SPEAKER 2: MR PHON KASEKA

CHEUNG EK: SAFEGUARDING HERITAGE WITH THE LOCAL COMMUNITY AND GOVERNMENT

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WORKSHOP ON
THE HERITAGE OF ANCIENT AND URBAN SITES:
GIVING VOICE TO LOCAL PRIORITIES
14-15 MARCH 2016
SINGAPORE

ABSTRACT

Cheung Ek is an important complex of archaeological kilns, landscape features and other sites located in Phnom Penh's rapidly developing peri-urban area. Research and field schools have demonstrated that the kilns belong to a major ancient industrial ceramic production complex. There are at least 69 documented kilns. They are being rapidly destroyed. Research teams seek and promote involvement of local community members in their work. Informal interviews and dialogues further involve local community members. Their opinions, suggestions and advice are very important. There are no hindrances for local communities to voice concerns, although there is no formal policy of informed feedback collection and analysis. Systematically informing local stakeholders as well as government and non-government stakeholders of the nature of the sites and the various trade-offs between research, preservation, mitigation, and/or development will be useful. Subsequently systematic approaches to collecting and analysing 'informed' feedback will be critically important. Currently, local community members and developers primarily prioritize development. This causes conflict among government bodies designed to support preservation and development respectively[1].

BIODATA

Phon Kaseka is the Director of the Archaeology Department and a PhD candidate at the Royal Academy of Cambodia. His Cheung Ek work began in 2004-2005 with support from the NAGA Research Group. Since 2007, Phon Kaseka has conducted three additional field seasons at Cheung Ek with funding from organizations as diverse as the US Embassy, US-based NGOs, the Royal Academy and the Phnom Penh Municipality.

Phon Kaseka has undertaken archaeological research across Cambodia since 1999. His CV outlines the various field projects that he has directed in four provinces; all his Cheung Ek field investigations combine research with training undergraduate Archaeology students from the Royal University of Fine Arts (Phnom Penh). Phon Kaseka has worked collaborative with many foreign archaeological, and several international organizations. He has extensive administrative experience and logistical skills from his current Royal Academy position. His most recent archaeological work, a World Bank-sponsored project in Northwestern Cambodia, reflects his ability to design and complete archaeological research according to international standards.

[1] This also brings up an interesting paradox: what happens when two or more ministries have different ideas on development and preservation vis-à-vis split or different stakeholder groups? Voices are heard, but they are not always in agreement, and varying solutions come with tradeoffs. Determining acceptable tradeoffs and actions needed (as well as securing support for possible actions) can be difficult and complicated.

CONFERENCE PAPER
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FEB 2016

Abstract:

Cheung Ek is an important complex of archaeological kilns, landscape features and other sites located in Phnom Penh's rapidly developing peri-urban area. Research and field schools have demonstrated that the kilns belong to a major ancient industrial ceramic production complex. There are at least 69 documented kilns. They are being rapidly destroyed. Research teams seek and promote involvement of local community members in their work. Informal interviews and dialogues further involve local community members. Their opinions, suggestions and advice are very important. There are no hindrances for local communities to voice concerns, although there is no formal policy of informed feedback collection and analysis. Systematically informing local stakeholders as well as government and non-government stakeholders of the nature of the sites and the various trade-offs between research, preservation, mitigation, and/or development will be useful. Subsequently systematic approaches to collecting and analysing 'informed' feedback will be critically important. Currently, local community members and developers primarily prioritize development. This causes conflict among government bodies designed to support preservation and development respectively[2].

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Introduction:

The following subsections describe the Cheung Ek Site complex. Cheung Ek is well known for harbouring the famed Killing Fields of Cambodia's 1970s Khmer Rouge history. However, the unknown history is vastly deeper. Thus far, 69 ancient kilns and several landscape features have been identified. Most of the kilns produced a unique type of stoneware widely distributed in Cambodia. Several kilns have been mapped. A few kilns have been systematically excavated (Phon 2007, 2002). Ceramic assemblages have been analysed. Radiocarbon dates and stylistic analyses have been conducted. Several of the kilns have been destroyed or compromised through development and tomb construction (reuse of mounds and/or cultural deposits for tomb mound construction).

The site was formally identified in the late 1990s by an archaeology student from the Royal University of Fine Arts who discovered abundant ceramic fragments scattered on the surface in a location at the eastern area of Cheung Ek pagoda. Although Cheung Ek was described in previous books by French scholars who inventoried some of the known architectural elements (e.g., inscriptions, Linga, doorjambs, columns…etc), they did not mention the pottery production sites or surface remains. They may not have been aware of their existence.

Location:

The Cheung Ek archaeological site complex is located 5 km south of Phnom Penh City, Cambodia (Figure 1). The Cheung Ek sites cover a large area in two communes which over 7 km long and 3 km wide (21 km^2). Geographically, the site is located along a large lake also named "Cheung Ek Lake". The lake is connected to the Bassac River by a stream. The archaeological sites are proximate to the state owned and managed Killing Fields Museum Complex[3]. Cheung Ek is now part of the growing peri-urban and industrial area of Phnom Penh. It is witnessing rapid development. Development includes land modification such as bulldozing and filling. Land development also includes zoning and land-titling which affects policies and legal repercussions for various undertakings.

