# Project Approach to the Establishment of Underwater Heritage Management in the Kingdom of Cambodia

Heng Kamsan

### Abstract

The establishment of Underwater Heritage Management under the leadership of Cambodia's Ministry of Culture and Fine Arts started a project to set boundaries and recognize limitations in its ability to oversee activities in underwater cultural heritage (UCH) management. The United Nations Educational, Scientific and Cultural Organization's (UNESCO) 2001 Convention on the Protection of Underwater Cultural Heritage and the UNCLOS III International Law of the Sea were adopted in November 2007 In 2011 Cambodia is the only Southeast Asian country to ratify the convention. This paper will provide an outline of the bureaucracy and project development currently ongoing in Cambodia. Details will be provided on the initiation of structural management and of limitations authorities must consider when establishing proposed project outcomes.

# I. Introduction

Cambodia has a long and important maritime history. The 2001 Convention was adopted in June 2006 with the intention to define Cambodian UCH and protect it for future generations. What is the project approach to Underwater Heritage Management in the Kingdom of Cambodia? All operations are run under the Ministry of Culture and Fine Arts with the following common characteristics: performed by people; generally constrained by limited resources; requirements in planning, execution, and control. The Ministry of Culture and Fine Arts (henceforth the Ministry) assigned a Director General of Cultural Heritage to supervise. The Underwater Cultural Heritage Unit was established by the Ministry since January 2011 which consists of 11 members, one director, secretariat, and research team.

"Project Start-UP" provides the basic framework in establishing subsequent projects. The proposed development entails a series of projects with the following parameters: define requirements; identify expected outcomes; results; fixed start and end dates; and extent of available budget/resources. Authorities must first define their expected results. A mission statement and name for the organization may be the first order of business. After the mandate has been established and a "project manager" (i.e. Ministry Director) assigned, the project starts. The end date is based on resources and limitations in the following factors: maritime cultural property, limits of authority on the sea and interior waters (lakes, rivers, baray [ancient Khmer reservoir); personnel, skills, and equipment. At this stage a comprehensive view of future requirements should begin to take shape (i.e. conceiving Phase 2, 3, 4, 5) and where it is anticipated that the organization will be in 5 years or more. With each project the following takes place in this order:

- 1. The Define phase: establish the plan; define what is to be accomplished and WHY.
- 2. The Start phase: Organization of people and equipment involved.
- 3. The Perform phase: Go do it! Track progress and maintain control while encouraging performance.
- 4. The Close phase: STOP! What are the results?

# II. Project Start-UP

### A) Phase 1

Projects are often implemented to achieve an organization's strategic plan. Operations and projects differ in that operations are ongoing and often the result of a project or projects, while projects are temporary and unique. According to the Project Management Institute (PMBOK) Guide a project is a temporary endeavor undertaken to create a unique product or service". The terms "temporary" denote a finite/defined beginning and end, and "unique" means that the product or service is in some way distinguishable from others.

A project may be undertaken at almost any level within an organization. It may involve one or more people and run over a few weeks to several years. In many cases a project may cross inter-organizational boundaries and involve organizations that are outside the perimeters of control.

Phase 1 is "Project Start-UP" or the basis for all that is to follow. Once the basic framework is established "Project Start-UP" would be complete and subsequent phases of the project initiated. Once the project is complete another project would be established to take the Ministries efforts to the next stage of development. Subsequent projects are expected to help in the strengthening and growth of the organization.

### i)- Temporary

"Temporary" means that every project has a definite beginning and end (PMBOK p.5 see *footnote*). Temporary does not always mean short duration and some projects can last for several years until the desired results are achieved. However, a project has a definite end and cannot and should not be construed as an ongoing effort. The difference between a project and operations is that is a project ceases when the declared objectives are met, while operations adapt a new set of objectives and continue to work. The end is reached when the project objectives are achieved; or it becomes clear that the project objectives cannot be met; or the need for the project no longer exists and the project is terminated.

### ii)- Unique

Projects involve doing something that has not been done previously. The establishment of a new department of underwater is unique even though the organization to which it will belong is large. The uniqueness is in the contents and context in which the organization is formed.

### iii)- Progressive Elaboration

Progressive elaboration is a characteristic of projects that integrates the concepts of temporary and unique (PMBOK Guide p.5). Because of the uniqueness the project must be progressively elaborated. "Progressively" means gradual movement, proceeding in stages or development towards a destination or more advanced state; while "elaboration" means involving many carefully arranged parts; detailed and complicated, to develop or present in further detail. Initially broad elements are defined early in the project and progressively elaborated while the scope of work remains consistent.

