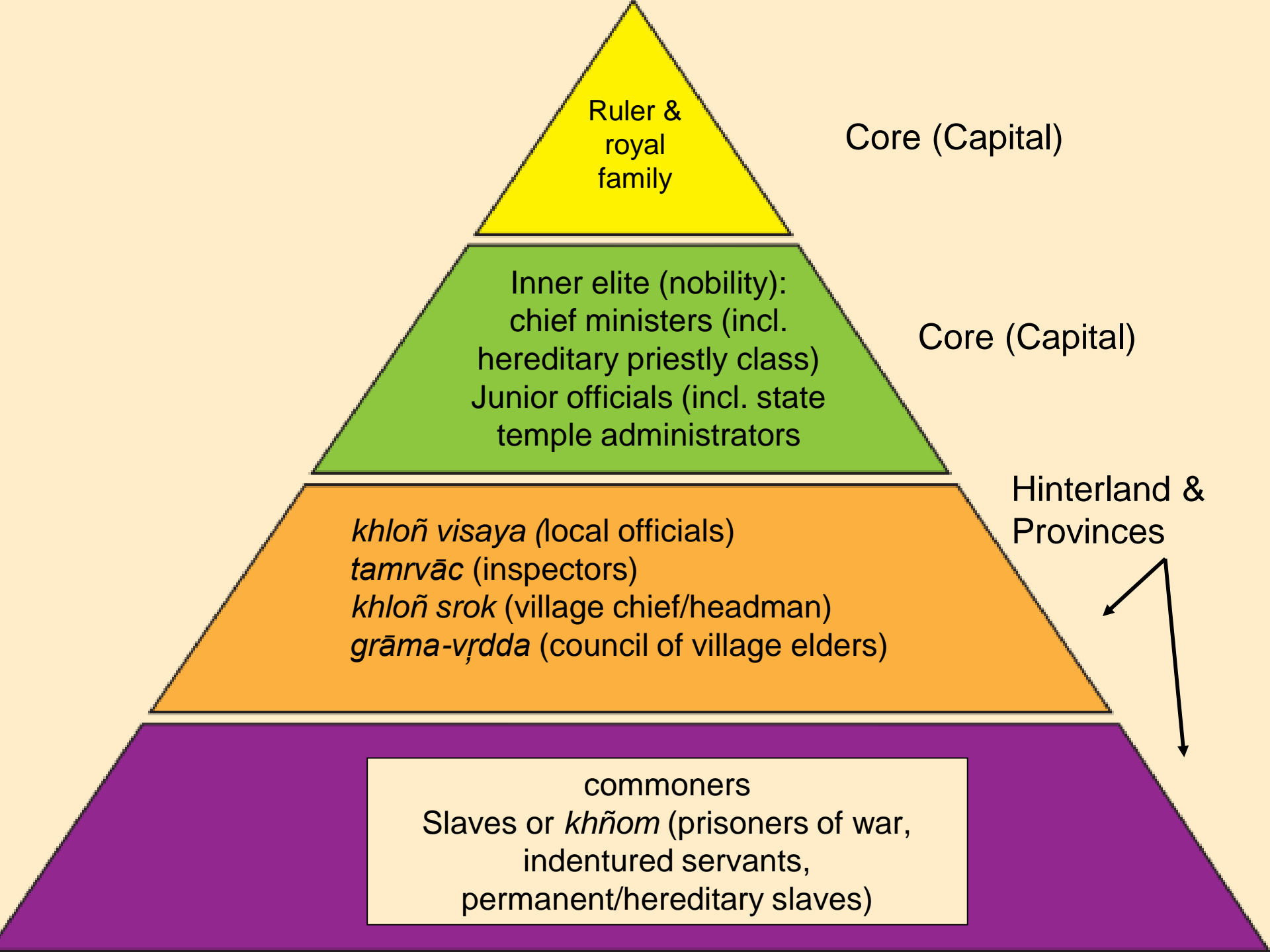
# Historic cycles



# Statecraft



Angkor Wat  
(southern gallery)  
oath-swearing to  
Suryavarman II



# The Mark of Angkor



Preah Vihear  
(Thailand/Cambodia)



Wat Phu (Laos)



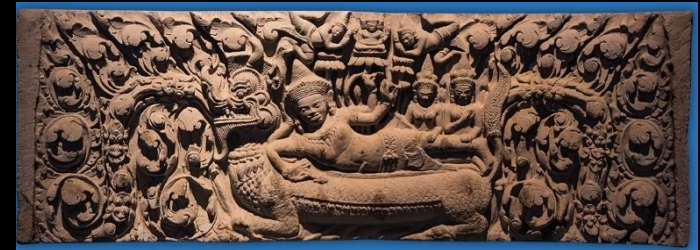
Khmer  
stoneware  
ceramics



Lopburi  
(Thailand)