Site Complex:

Cheung Ek is one of numerous archaeological sites in the flood zone of the Lower Mekong Delta. However, Cheung Ek contains the only identified ancient pottery kilns in the region (lower Tonle Sap lake to the Mekong Delta—perhaps further north and west as well). One of the kilns has been radiocarbon dated[4] following recent test excavations. The samples range from the 5th-7th

[3] It is noted that the mass graves at the Killing Fields were occasionally excavated through archaeological sites as evidenced by pottery scatters and other remains visible on the surface and in stratigraphic profiles.
[4] Important note: The radiocarbon samples for the Cheung Ek kiln were analyzed by Rafter GNZ Science (special thanks is extended to Dr. Nancy Beaven); while the earthen wall dates discussed below were provided by NSF-Arizona AMS Laboratory).

centuries CE making it the oldest know kiln and kiln site in Southeast Asia. The radiocarbon dates do not indicate its entire temporal range of use or earliest date of construction. However, the pottery forms and styles are comparable to contemporaneous pottery assemblages in Angkor Borei[5] and Phnom Borei.[6]

Sixty-nine kilns were identified in an initial survey. Since 2012 three kilns have been excavated to understand: 1) the nature of the pottery assemblage (e.g., types, diversity); 2) kiln structure; 3) pottery and kiln technology; 4) dates of use; and, 5) economic and social factors related to pottery production, distribution and consumption. One of the tested kilns produced earthenware such as cooking pots, bowls, water containers, jars, small cups and *kendi* (a unique spouted water jar/pot). *Kendi* are the most prolific of all pottery types (generally a fine paste buff ware requiring skilled craftsmanship to produce[7]). Over 33% of excavated fragments are *kendi* fragments. It is inferred that potters at Cheung Ek had special skills for *kendi* production.

Two other stoneware producing kilns which were excavated in 2012 and 2013. Results indicate that the potters built an artificial mound before constructing a kiln structure. The mound could be oriented in any direction (i.e., wind or sun direction seemed irrelevant). What mattered most was topographic and production resource locations. They needed to choose a place where enough dry land, water, and soil were available.

One excavation at Mong Kiln indicated three kilns were built in different phases. When an old kiln was damaged or unusable, a new kiln would be constructed at the same location. However, the first kiln had to be backfilled before the new kiln was constructed.

[5] Angkor Borei is now widely believed to be the 1st-6th century Funan capital city; one of the earliest and largest walled urban sites in the region (Stark et al 1999; Stark and Bong 2001). It contains numerous structural, architectural, water control and landscape features; deeply stratified artifact bearing deposits; burials; and a 6.5 km earthen wall 20 meters wide (amorphic shape in line with topography and water control functions)(Stark et al 1999). Radiocarbon [C-14] and thermoluminscence [TL] dates extend to at least as far back to the first few centuries BCE (Bishop et al 2003; Bong 2003; Stark et al; Sanderson et al 2007; Stark 2006a, 2006b; 2003). Material cultural spans pre-Angkor, Ankgor and post-Angkor periods as well). There are numerous metal age to post-Angkor sites in the larger region—many of which belong to the same socio-cultural-economic nebula. Exotic material culture (e.g., glass beads, some pottery, Roman coins, etc.) demonstrates a significant extra-local trade and influence network extending to India, China and beyond.

[6] Phnom Borei contains contemporaneous Funan settlement sites. The sites are located a few km from the urban complex of Angkor Borei at the base of Phnom Borei hill near the well known temples of Phnom Da and Asram Maha Russei—early Angkorian and pre-Angkorian temples. The settlement sites have been surveyed and test excavated (reports available by Phon Kaseka, nd).

[7] Compositional analysis of the pottery has been conducted by Shawn Fehrenbach (2009; see also Latinis 2007; Latinis and Dega 209, 2011, 2012; Dega and Latinis 2014) He demonstrates that the pottery is indeed fine buff ware pottery and that the relationships between vessel form and composition could indicate different production techniques employed for different vessel types of vessels at that kiln, or, possibly even several groups of ceramic producers sharing the kiln.

Generally, kiln roofs are supported by internal columns. However, there is no evidence thus far to show how many columns at Cheung Ek were added to support roofs. Walls are also important components of kiln structures. Remains of the walls in the Mong Kiln are not vertical, but slant outward. The floor of the kiln is another important technological factor. Floors slope upwards at about 8 degrees. The kilns were updraft kilns constructed with subsurface fireboxes. Later kilns were built higher and bigger, but fireboxes remained below ground level.

Kiln construction at Cheung Ek developed from small-scale to large scale production over time. Newer (more recent) kilns appear larger and longer. This suggests that stoneware production increased to meet increased demand. Ceramic distribution and consumption was widely spread throughout Cambodia as indicated by the presence of Cheung Ek ceramics in numerous sites. Cheung Ek stoneware is prolifically found in sites to the south and north, and probably neighbouring countries. The dates of the stoneware kilns range from early 8th to early 13th centuries CE. The data provides useful comparison with kilns and pottery in the Angkor region and in the broader Southeast Asian context (Figures 2 and 3).

A unique large circular earthwork has been identified at Cheung Ek site. It is an earthen embankment/berm with a partial moat or ditch. Excavations revealed that the moat was absent at the western side of the circular earthwork. The earthwork is approximately 740 meters in diameter, 2.4 km in circumference and approximately 452,000.00 m^2 (Figure 4). The relationship to the kiln industry is unknown, but it likely serves as a water control feature for the area related to agriculture, aquaculture/fisheries, and settlement. Some parts of the site are being destroyed due to water erosion. The moat and wall are still visible in some areas.