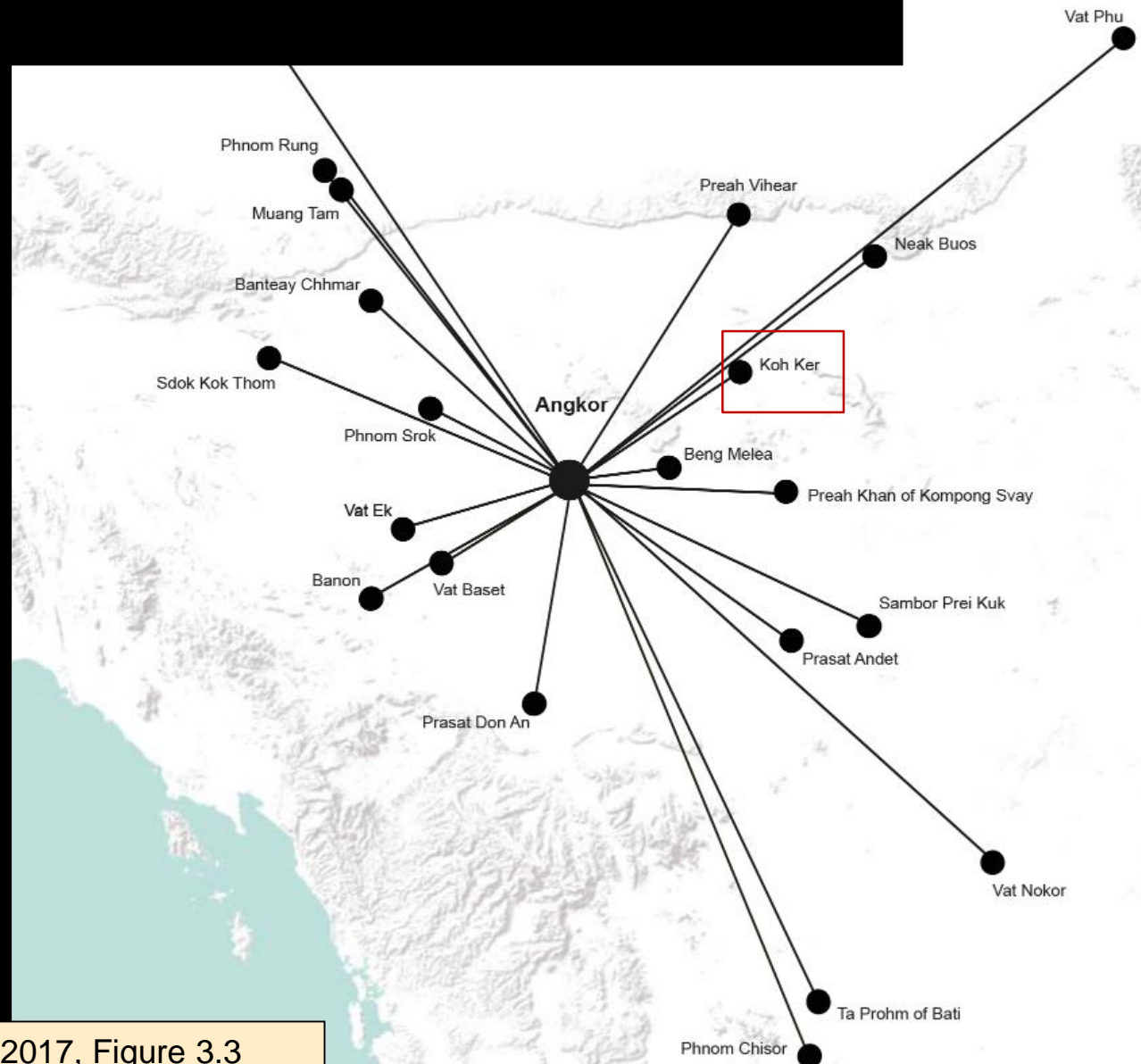


Angkor Wat

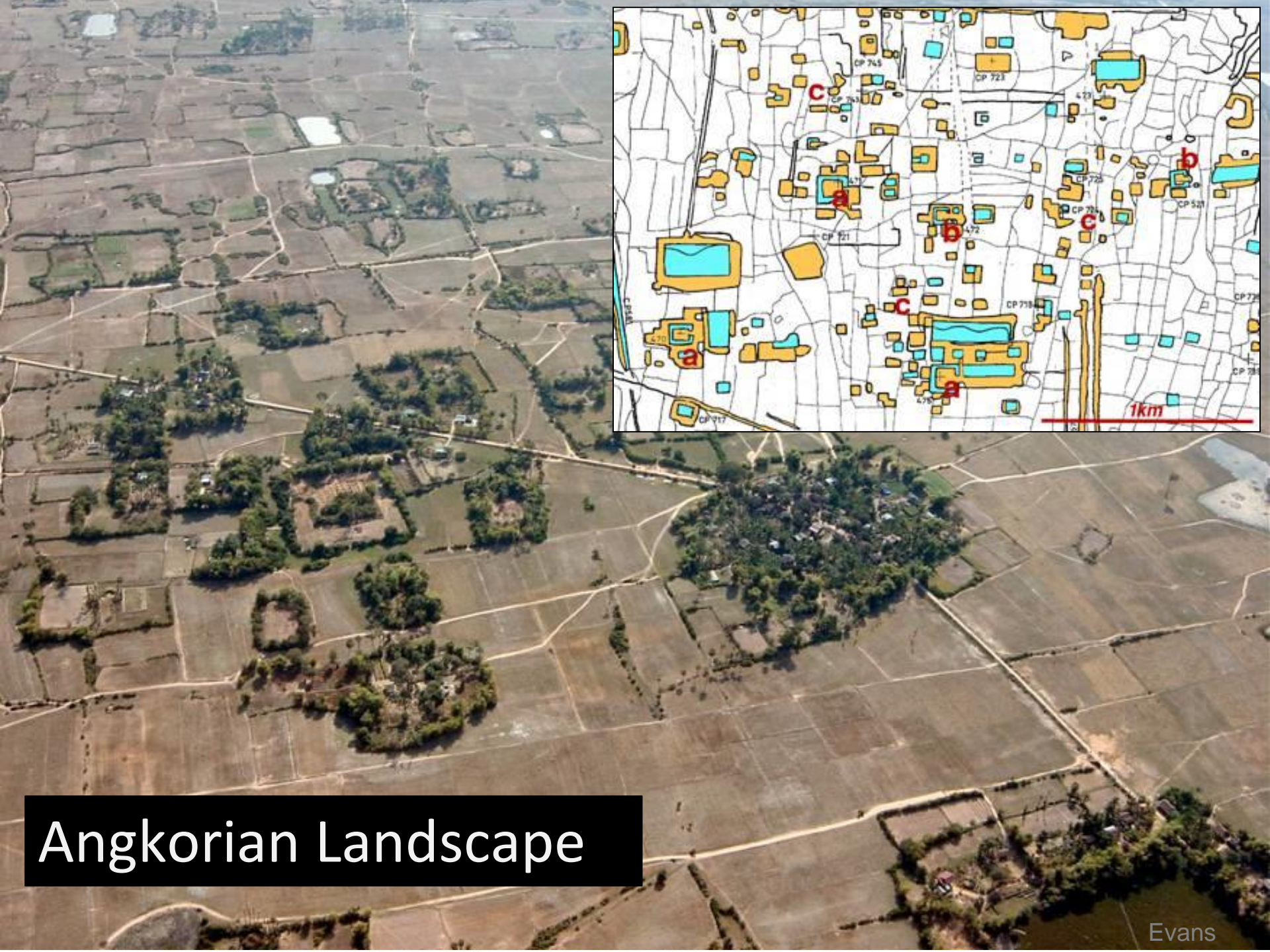


Lintel, Prang Ku SuanTaeng, Buriram

# Connectivity between the capital and its hinterland



Hall 2017, Figure 3.3



Angkorian Landscape

# Roads & water routes



Battambang to Siem Reap  
boat

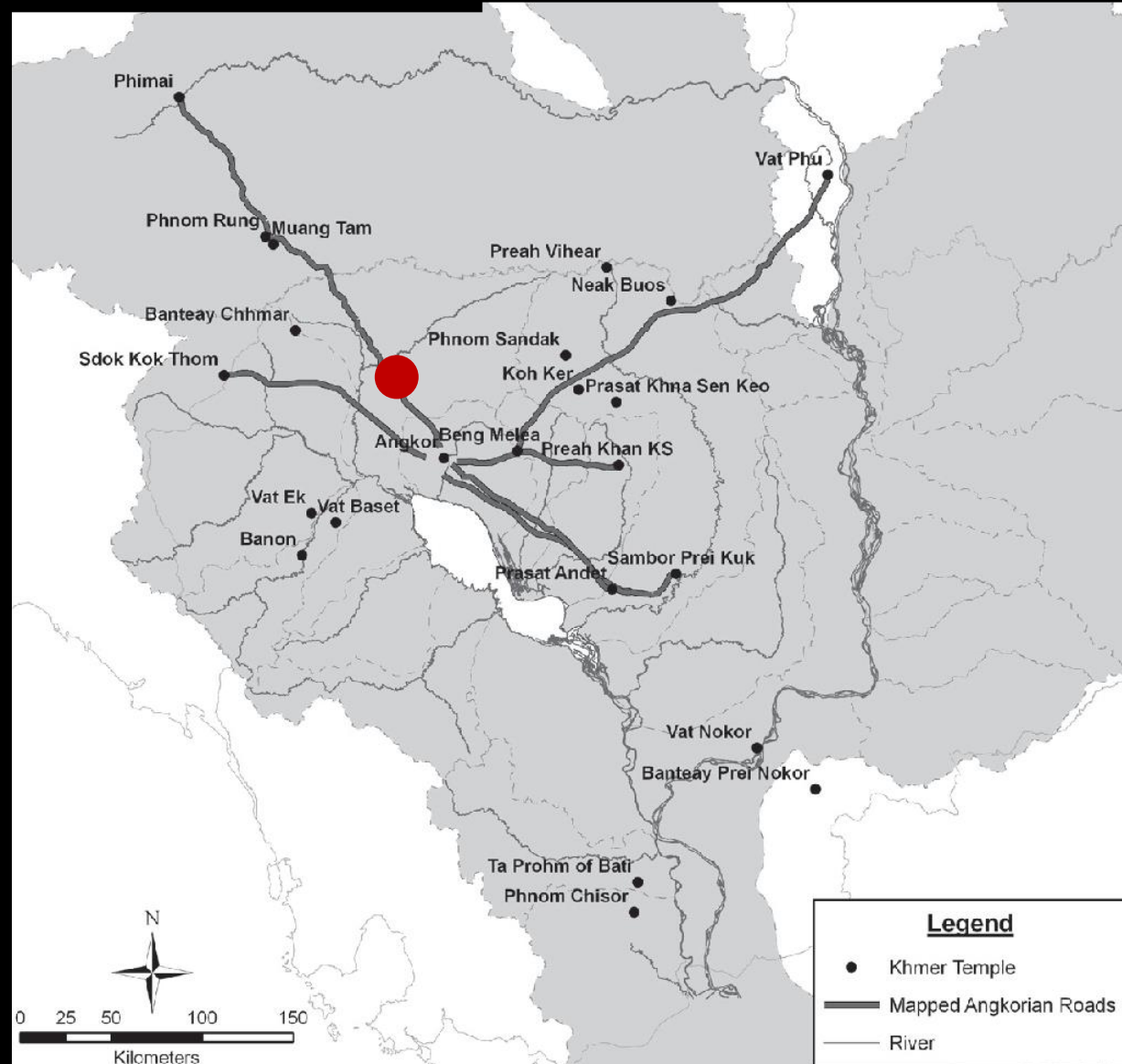


Figure 6.7 in Hendrickson 2012



# Roads



Courtesy of Mitch Hendrickson



Context

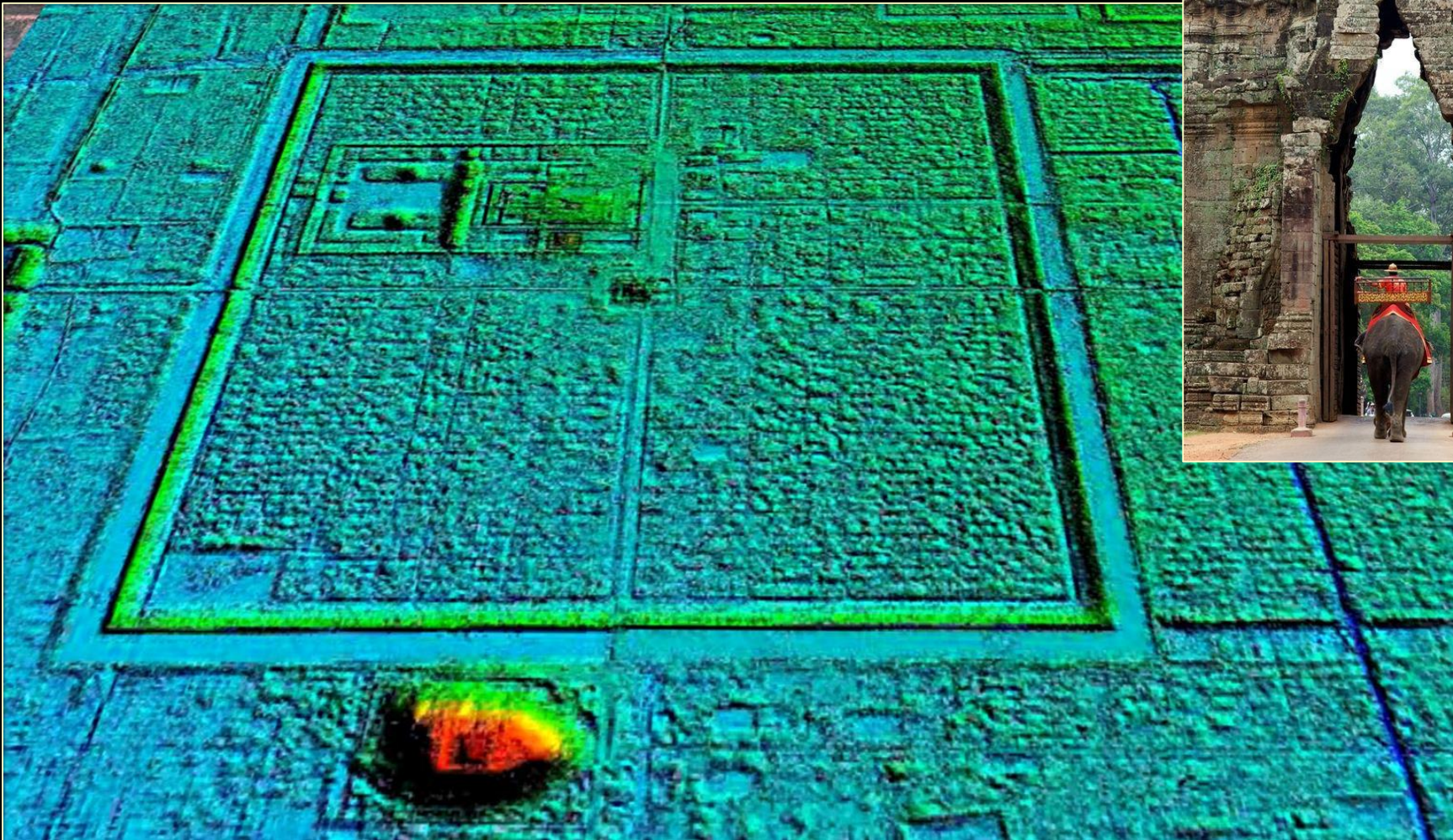
Premodern Southeast Asia, the  
Lower Mekong Basin, and  
Angkor

Angkorian Urbanism: History,  
Scale

Angkorian Economy

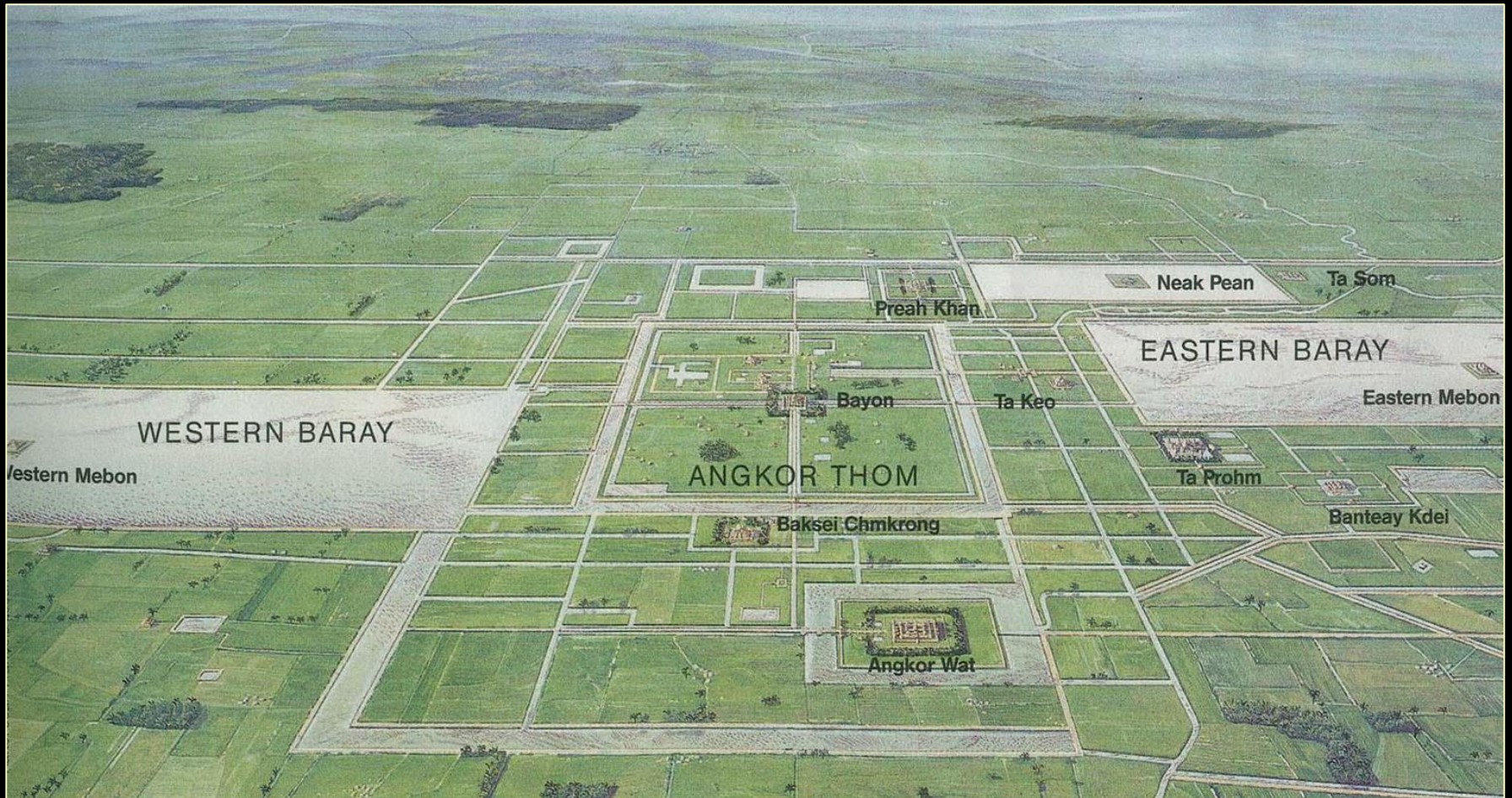
# Urbanism



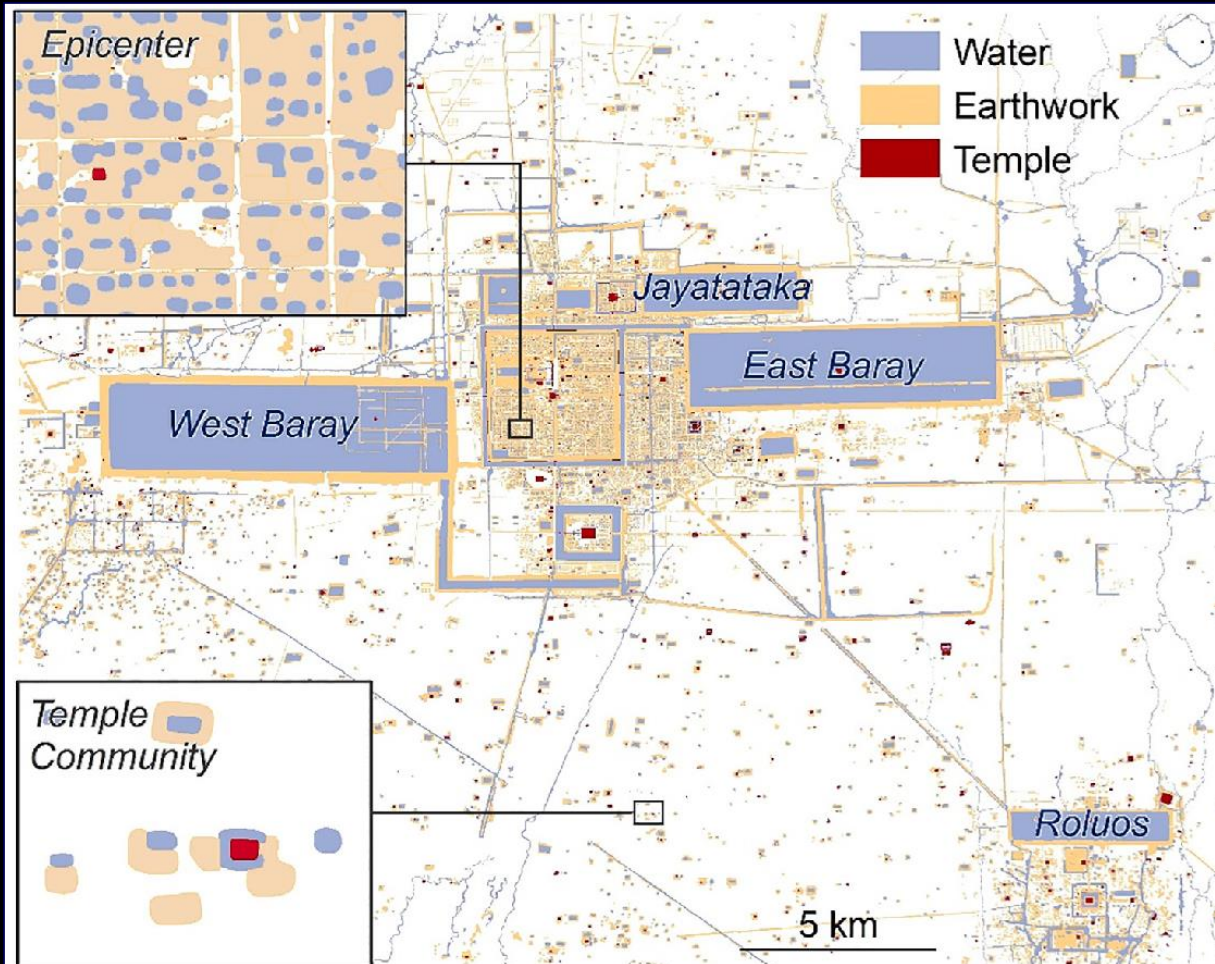


Angkor Thom (Great City)

# Late 12<sup>th</sup>/early 13<sup>th</sup> century epicenter: Angkor Thom



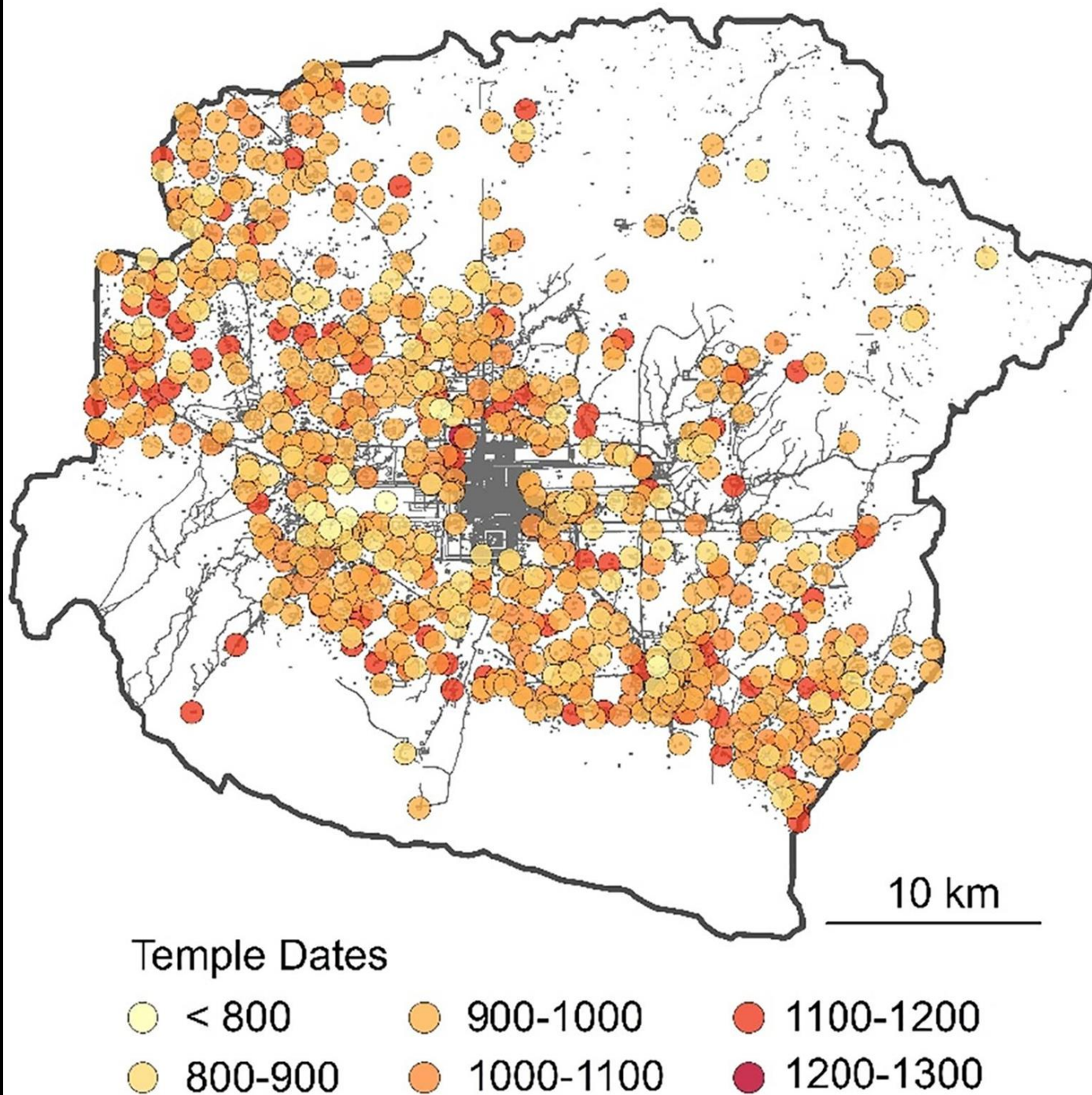
# Angkor's Urban Population



50 years of work

Work by  
multiple  
researchers and  
field projects

5,000  
dated  
features

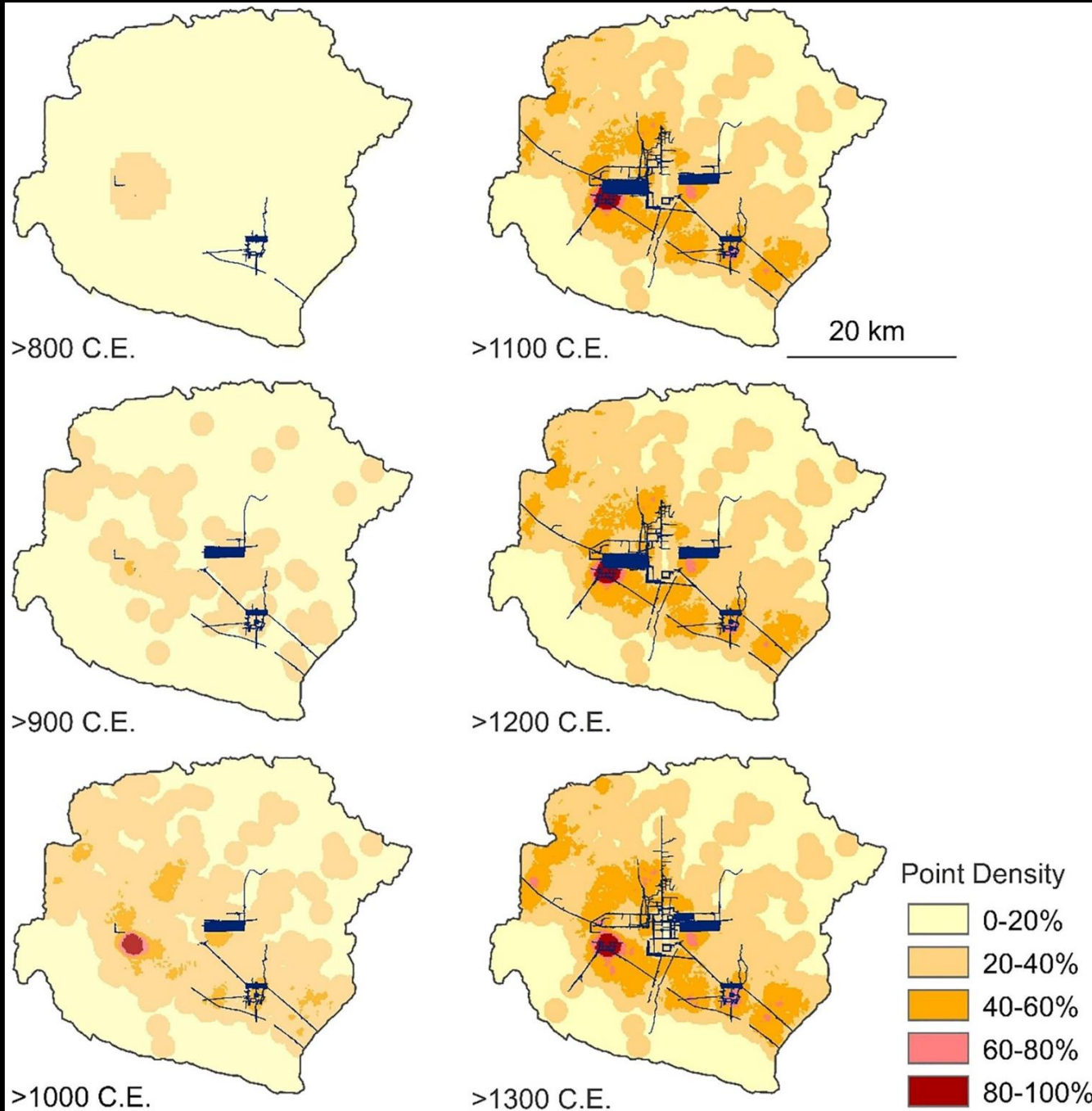


Klassen and Evans  
2020: Figure 2

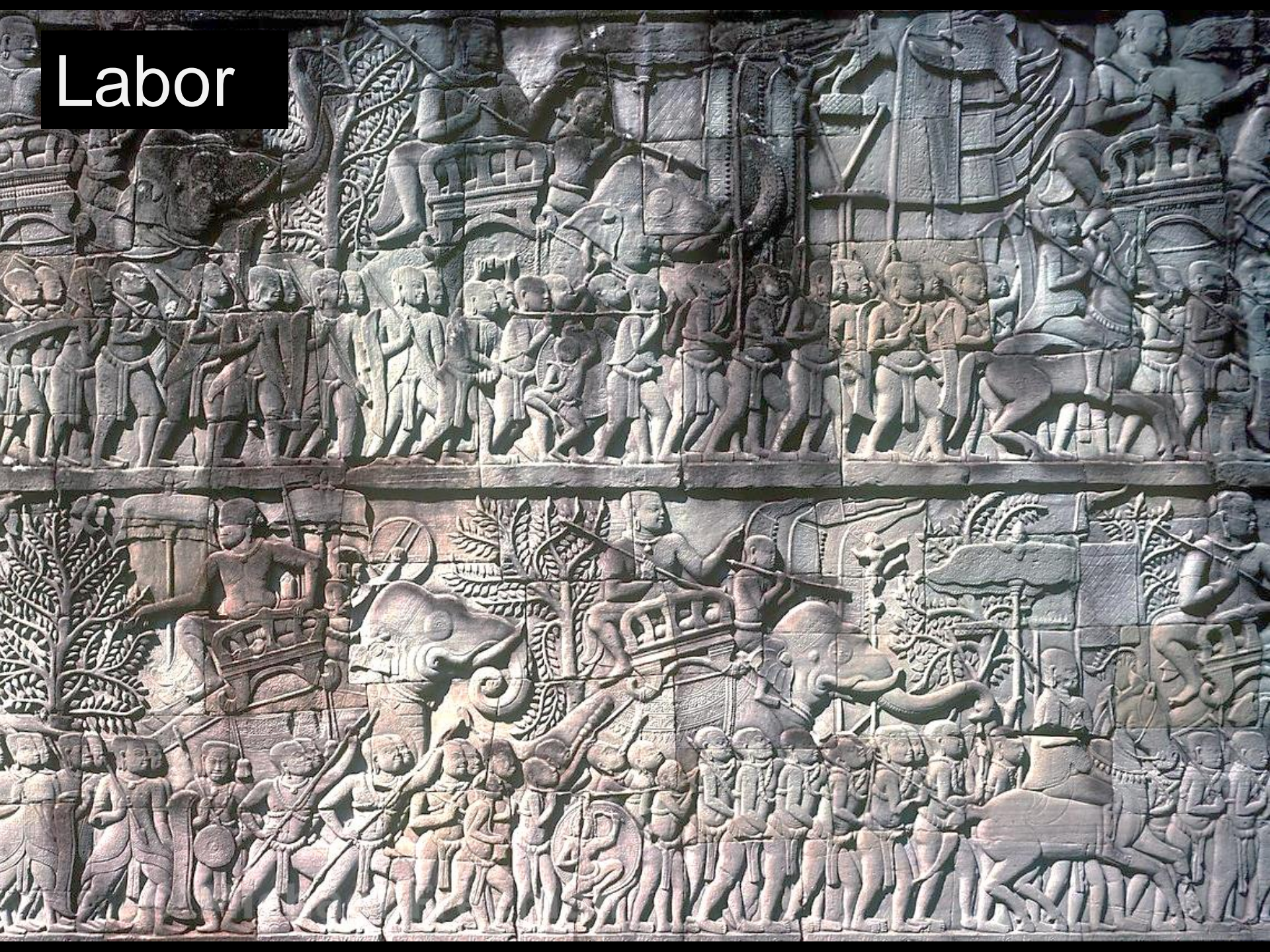
# Estimated population of 700-900,000 at 12<sup>th</sup>/13<sup>th</sup> century peak

Relative point density of temples on the landscape (based on the centroid of temples)

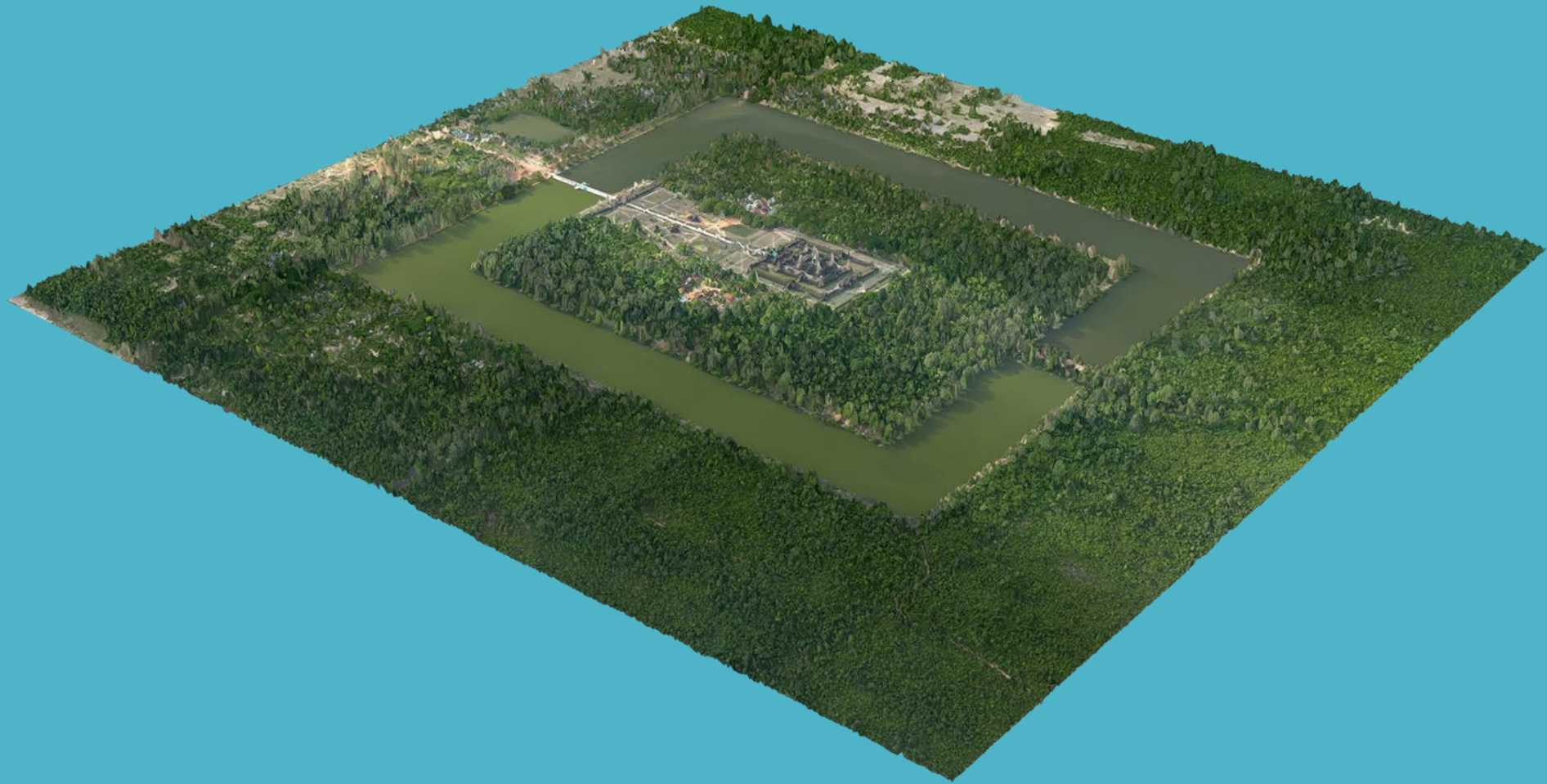
Klassen and Evans 2020;  
Klassen et al. 2021



# Labor



# Angkor Wat as State Temple



*Damian Evans / KALC*

# Angkor Wat as Urban Living Space



GAP excavations 2010, 2013, 2015 ([Carter et al. 2019](#); [Stark et al. 2015](#))