The most likely function of the moat was to store water and transport water from the canal that connected Prek Tnout River to the moat. Currently, the rice fields are called *sre krom* by the villagers. *Sre krom* means lower rice field. These rice fields were used by villagers for rice production until recently when villagers sold their rice fields to people from Phnom Penh.

As described by local respondents, the water stored in the moat supplies water during the dry season to rice fields outside the circular earthwork at the east along the lake. Water can adequately circulate in the moat because of the moat's round shape. The moat is built on a higher level; 4 meters higher than the surrounding rice fields. When the water is released from a gate, the water flows to the east to feed the rice fields.

Based on 2007 excavations, the circular earthwork was also not built for habitation. The interior of the circular earthwork revealed no archaeological evidence to support habitation or settlement along the walls or the interior of the feature.

If the circular earthwork of Cheung Ek was not constructed for habitation, why it was built? The ethnographic and historic case mentioned above suggests water control and irrigation. Two

excavations were conducted in 2013 and 2015. Evidence in the form of structural design indicates the purpose of its construction was for water management, having the function of a *baray* (anthropogenic reservoir or water tank) for supplying water to rice fields for rice production in the dry season. However, if it served as water management akin to *baray*, why is the earthwork circular and not the standard rectangular or square shape typical of ancient Khmer design? Further research might find the answer why the circular earthwork at Cheung was constructed?

The radiocarbon samples of charcoal from the bottom of the moat dates to the 9th century CE. Thus, the moat was probably constructed in 9th century and the excavated soil was likely used to create the berm. It is not a prehistoric site as is the case with other well-known circular earthworks in Kompong Cham province, Cambodia and similar circular earthworks in southern Vietnam. The relation to moated sites in Thailand is unknown; but again, there is no evidence of a direct linkage, culturally or technologically.

Eleven Temple mounds are also identified at Cheung Ek. The temple foundations were probably built in Funan period. However, most of the mounds were completely destroyed. Archaeological evidence indicates the presence of architectural elements consistent with shrines or temples.

Temple or shrine architectural, epigraphic and statuary evidence recovered in the area are found at the Pagoda campus. They are sacred objects. These include *linga*, pedestals, lintels, door frames and inscriptions. In the early 20th century, a French scholar took one pre-Angkorian inscription, and a column from Cheung Ek pagoda along with another inscription from Toul Neakta Bak Kor to store at the National Museum. Those architectural elements date to the Pre-Angkorian period.

Even though Cheung Ek is located in lower flood area with a large lake existing, *trapeang* are also dug for the use in dry season. *Trapeang* are another typically Khmer type of water capture and control features, also providing a reservoir of storable water.

Importance of Cheung Ek Site Complex:

Cheung Ek is very unique site in Cambodia and the region. No other kiln complex exists in lower Mekong. It is one of a kind; and, one of the earliest kiln sites in Southeast Asia. The following list provides several 'importance' criteria that demonstrate Cheung Ek's uniqueness and high importance.

- Cheung Ek represents a sophisticated, large-scale ancient industry with wide distribution; there are many important research and heritage preservation implications.

- The sites have proven high research potential for regional and global discourse to include contributions to method and theory; especially ceramic technology, production and distribution as well as contributions to ancient economic and value chain models.
- Cheung Ek has multiple sites, features and periods of settlement and use. It provides a diverse set of heritage resources.
- Kiln-centered field research contributes to an international collaboration that studies Khmer stoneware kilns and their products; work involves staff and student training.
- Cheung Ek has been a field training center since 2007. It provides a more thorough field experiences to archaeology students and staff from the Royal University of Fine Arts (RUFA). Logistically, students and staff benefit from proximity to Phnom Penh. It provides a conveniently located and diverse training grounds. Many former students now working at the Ministry of Culture and Fine Arts, APSARA Authority, Preah Vihear National Authority, RUFA and elsewhere received training at Cheung Ek. Ground staff who worked for running the Indo-Pacific Prehistory Association organized in 2014 in Siem Reap, Cambodia were students who trained at the Cheung Ek Site as well.
- Cheung Ek has proven effectiveness for International field schools and training (again, good location and sites).
- Through the results from research and excavations at Cheung Ek, knowledge and education are disseminated publically through television, newspapers, magazines, social media and other means (e.g., word of mouth is still particularly influential); people are happy to learn and provide positive responses. The public education potential is high.
- Tourism can be linked to the Cheung EK Killing Field Museum visitation (i.e., the Killing Fields mass burial graves and part of the museum complex are within and technically part of the archaeological site complex as some mass graves were dug into archaeological deposits).
- Site information can be readily disseminated to tourists who visit the Killing Field Museum.
- Continued research and preservation at Cheung Ek fits within national, regional and world standards for cultural heritage preservation.

Threats:

The following list details the current threats to the site. The threats are primarily physical (i.e., destruction), but economic/financial and social threats could also be included. The impacts listed (high, moderate, low) refer to negative impacts or 'threats' to the archaeological sites/heritage assets (although a few positive impacts are listed[8])

- Development (high impacts)
    - Property and house development: Housing, mainly flats, are being constructed at Cheung Ek following city expansion. When land prices increased rapidly, more people moved to live at Cheung Ek leading to increased housing construction.