Context

Premodern Southeast Asia, the  
Lower Mekong Basin, and  
Angkor

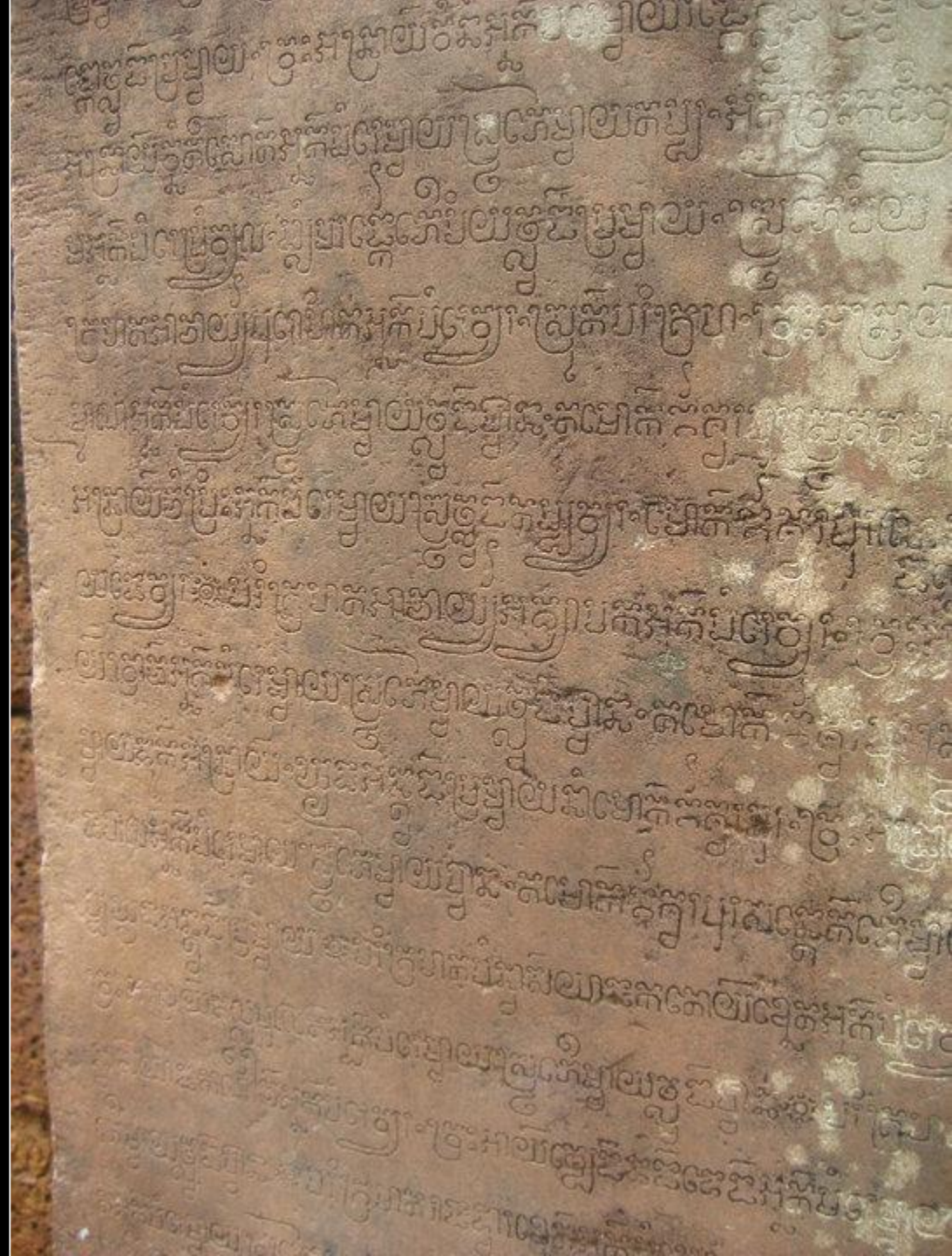
Angkorian Urbanism: History,  
Scale

Angkorian Economy

# Internal documentary evidence

c. 1300 pre-Angkorian &  
Angkorian inscriptions

Archaeological research



Banteay Srei inscription (courtesy of  
Charmaine Wong)

# Ideology of Hierarchy



*cakravartin  
devarāja*

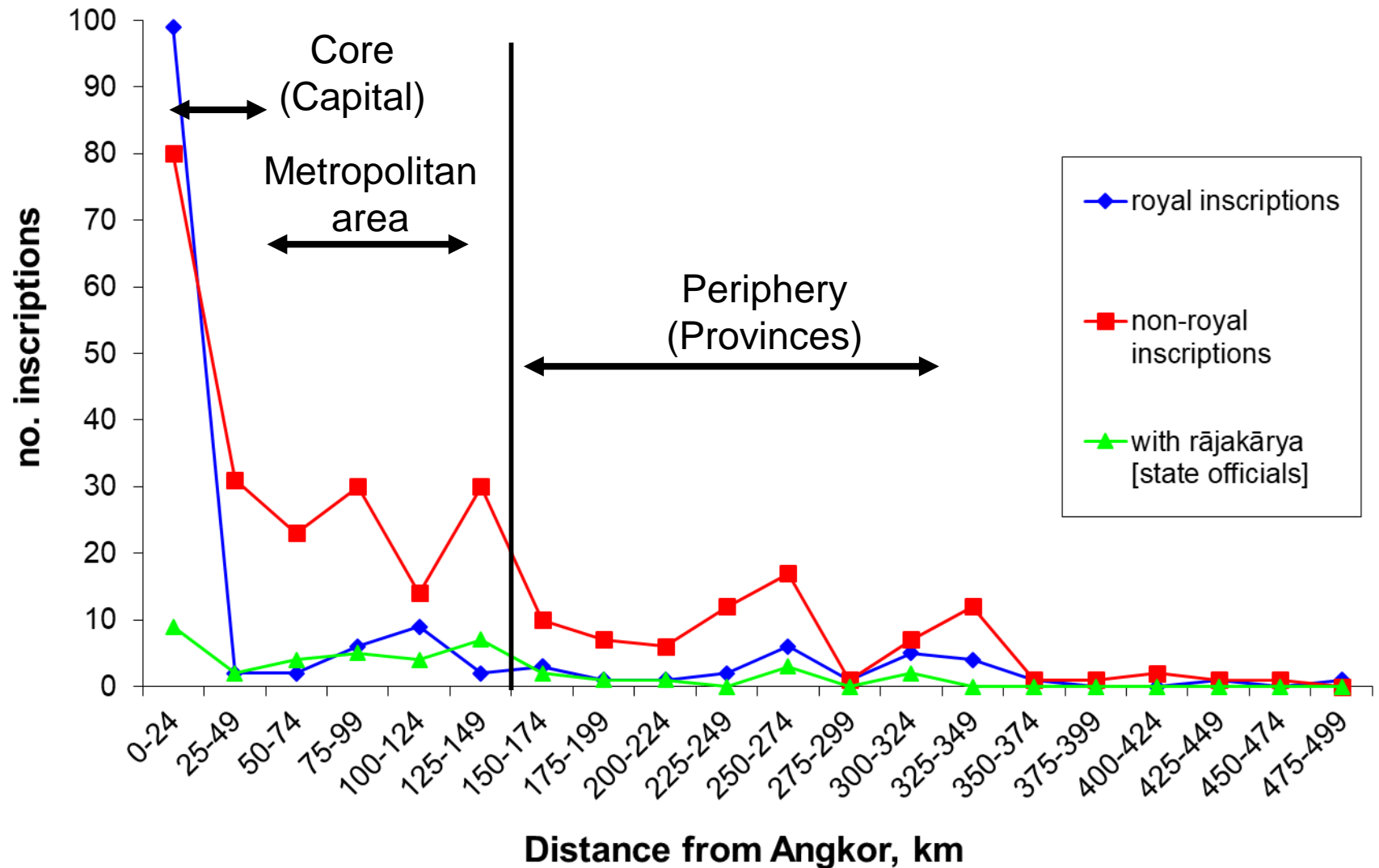
# Religion & State in Urban Angkor



Clockwise  
from left:  
Vishnu,  
Harihara,  
Buddha, Siva  
lingam & yoni



# Limited centralized control

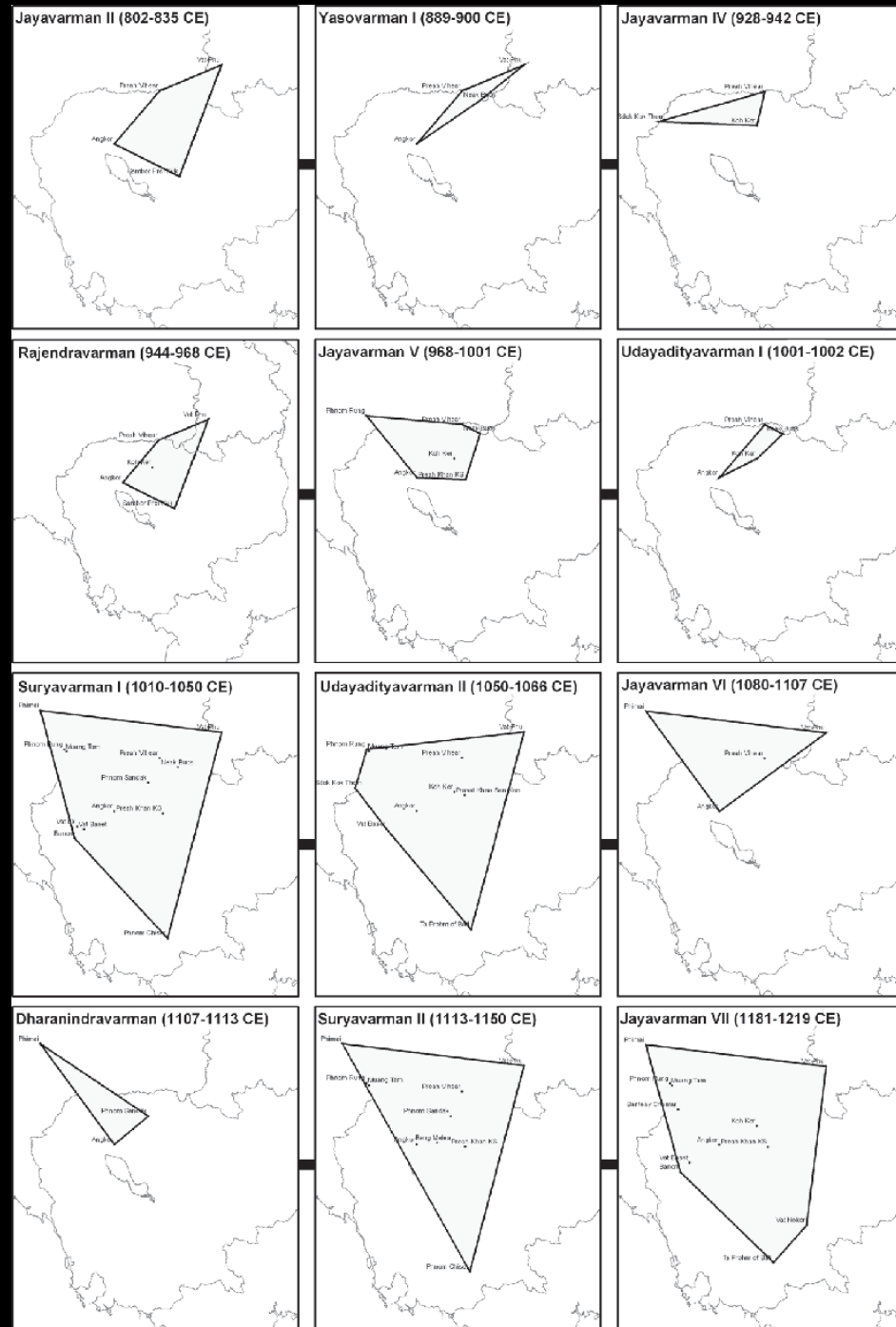


(from Stark 2019, with help from Eileen Lustig)

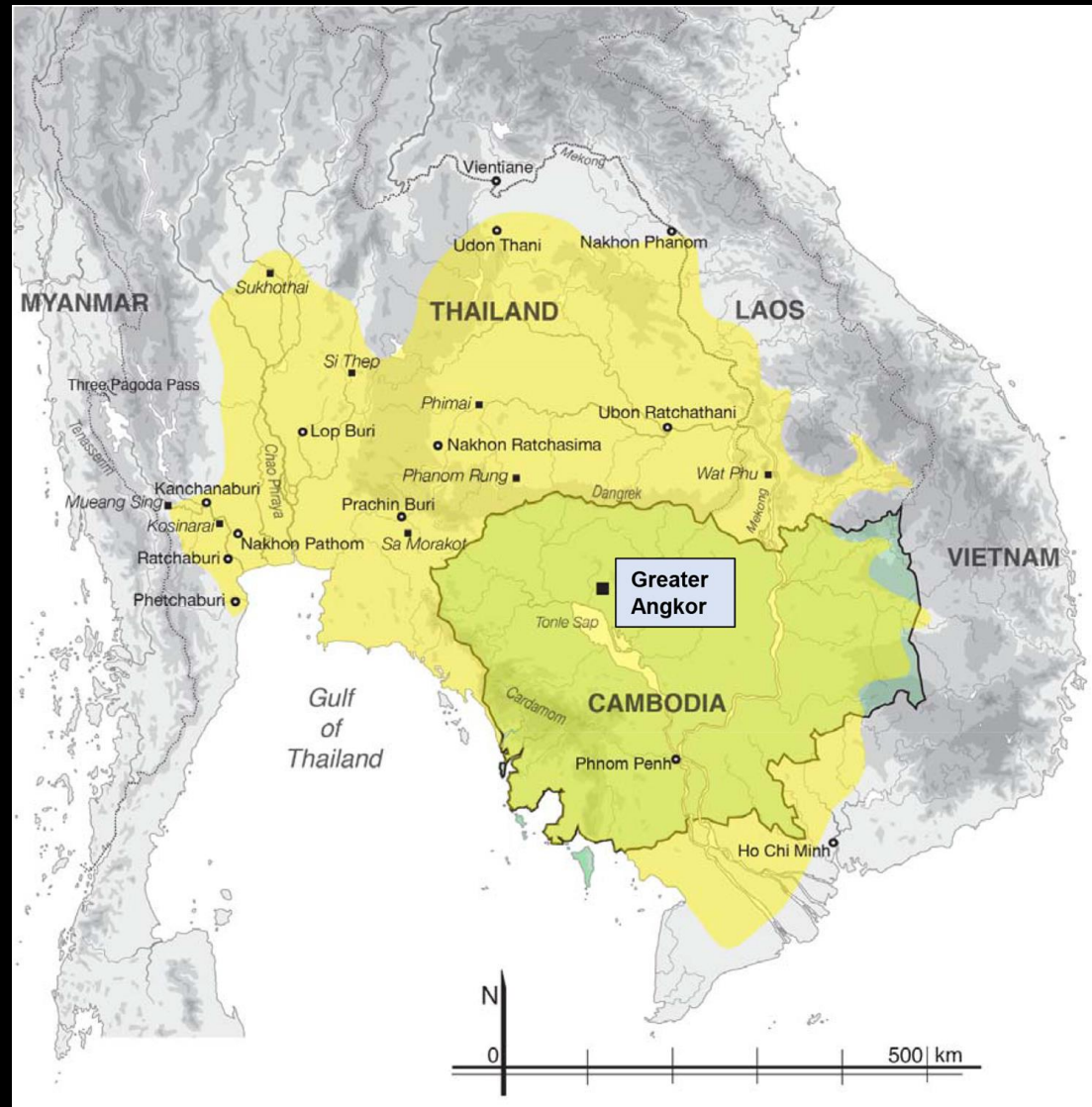
# Geographic regions under Angkorian rulers (c. 802 – 1219 CE)

Proximity to roads and  
rivers

Temple prominence  
(location, size)



# Prominence of provinces *viṣaya* or *pramān*



The inferred extent of the Angkor Empire during the 12th century (modified from (Multz o'Naghten 2014: Map 2).

# Angkorian Economy

Agrarian foundations  
Craft production

Shiva Ardhanarishvara, 10thC, repatriated 2021 (now  
at National Museum of Cambodia)



# Agrarian foundations

rice as primary domesticate and  
most important taxation commodity

Tonle Sap hydrology ideal for  
complex agrarian ecology

90% of 20<sup>th</sup> century Cambodian  
agriculture based on rainfed  
farming





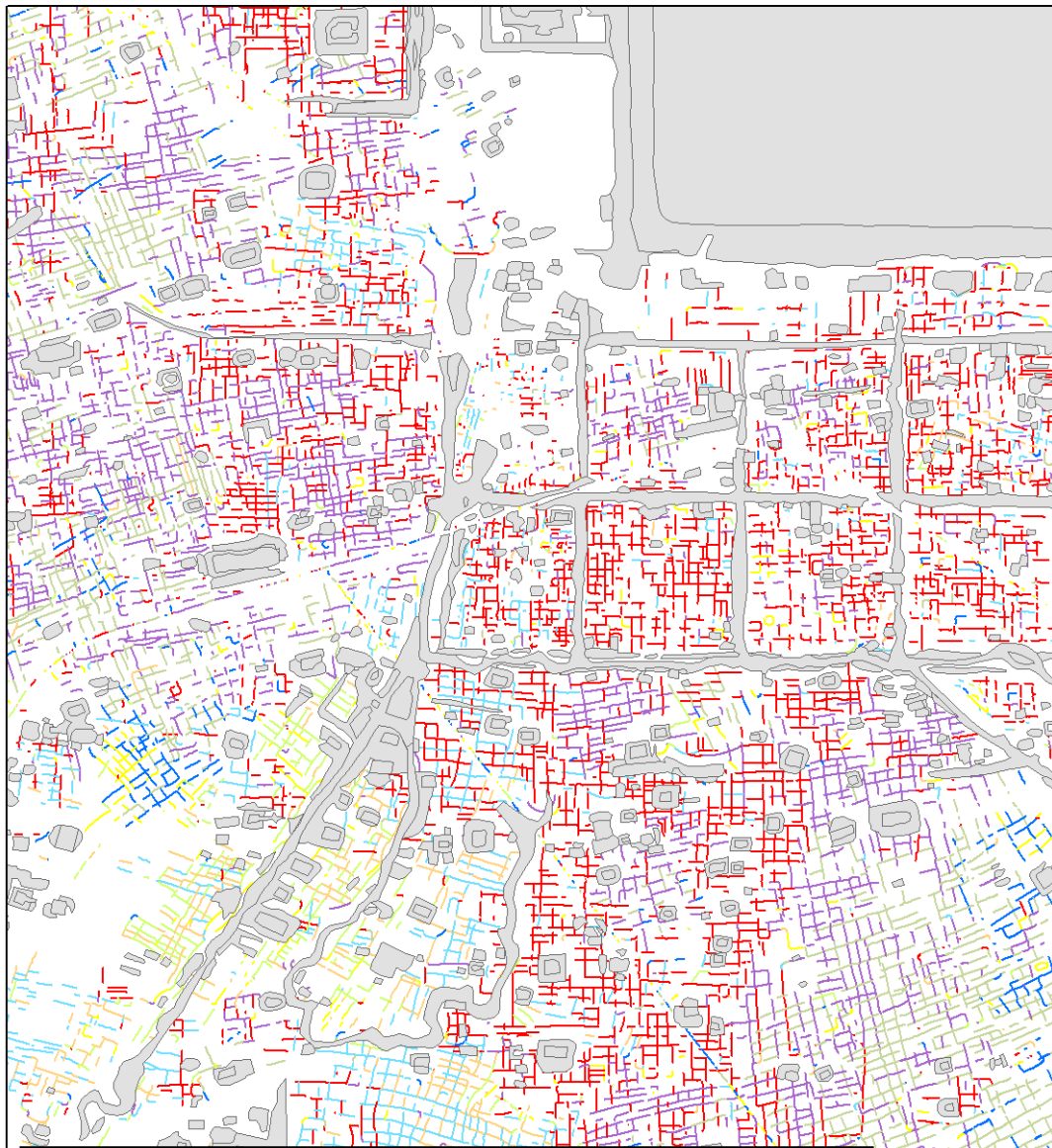
bunded pondfields  
flood recession  
floating rice



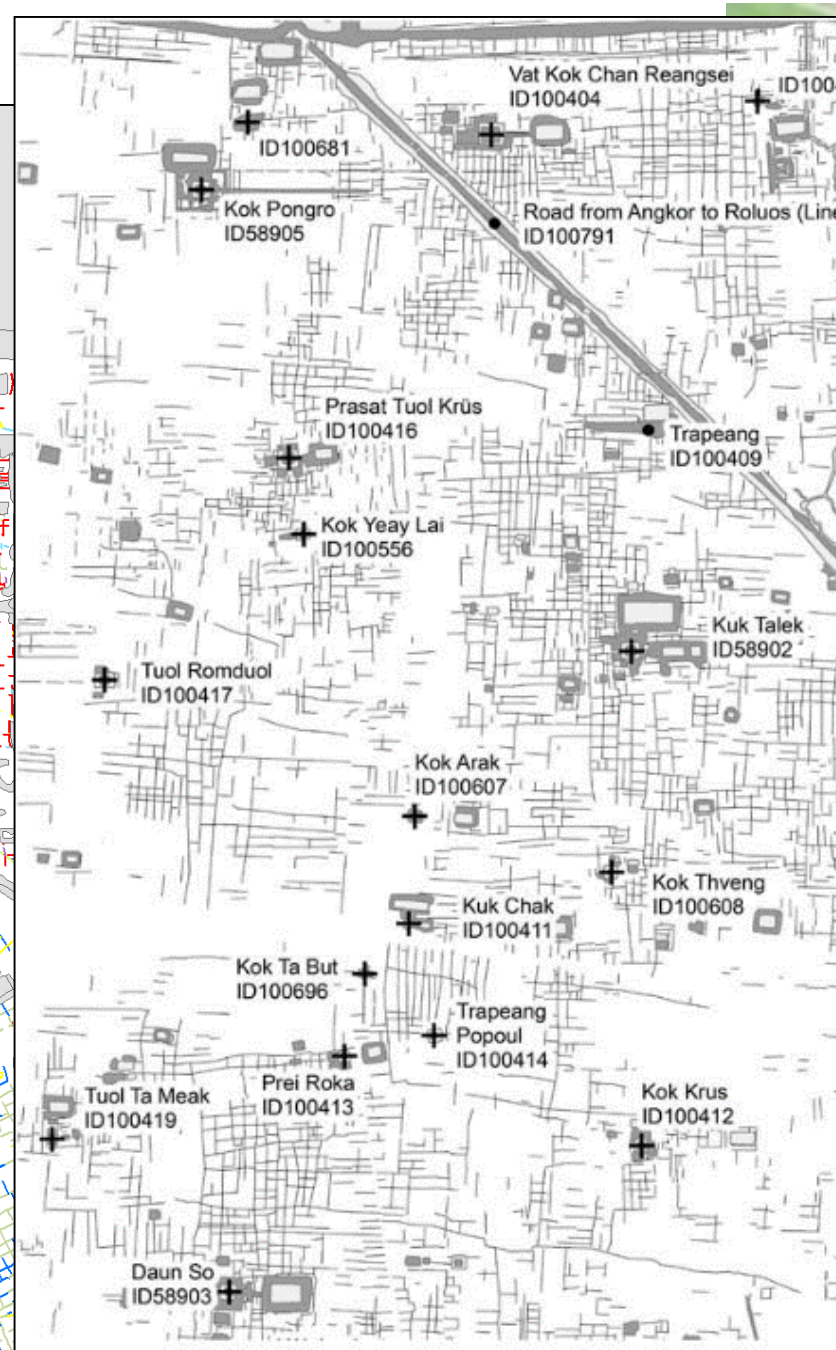
Floating rice field (2005)



0 0.5 1 2  
Kilometers



Work by Scott Hawken (2011, 2013)