[8] Archaeological research and training is a positive impact. It helps with understanding, appreciation and skills training. Although archaeological excavations are destructive (excavations systematically dissect a site and remove contents), it is a research, learning and preservation undertaking. It becomes a mitigation strategy. It provides systematic recording that may otherwise be lost with development and site destruction. It also has the potential to identify important features that deserve more attention and possible preservation. Many of the artifacts are also preserved. Some sites can be developed into cost effective site museums. Economic returns from tourism may be limited, but social and educational returns are high.

  - Many villagers sell their land to rich investors from Phnom Penh. The new owners subsequently develop the land for various purposes. One owner built a new road which destroyed several ancient kilns. Many landowners also carve out small channels to identify property boundaries. Many of these channels have destroyed parts of kilns and habitation sites. Additionally, kiln and other archaeological mounds are mined for soil used for house building and other purposes.
  - The circular earthen-walled site is unique. Compared with circular earthworks in Kampong Cham and circular sites in Thailand, this site is vastly larger at 740 meters in diameter. Unfortunately this site is rapidly being destroyed by developers. A large water reservoir has been dug in the middle of the site for collecting road construction soil. A large road is also being built across the western part of the site. This activity is unchecked by the relevant authorities.
  - A former brick factory was built at Cheung Ek, but it has now moved to another area. However the prior factory construction led to some kiln destruction. Other impacts, such as soil mining for brick clays and other materials remain unknown.
  - Recently, a beer factory (Cambodia Beer Company) was built at the sites. A few kilns and some ancient habitation sites were destroyed during factory construction.
  - There are some industries for drainage production and a cement factory being built at Cheung Ek. These activities will lead to more site destruction.

- Soil Mining (high impacts)
  - Soil mining for road construction is another threat to the Cheung Ek site. The interior of the circular earthwork was an obvious source for construction-fill soils. Land owners sold the right to remove the circular earthwork soils by a road construction company. Bulldozers were used to remove the soil from the interior of the circular earthwork. The total area of the mining is more than one hectare. As a result of the bulldozing the area became a large pool filled with groundwater.
  - Soil mining also occurred at other kiln mounds. The landowners with kiln mounds located along a canal at the western side of the circular earthwork also sold the rights for soil removal. As a result three kilns were completely destroyed. All the soil and dirt are now in the main road leading from Glass Factory to the Prek Chrei Bridge. Remains of brick walls and pottery are scattered around the destroyed area (Picture 5).

- Population Increase (indirect high impacts; results in further land development)
  - The population of Phnom Penh is approaching two million people. With increased attraction to the city's presumed benefits and increasing problems with squatters and homeless, people will likely move to and manipulate land city (e.g., t Cheung Ek). Satellite-city and new factory planning and investment will likely increase local, government and foreign interests in development of these lands. With growing population, new families are developing new tracts of land for house construction. Sites may be altered or destroyed for housing construction with excess taken away for construction material outside of the immediate site area.

- Agriculture (moderate to low impacts)
  - This is the smallest scale of anthropogenic destruction, but still has an impact. Sites are cleared to provide soil elsewhere or are leveled to increase agricultural holdings. Farmers simply do not know what they are destroying, or more likely, the economic benefits to themselves and the lack of heritage law enforcement outweigh the

concern for heritage sites. It is possible, but will take effort, to make preserving a site more economical than destroying it for other purposes.
    - Farming is mainly a low impact activity at Cheung Ek. Many people still produce rice and other crops in their property. They stay away from archaeological sites if they encounter them.

- Natural (low impact)
    - The site is located in an active fluvial flood plain area. Erosion continues to alter the landscape. Wind and rain have an impact as well. Increased alteration of water flows from the main rivers, canals will have an effect. Reduced vegetation may increase erosion and/or siltation in some areas.

- Pagoda construction (low impact)
    - Pagoda renovations and other undertakings have marginal impacts. In fact, the pagodas have a positive role in protecting some of the ancient artifacts in the area.

- Chinese tombs and cemeteries; historic and modern (past impacts: moderate to high; current impacts: decreasing)
    - In the 1960s, the Chinese community used the Cheung Ek area for a cemetery (mainly the area close to the lake). Hundreds of Chinese tombs were constructed. Some of them were built on kilns. Some are upgraded annually, but the current negative impacts to the kilns have decreased as tombs are no longer being prolifically built on the kiln mounds. The historic Chinese tombs, however, are another type of heritage asset. This needs further 'inclusive' consideration.
    - The Cheung EK Killing Field Museum contains several Chinese tombs built in site before Khmer Rouge chose this area for mass burial pits. Like the Chinese tombs, the Killing Fields mass graves compromised archaeological sites. However, the Killing Fields has become an important heritage/cultural site.

- Zoning (unknown impacts; potential for negative and positive)
    - Most of the area in Cheung Ek is likely slated for new city construction zoning; called "Green City". Detailed plans are still being negotiated. This may be very harmful to the sites. The urban growth zoning increases the property value and leads to land development and site destruction, but not preservation, mitigation or research efforts (Picture 8, 9, 10 and 11).
    - If there were a heritage protection zone set in certain areas, then zoning would have a positive impact or no negative impact. Or, if zoning required mitigation plans and action to effectively deal with the sites (e.g., research first, record and collect data, preserve select aspects, etc.), negative impacts would be reduced.