# Temple as center of economic life

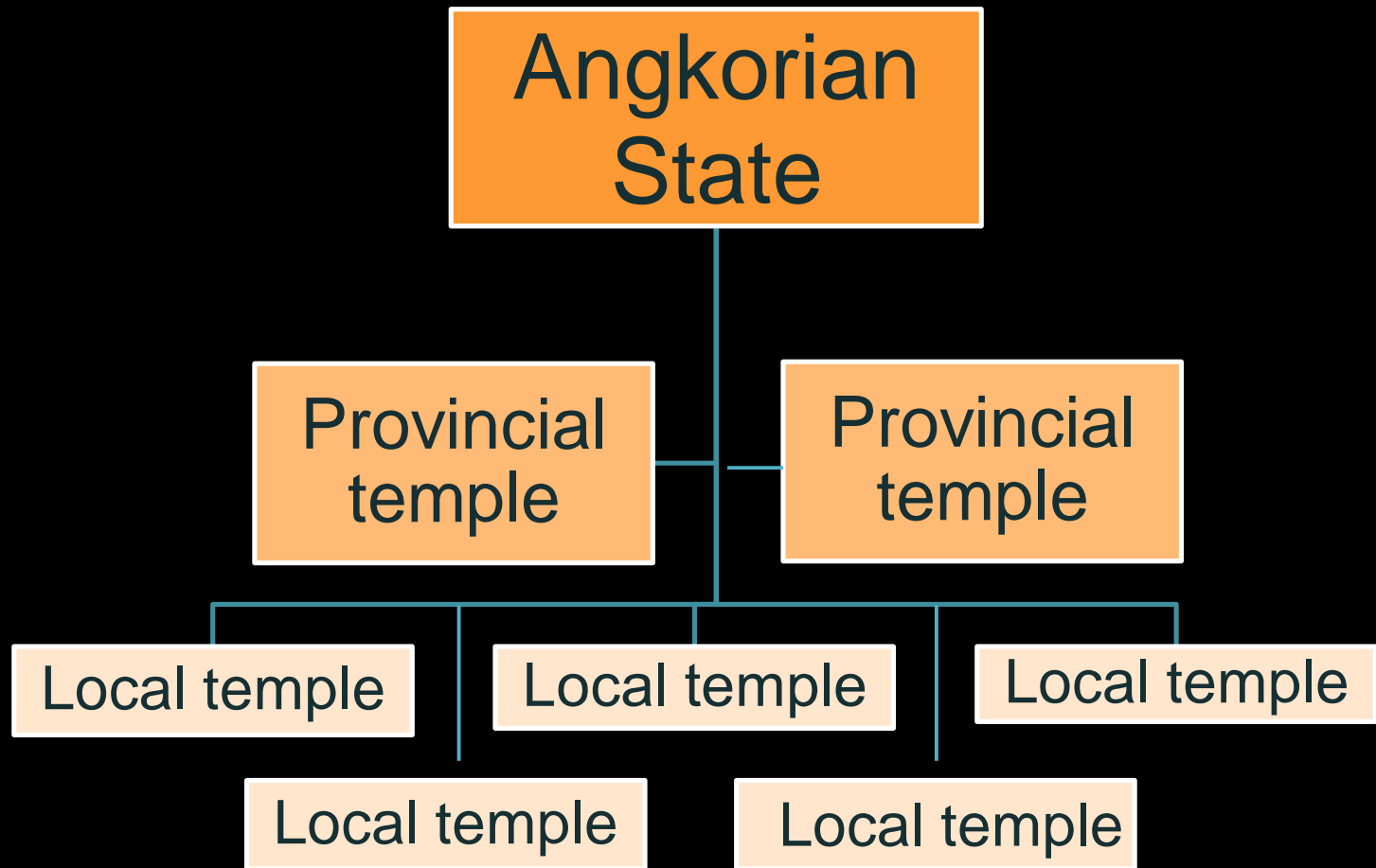


Courtesy of Melchor Ruiz

# Temple as center of economic life



*Tom Chandler and Micheal Lim, Monash University, 2011*



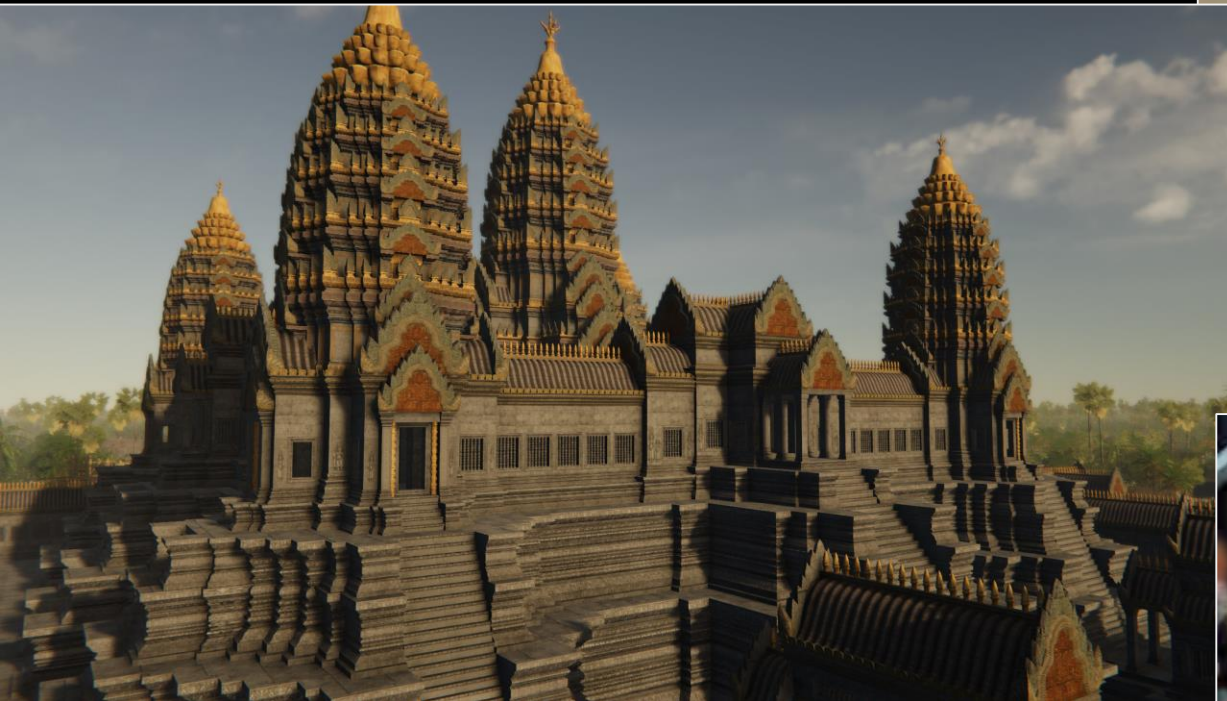
Temple economy

# TAXES

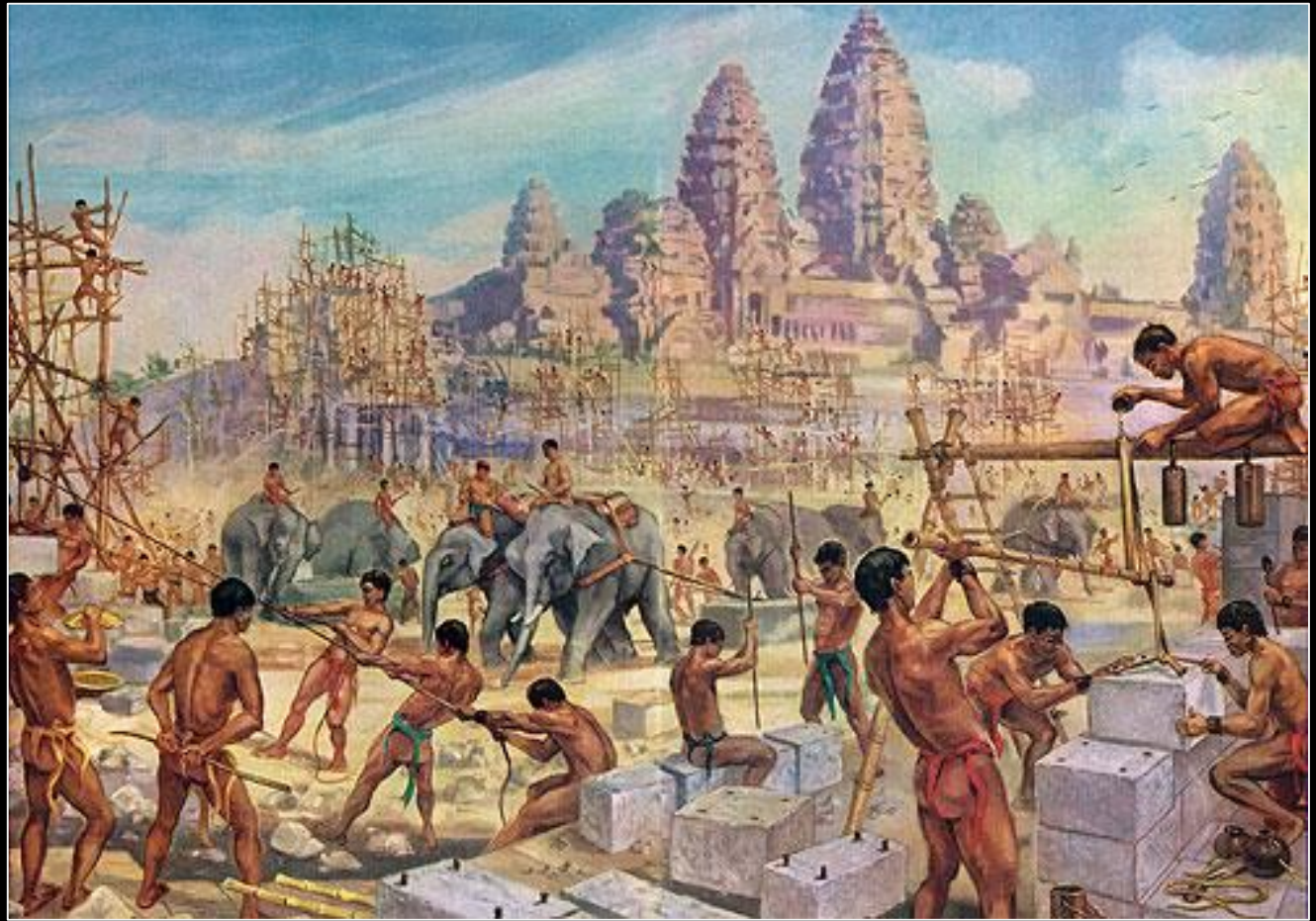
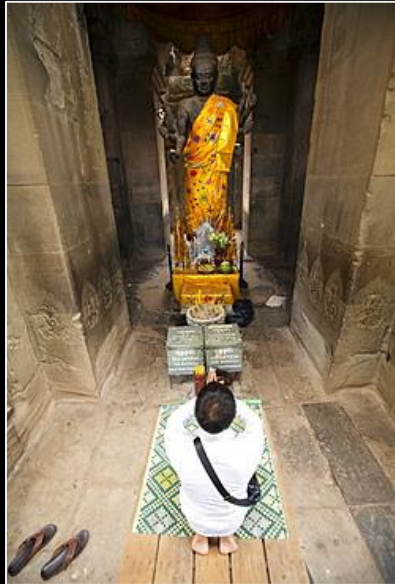




# Non-monetized economy

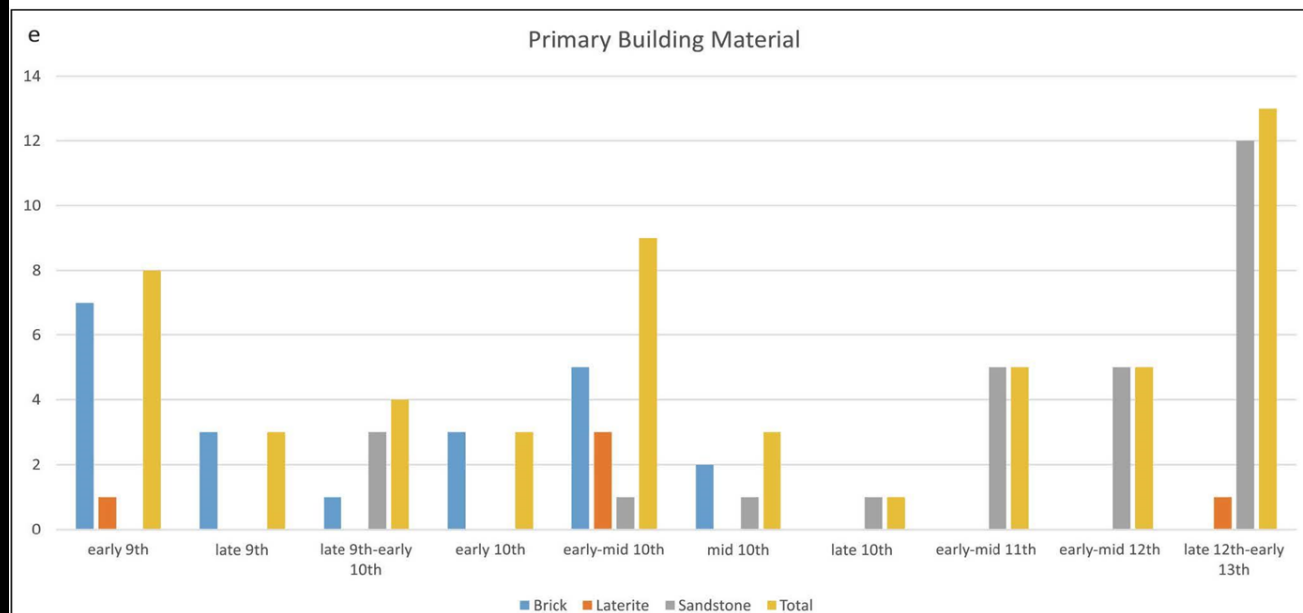
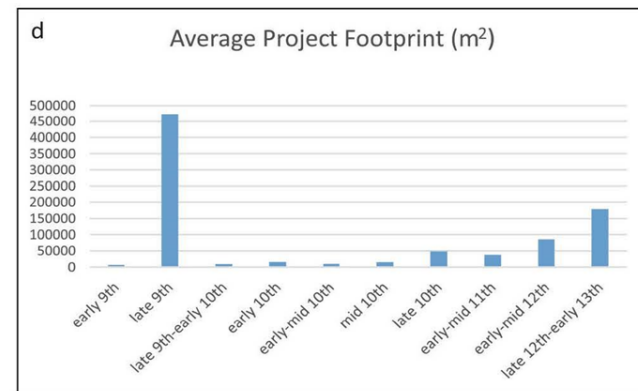
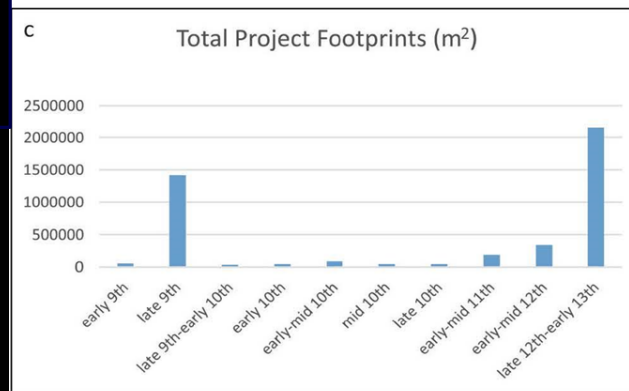
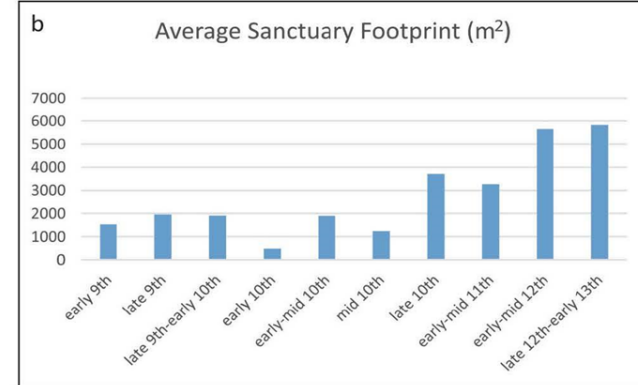
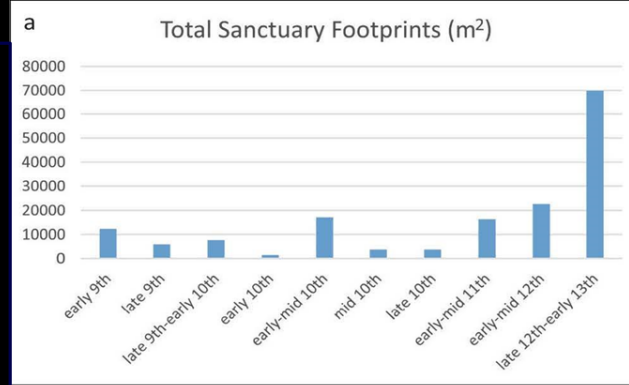


Courtesy of Virtual Angkor



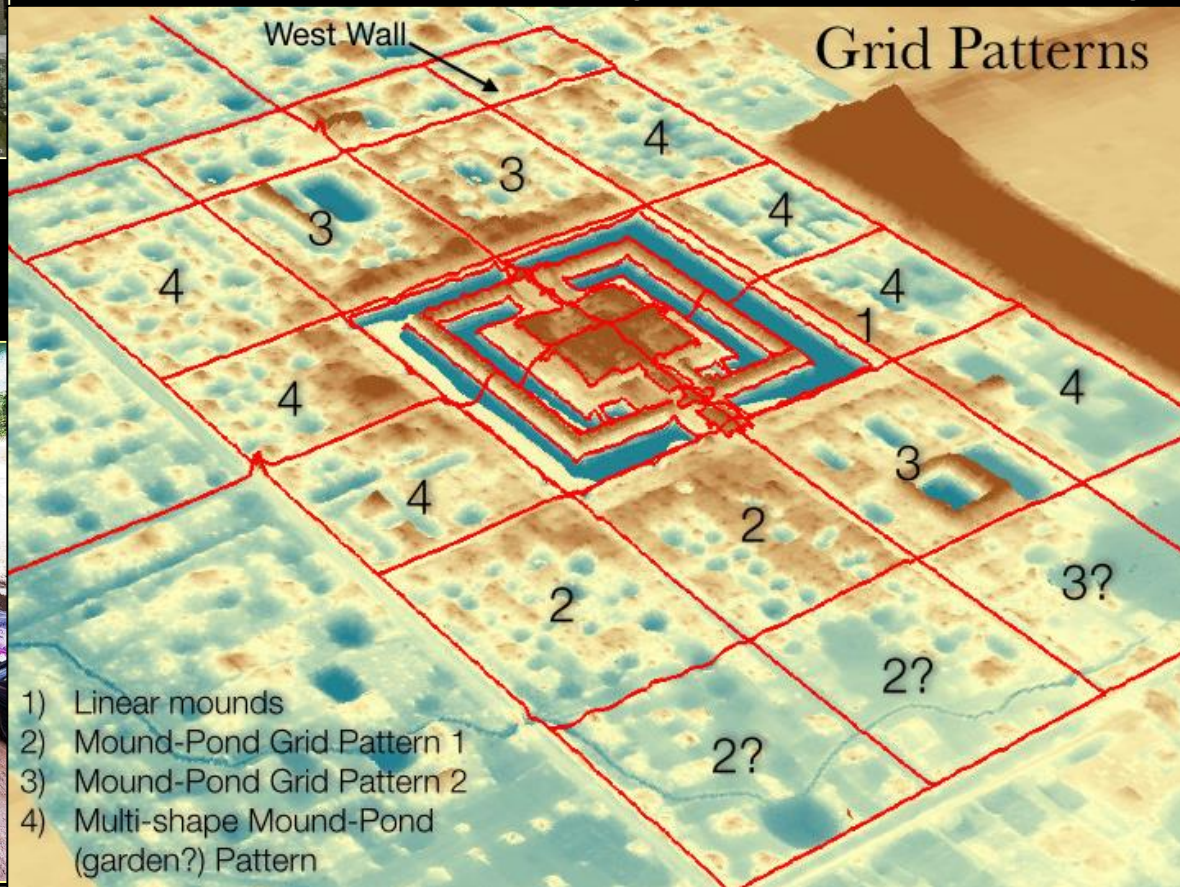
Corvée labor

# Labor Investment in Civic Architecture





# State Architecture: Ta Prohm Temple (est. 1182 CE)



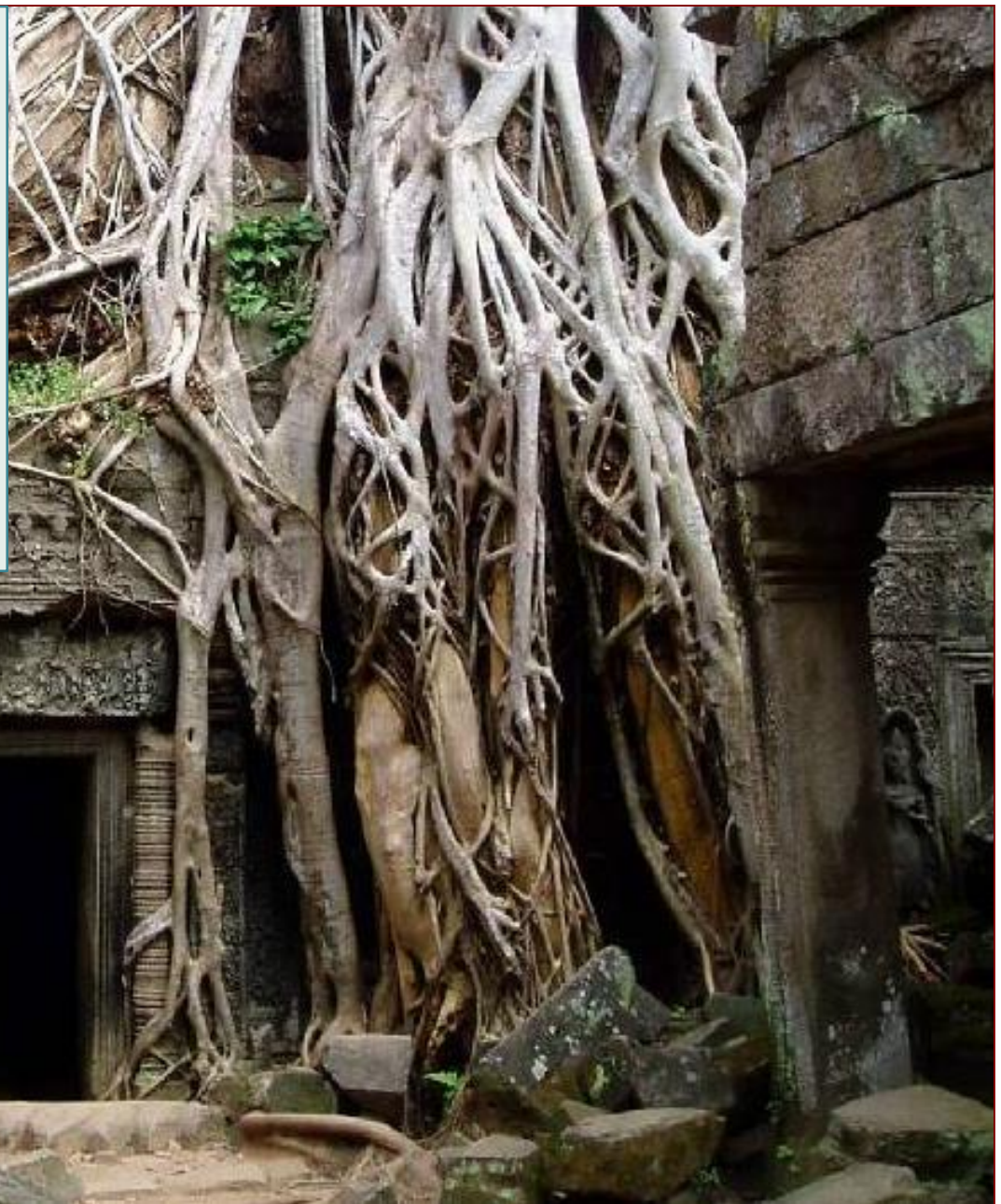
GAP excavations 2012, 2014  
(Carter et al. 2018)

Courtesy of Heng Piphal

# ប្រាសាទតាព្រហ្ម

Ta Prohm stelae:

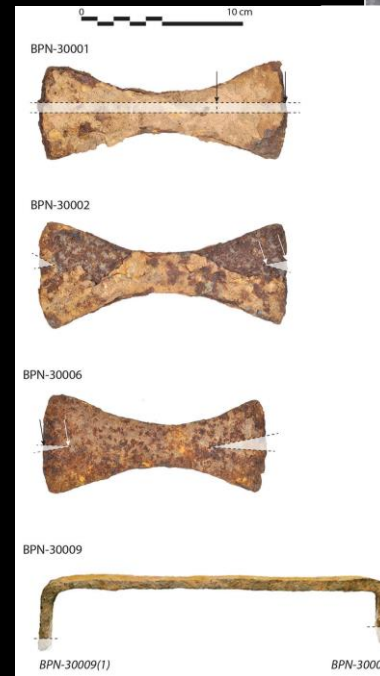
- 12,640 residents (including 18 high priests , 615 dancers, 1409 learned men & students, 2470 officials, 2232 attendants, and more)
- 66,625 individuals in 3140 *grama* (surrounding villages) provided services to the temple



# Materials for Empire



Stoneware ceramics

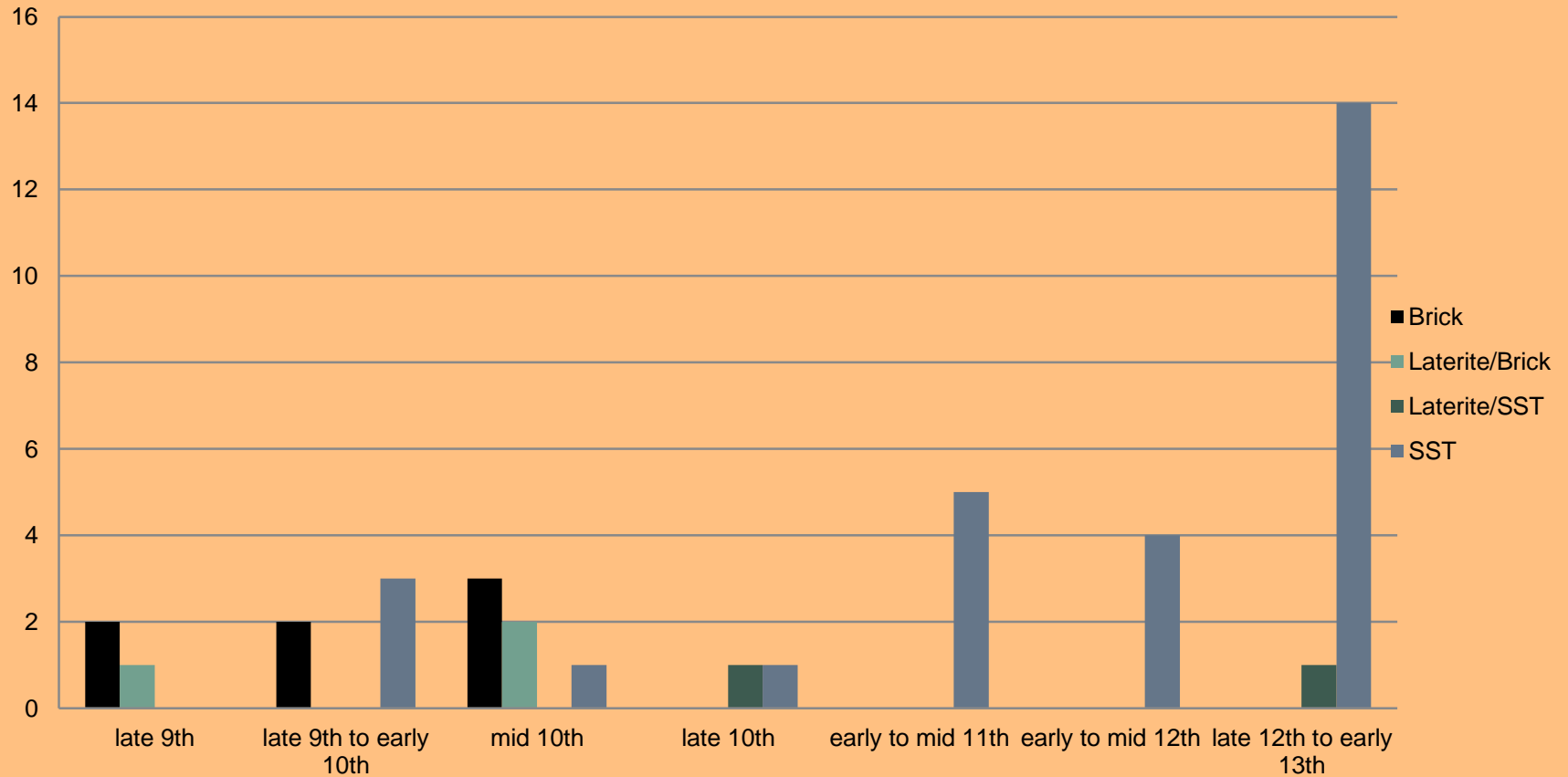


Architectural  
iron

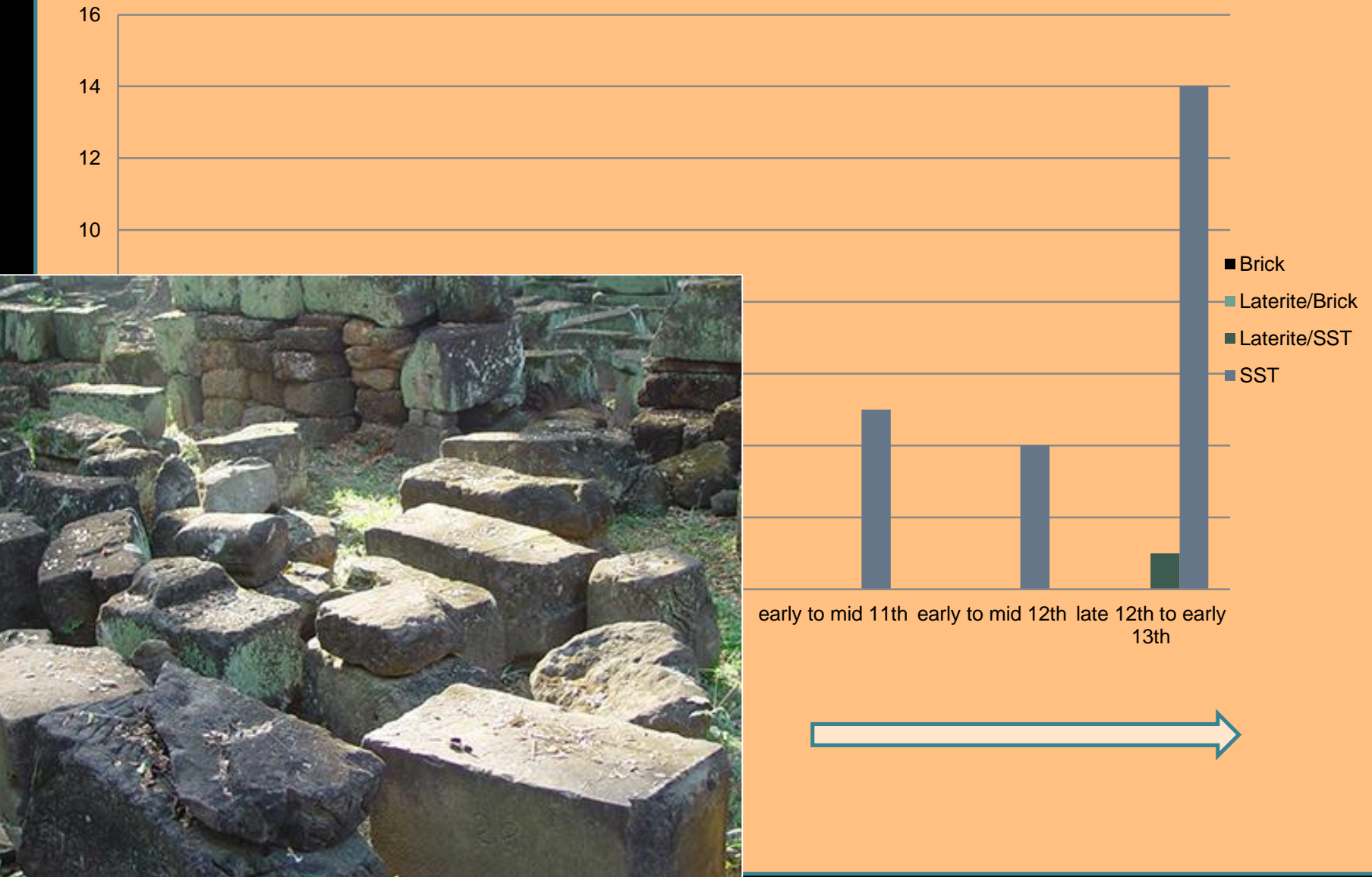
# State Temples as Public Works



# Temple Building Material



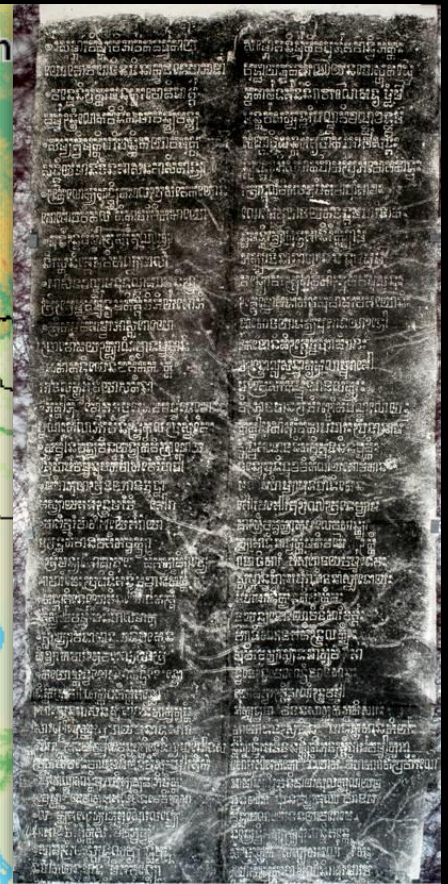
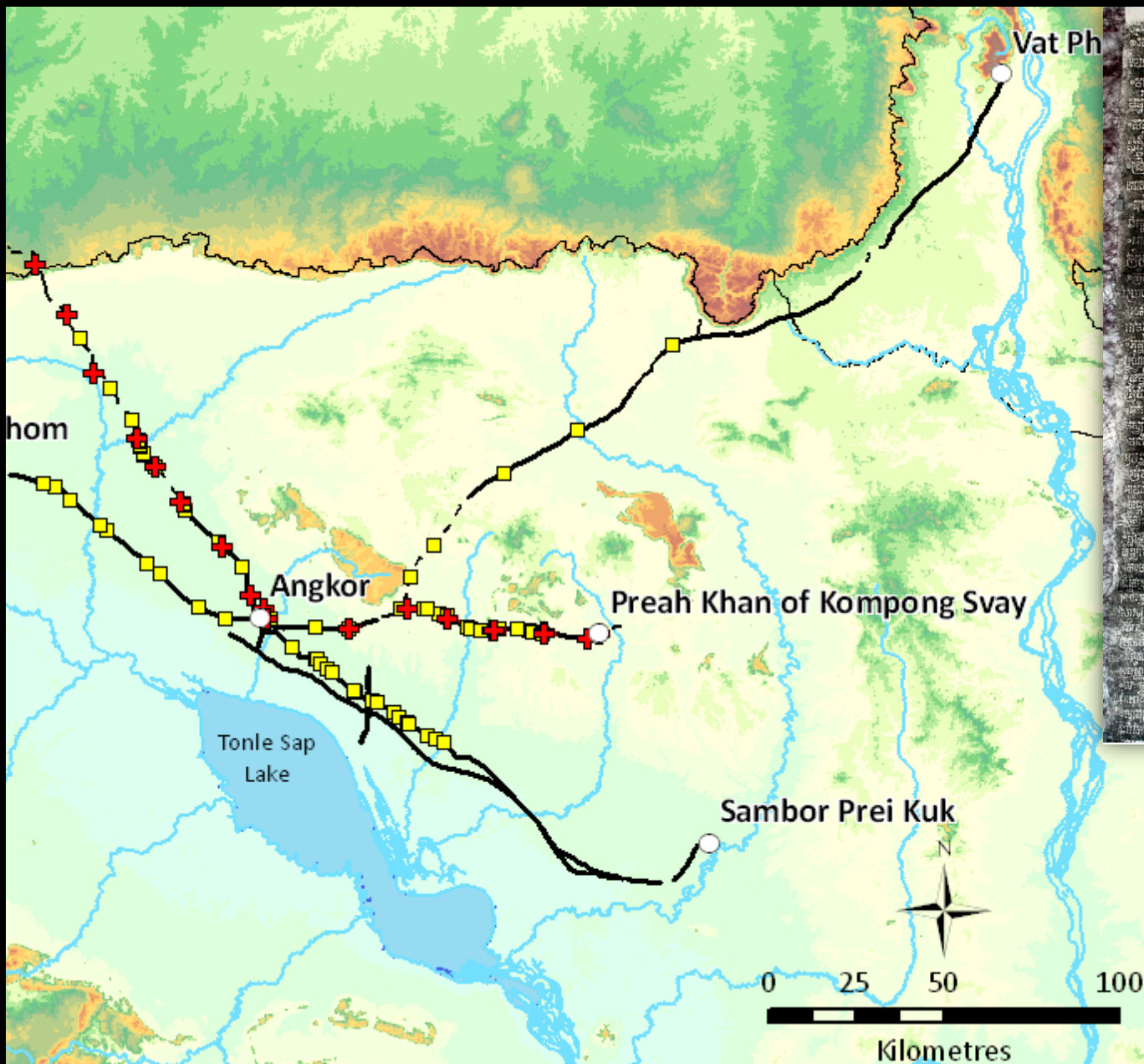
# Temple Building Material