- Environment/Ecology (high impact)
    - Sewage from Phnom Penh is channeled to the lake. The water system was part of ancient water management system for agriculture, settlement and production. Sewage negatively affects local fisheries, agriculture and household use water. It destroys the site as an ancient agricultural and fisheries water control mechanism.

What does the local community currently know?

The local community did not know heritage assets, particularly the kilns, existed in their area. According to a legend, however, some people were aware that the area used to have a lot of pots that they could ask the [ancestral] spirits to use. Pots used for ritual purposes needed to be returned after use. After a while, people became greedy. They did not return the pots after using them. Since then, the spirit(s) stopped providing pots to the villagers. Some people also believe that pottery at Cheung Ek was produced by Cham people many years ago.

After research carried out at Cheung Ek from 2002 to 2015, people at Cheung Ek became more aware of the sites through the research teams, TV, radio, newspapers, magazines and even discussions with the researchers. They have a new appreciation of the sites. And research results, although property development is still a priority for many.

How do the locals make informed decisions (if information and awareness is lacking)?

The locals usually do not make decisions as a community unless it is a community-based sacred area or a property/economic-based issue. They primarily get their information about the site from research activities, word of mouth, and media coverage (e.g., television, radio, newspapers, and social media). There is no formal mechanism, policy or protocol other than state-level preservation policies of priority assets. However, researchers are typically closely involved with locals during survey, research, excavation, museum planning and related activities. This is informal but expected interaction—part of normative cultural respect in Cambodia.

What do local community stakeholders want?

Development is the key priority at Cheung Ek. Many developers reach out to the people in order to buy property for the future construction. Essentially, they are land and development speculators. Many local residents and other stakeholders (e.g., developers, business people) want development in the area to increase the land value. Many people have sold land with archaeological sites (many times, unknowingly) to developers[9]. They often sell land so that they can raise money to build a bigger house and provide more cash capital for the families. There have been many changes at Cheung Ek from traditional wooden houses to stone, brick and cement houses. People make a considerable profit from selling their property. In 2007, when the research team conducted excavations, the land price was 3 US Dollars per square meter. In 2015, the land price increased to 80 US Dollars per square meter.

However, some older people who were born in the area want to keep many old objects. The Monks and Achar in the pagoda are not happy with archaeological site disappearance. They have tried to store some artefacts such as lintels, pedestals, door-frames and linga inside the pagoda. Nevertheless, unless a site or object has some ritual or sacred power value, or is associated with a sacred spirit, most people are less concerned and less fearful with loss or destruction (i.e., there are no negative consequences; such as bad luck or misfortune).

What do developers want (which may include individual property owners)?

Developers generally view interest in heritage and archaeology as a potential threat. They fear the government may protect and rezone the property; locals and developers will lose money/investment—possibly their property and/or business opportunities. The developers are not always happy with the presence of any archaeological sites in their property. Some of them destroy the sites by bulldozer to get rid of the sites before the research team can record and assess them. For example, one undisturbed kiln was identified in 2012 during kiln excavations supported by Friends of Khmer Culture. It is now completely destroyed. This is a particularly painful loss because the research team planned to conduct future excavations at the kiln after we successfully secured funding (Picture 6 and 7).

How do locals voice their perceptions and opinions on what to do with heritage resources?:

People can informally raise their voice and offer their opinions and suggestions on whatever issues they wish. There is no formal restriction; no punishment; no threat. In fact, we encourage them to voice their ideas. However, there are some ‘pressures’, ‘influences’ and ‘social perceptions’ that need to be considered. For example, they could raise their voice in front of the research team

[9] Many people who have sold land may not have known archaeological sites existed on the property, or, not understood the nature of the site or the implications of site destruction during land clearance and modification for development.

about the heritage preservation, but they believe some things are out of their control. One man who worked with the team in 2012 sated: "The circular earthwork should be partly preserved, but it is not my decision. The site belongs to the rich now. I cannot say beyond this." In fact, he learned a lot from working at the excavation with the excavation crew. He then knew the importance of the site from his interaction with the research team[10].

There are no local organic organizations or heritage NGOs established in the area. There are some organizations such as Heritage Watch, Friends of Khmer Culture (FOKC), and Center for Khmer Studies that often assist with national protection efforts, preservation and research (FOKC also assists with museums and other endeavours such as the Memot Center and museum in Kampong Cham). These are helpful. However, they are external rather than internal with other political, social and economic factors to consider. Nevertheless, the local communities are not restricted in forming their own heritage groups or organizations. They could if they wanted. However, they would likely need education, guidance, support and a strong incentive that outweighs the economic advantage for property development.

What does the RAC and the Ministry do to increase local community awareness, include their opinions and increase informed decision making?

- Interact:
    - There are a lot of face-to-face interactions and working relations during research, survey and excavations. It is informal, but well-practiced to inform locals, seek permission and discuss activities.
- Engage:
    - This is similar to interactions. We seek to more formally and thoroughly engage through dialogues, hiring local laborers, seeking feedback, etc. (see below).

- Obtain feedback during the survey and research process:
    - Landowners.
    - Local elders, leaders, religious representatives (mostly oral history, history, land use, sites and ecology/environment).
    - Informal interviews.
    - Informal discussions and interviews.