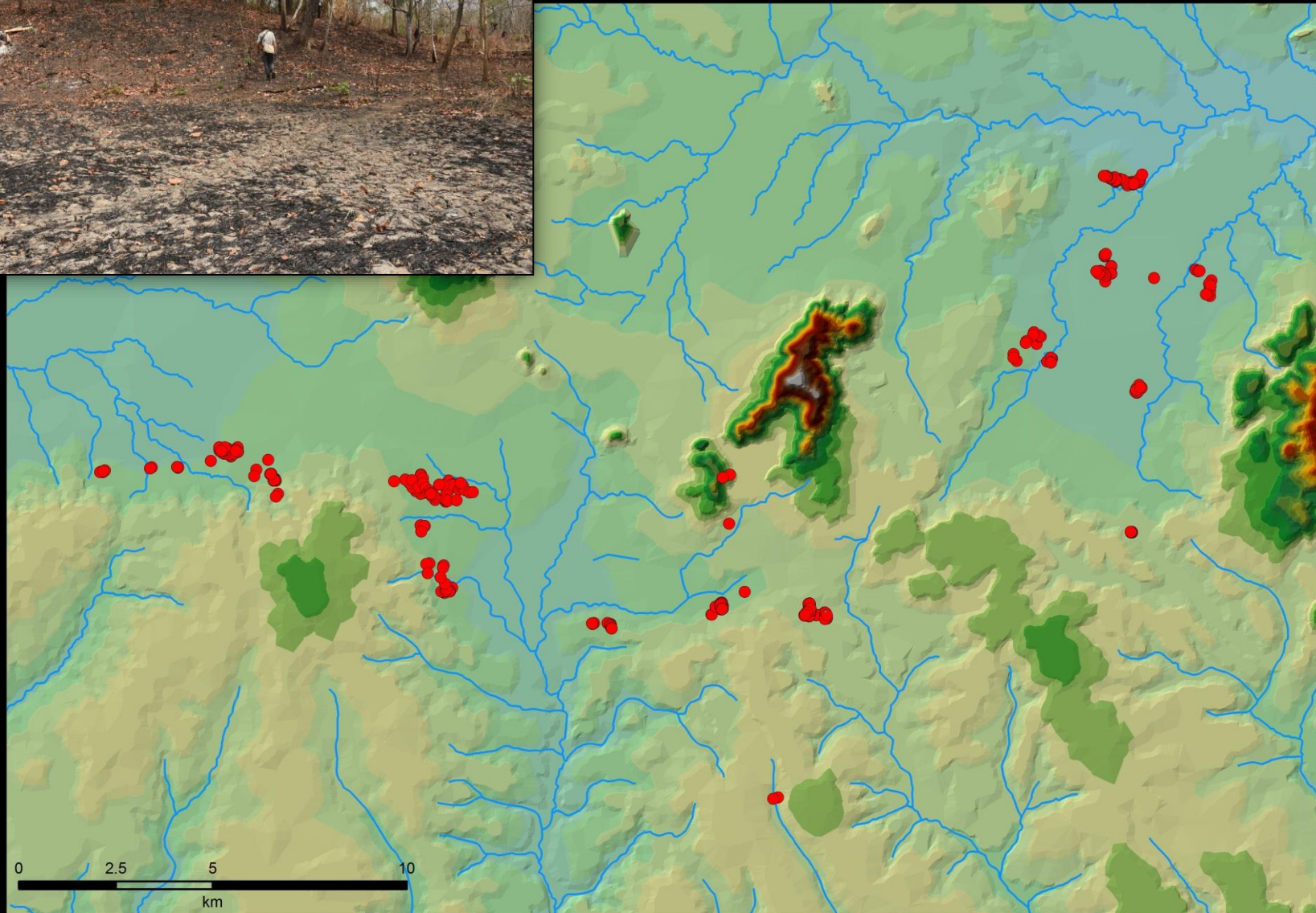
Prasat Hin  
Phanom Rung  
Buriram





Ta Prohm  
Inscription  
615 *bara* = ~114  
tons of iron  
required to build  
temple

# The Phnom Dek Iron Landscape



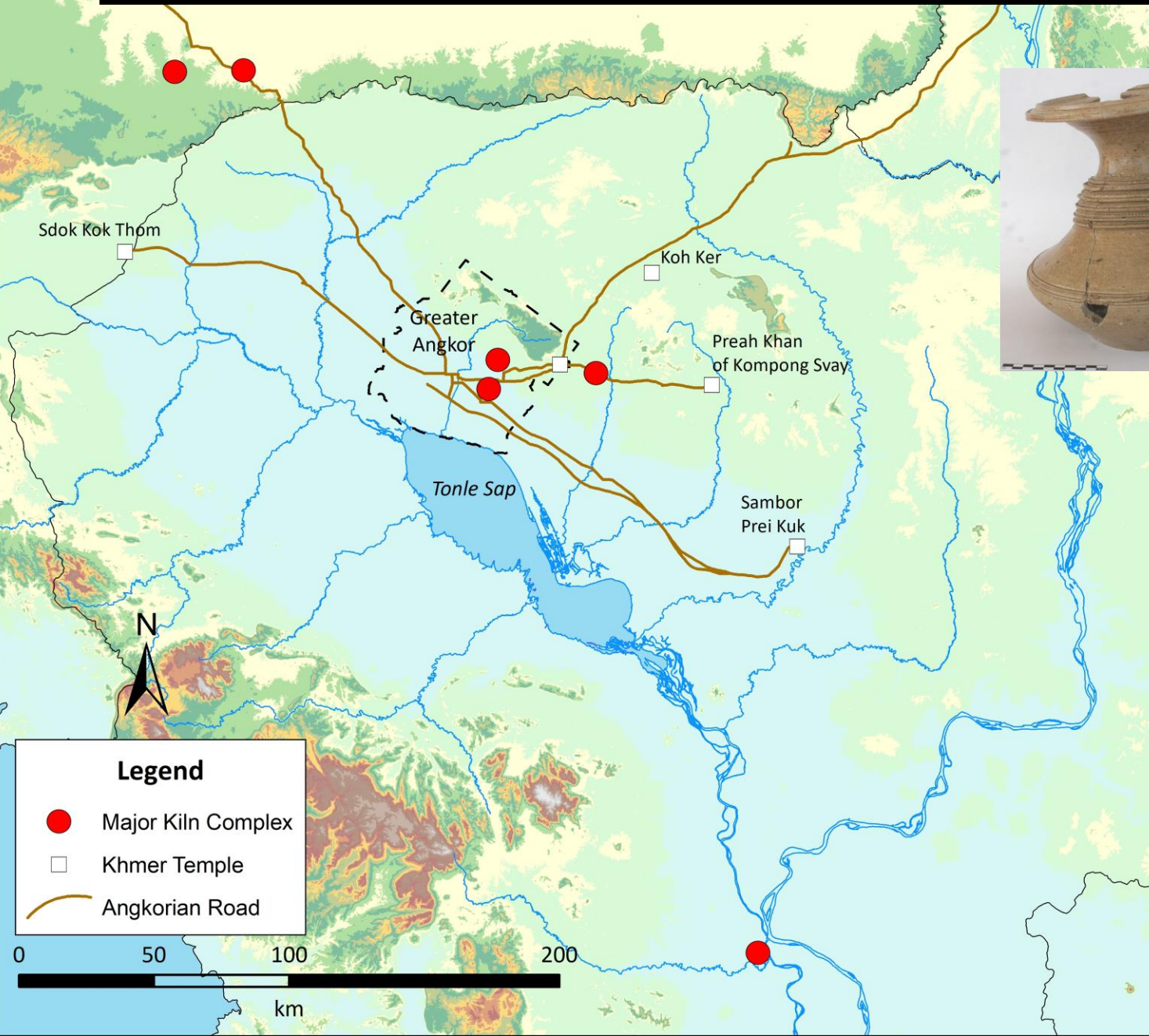


# Public Works West Baray/Mebon



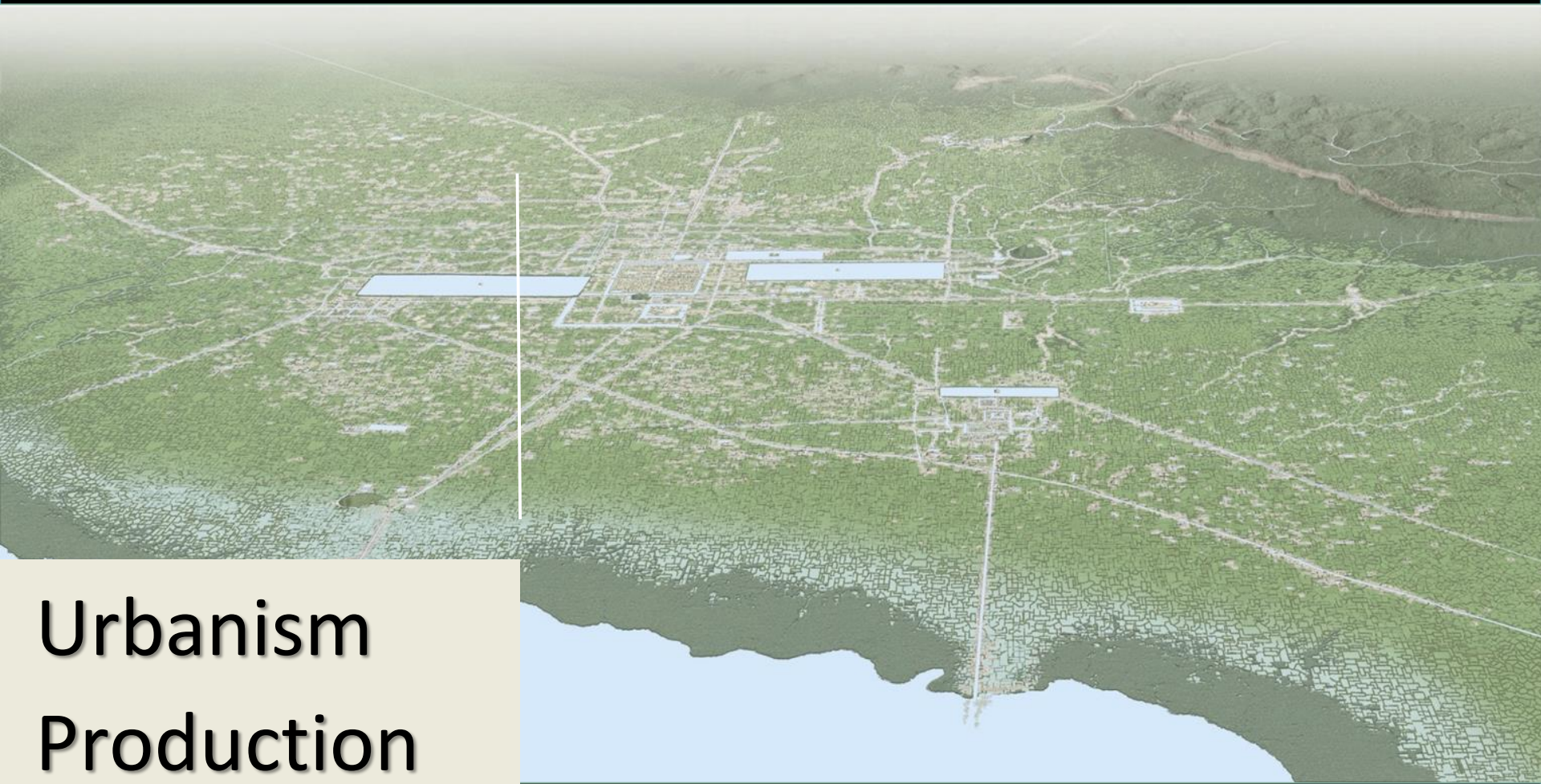
Repatriated Khmer stoneware ceramics  
from the Smithsonian Institution 2018

# Angkorian Stoneware Ceramic Kilns



Courtesy of M.  
Hendrickson & R.  
Chhay (APSARA)

# The Political Economy of Angkorian Urbanism



Urbanism  
Production  
Control

# Acknowledgments

- APSARA National Authority, Kingdom of Cambodia
- Ministry of Culture and Fine Arts, Kingdom of Cambodia
- Australia Research Council, National Science Foundation, Wenner-Gren Foundation, National Endowment for the Humanities, National Geographic Society





Special thanks to the Center for Khmer Studies for its many years of support to our broader community and for sponsoring today's presentation!