- Hire local workers to be involved with research projects:
    - Enjoy the employment opportunity.
    - Enjoy working with the international teams (they gain a lot of knowledge)
    - Have an opportunity to learn about the history and heritage; especially the importance of the ceramic industry and technology.
    - Provide important feedback.

- Conferences:
    - Conferences have been held with government representatives from communes, districts and municipalities with researchers.

[10] Individuals like this are useful at discussions with locals to enhance informed dialogues and decision making.

- The Royal Academy of Cambodia organized conferences on heritage preservation in Cambodia with topics focusing on Cheung Ek CRM (cultural resource management) and preservation.
- Participants learned a lot from the conferences.
- The media transmitted the conference events to the public, which had a very useful extra-local knowledge dissemination result.

- Media (TV, Newspaper, Magazine, Radio, Social Media):
  - Media successfully transmits the result of the research to the public. When the research and excavations were conducted at the site, the media actively approached teams for public interest stories and information to disseminate through television, radio, newspapers and magazines. The media actually takes a proactive role in the process. This is good. They often seek us, rather than our teams having to seek them. It demonstrates considerable responsibility and concern on their behalf.
  - Social media has a high impact on awareness (not necessarily action; although crowd sourcing for research funds, for example, is increasingly important—e.g., Vouern Vuthy's interest in skeletal remains research, etc. for KR victims). Facebook postings, for example, quickly reach a large national and international audience.

- Feedback from developers through media:
  - This is an interesting case. It was reactionary. Developers came to discuss with researchers after media exposure. They thought the government might take land.
  - After the media released news about the research, excavations, and results of the presence and nature of the existing heritage, the developers were not happy with the media and the researchers. Developers want to recognize any archaeological sites at Cheung Ek. From day one, they consistently destroy sites if a site is securely identified[11].

Conclusion: Local Voice, Key Issues, and Recommendations:

The locals have no problems expressing their "voice". There are no hindrances or major obstacles preventing them from stating their opinions to government or non-government actors. There are many platforms they can use (e.g., social media, standard media, community meetings, government forums, conferences, dialogues, etc.). There are many people they can freely talk to. Most residents who pay attention to the projects are happy the research teams have conducted work in the area; bringing notoriety and new information on the history and technology.

The problem is that most community members have little awareness and understanding of the sites, the importance, and the implications of site destruction. They view the kilns as 'interesting' but not necessarily a critical aspect of identity, history, and/or social and economic potential worth preserving. The economic returns for property development are a priority whether or not it results in site destruction. There are also no negative consequences, such as tangible fines for site

[11] This remains a big problem. Of course, the locals want development, increased property value, etc. and do not feel they have a more powerful voice even if they wanted preservation. It is unfortunate that developers do not work with researchers and locals to find a trade-off solution (e.g., partial mitigation through temporary preservation, recording and data collection, research, etc.).

destruction, or, intangible threats such as misfortune and bad luck from ancestral spirits for disturbing remains.

Another part of the problem stems from the vast number of ancient temples and temple complexes in Cambodia, such as Angkor Wat. These major sites are primary assets for economic, social, religious and identity reasons. For example, millions of tourists visit Angkor every year with tourism being one of Cambodia's leading industries. Also, Angkor Wat is a preeminent social identity icon—depicted on the national flag. Thus, by comparison, sites such as Cheung Ek are small and negligible from the local perspectives (often the tourist and international community as well). The Killing Fields sites also diminish the importance of the Cheung Ek kiln archaeological sites in a similar fashion. This perception also pervades many government bodies and development industries as well.

This is a problem for the government in which separate ministries may have competing goals. The Ministry of Culture and fine Arts (MoCFA) is responsible for identifying, researching, protecting and preserving important heritage assets for a wide spectrum of stakeholders—local and global. On the other hand, other Ministries are responsible for increasing economic, social and physical development to meet the desires of the residents. Additionally, the communities may be divided—with some promoting research and preservation while other promoting development. Most would agree that research as a mitigation strategy before site destruction is good, but it is time consuming and expensive. Resources are too limited to realistically research and protect an adequate sample.

Another problem is the local belief on what needs to be protected and preserved. If a site is associated with a local spirit (e.g., *neak ta*), local communities tend to protect the site. However, it is not the site that's being protected; rather, it's the 'residence of the spirit' that should not be disturbed. If the spirit is negatively disturbed, the spirit could cause ill fortune and various problems. Areas not associated with spirits are essentially 'disturbable' (i.e., open game for developers, looters, etc.).

RAC and the MoCFA have always been interested in local inclusion. They are very supportive of assisting locals to voice local concerns—giving them "voice" and opportunities to voice their desires, opinions and advice. However, the local concerns do not always agree with goals of RAC and the MoCFA. Simply stated, RAC and MoCFA have many different stakeholder groups to consider, and these stakeholder groups may be prioritized differently (e.g., national, regional, and global interest groups; research communities; etc.). Local communities are generally concerned with themselves as the priority stakeholder group (and perhaps rightly so). Developers also prioritize local communities and their own interests (i.e., their companies, businesses, investors) vis-à-vis development and economic gains. Other Ministries also prioritize development and economic growth [not necessarily preservation of heritage assets] for local stakeholders, national interests and other investors.

With this in mind, it is recommended to increase efforts to inform communities, developers, government bodies, NGOs and international organizations of the nature and importance of the sites as well as the trade-offs and consequences of preservation, partial preservation, and/or development. Once adequately informed, systematically obtaining and analysing feedback will be helpful. Interviews, focus groups, and dialogues will be useful. In the case of disagreement or conflict, realistic solutions will need to be found. Disagreements will likely need to be mediated by local to national government 'informed' authorities (i.e., people with professionally informed understanding of the sites and trade-offs for different potential activities related to the sites). Researchers can play a significant role in mitigation and professionally informing stakeholder groups. Thus, it may be important to revisit, revise, devise and implement more specific policies with enough flexibility to address not only Cheung Ek, but other cases faced throughout the country. The role of NGOs or local community organizations may be helpful as well; but can also cause problems, particularly if they have various political agendas. Again, this needs careful thought and planning for both Cheung Ek and innumerable sites throughout Cambodia. It needs to be soon, however, as many sites are disappearing and they are non-renewable resources.

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Figures:

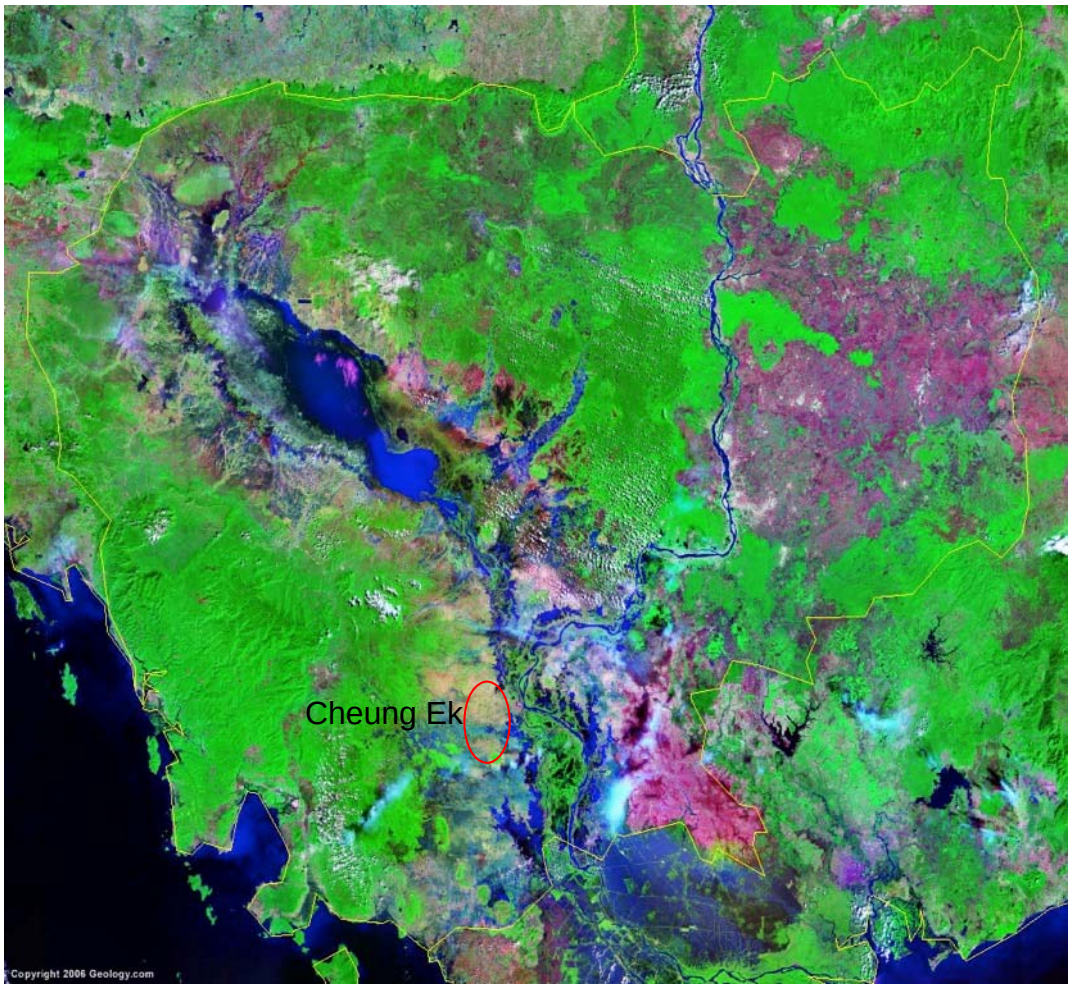

Figure 1: Map of Cambodia highlighting Cheung Ek Archaeological Site Complex

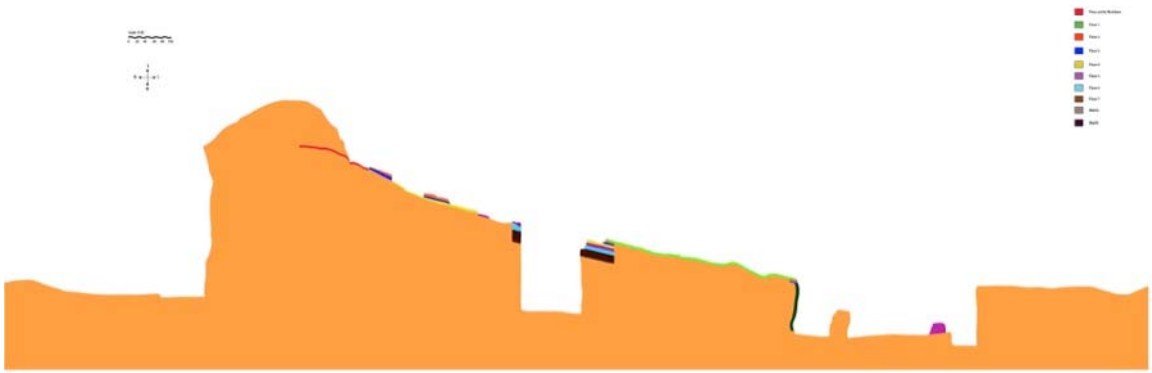

Figure 2: Profile of Kiln 17 after excavation in 2012

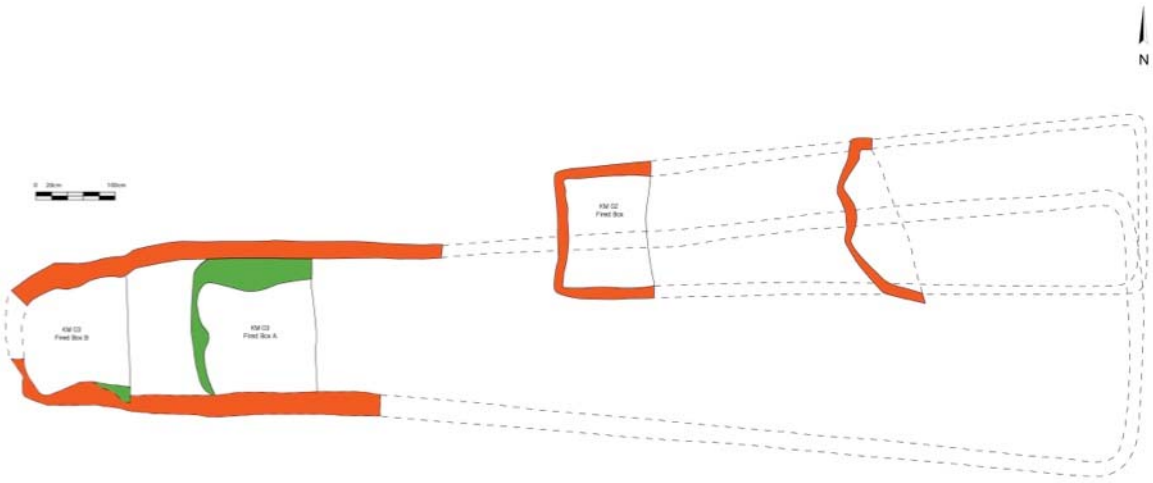

Figure 3: Plan of Mong Kiln after excavation in 2013

Figure 4: Cheung Ek circular earthwork from aerial photography in 2007

Figure 5: Bulldozer mining soil within the circular earthwork; for road construction in 2006

Figure 6: Kiln 17 after clearing vegetation prior to excavations in August 2012

Figure 7: Kiln 17 after bulldozer removed the whole structure; red fragments from kiln walls and floor scatters remain on the surface

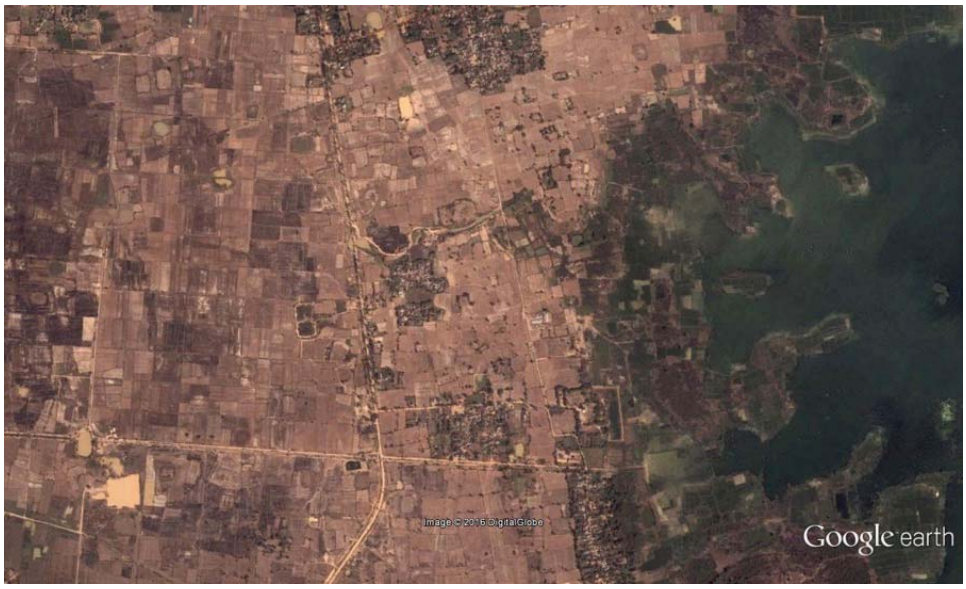

Figure 8: General view of landscape in 2003; no factories and housing built on the sites (Source: Google Earth 2003)

Figure 9: View of landscape at the same location with Cambodia Beer Factory and several new houses (Google Earth October 2015)

Figure 10: View in 2003 of Cheung Ek Lake with no road construction (Google Earth 2003)

Figure 11: View in 2015 of Cheung Ek Lake with road construction from north to south across the lake (Google Earth October 2015)