### III. The Project

All projects must meet the formal commitments made to the world community in complying with the 2001 Convention and UNCLOS III (1985). The unique product or service of a project

is run under a specialized organization within the existing framework of the Ministry that can implement and sustain the Cambodian commitment to underwater heritage management. the PROJECT is to develop the framework for an Underwater Heritage Management Unit within the existing framework of the Ministry and integrate the Unit's objectives with those of other Ministries and government bodies.

### CONCEIVE=DEFINE=START=PERFORM=CLOSE The idea= The plan=The team=The work=The finish

### A) Defining Requirements:

- 1- Specific outcomes: results
- 2- Define start and end dates
- 3-Establish budgets/resources: people, funds, equipment, facilities, and information.

### B) What are the results?

Before results can really be defined authorities must start the process by defining what desired results are expected.

The results may simply be an interpretation of the 2001 Convention and how it applies to Cambodia or the required and expected results may be more complex. A mission statement and a basic name for the organization may be the first order of business.

After the mandate has been established and a "project manager" (Ministry Director) assigned the project starts. The end date can now be set based on requirements of resources and definition of terms:

1- Maritime cultural property

- 2-Limits of authority on the sea and interior
- 3- Authority under existing Cambodia law
- 4- What personnel and skills are needed?
- 5- What equipment is required and when

### IV. The background of the Kingdom of Cambodia

### A)- Geographical setting

Situated in the Southeast Asia Region, Kingdom of Cambodia forms part of the south portion of the Indochinese Peninsula between latitude 10° and 15° north and longitude 102° and 108° east. It is bounded on the north by Laos, on the east and southeast by Vietnam, and on the west and northwest by Thailand. In the southwest, Cambodia is bordered by the Gulf of Thailand (by the three provinces Koh Kong, Sihanoukville and Kampot) with a coastline of 435 kilometers (km). To the southeast of the country lies the delta of the Mekong River.



Figure 1. Map indicating Cambodian waterways and plains (Encarta 2005)

The capital and largest city of the Kingdom of Cambodia is Phnom Penh, sited at Chaktomuk, which translated means "four faces", this relates to English as the geographical confluence of four rivers - the Upper and Lower Mekong, the Tonle Sap and the Bassac (MC-DAI 1997). The city traditionally has been a commercial centre for the Mekong Valley with facilities for transportation by air, rail, river, and highway. Phnom Penh today, as it was in history, is a major river port with an outlet to the South China Sea through the Mekong Delta in Vietnam.

Cambodia's most important river and waterway is the Mekong River, the longest river in Southeast Asia and the tenth largest in the world. Originating from the Chinese Himalayas, it runs through Myanmar, Laos, Thailand, Cambodia and Vietnam before flowing into the South China Sea. The Mekong River runs southward through Cambodia for 486 km passing Phnom Penh where it divides into the aforementioned rivers. Both the Tonle Sap Lake and the Mekong River are the hub of Cambodia's economy, transportation, and supports fisheries, agricultural irrigation (particularly important for rice production), and other cultural activities (Choulean, *et al.* 1996).



Figure 2. Satellite image of Phnom Penh showing the crossing Mekong and Tonle Sap in front of the city (Phnom Penh développement urbain et patrimoine, MC-DAI 1997)

There are several other important river networks in Cambodia. To name a few, they include the Battambang rivers (centered on the Sangke River), the Stung Treng group (the Sesan, Sekong and Srepok Rivers), and the Sen River (Kompong Thom).

### B) Historical Review of Waterways in Cambodia

Waterways have been and are important elements for communication. They are the most reliable natural feature to support transportation, thus providing passage for the movement of people, trade and culture. Maritime relations were established early between India, China, and the Arabs and then firmed between various parts of the coast of the Indochinese peninsula, the Malay Peninsula, the islands of Sunda in Indonesia and Japan (MC-DAI 1997). However, well before the arrival of foreign navigators the local populations living along the littoral of rivers had established their own fleets of ships and built cross-community relationships due largely to continual exchanges along the coasts (MC-DAI 1997). The river network provided the grid along which settlements were established, of which the Mekong River remains the most important feature.

Further to the southeast, another city contemporary to Angkor Borei, was built on the coast. It was once the Gulf of Siam, now named Oc-Eo (in present day Vietnam). This was a Funan site (Pélliot 1903) and an important port where foreign merchants came to settle since sea routes from India and the Malay Peninsula probably ended here. The exterior wall of the Oc-Eo site consisted of four embankments with five moats. The principal axis of the site was probably a canal, and the site lay at the heart of a regional network of waterways. Aerial photographs reveal a large network of waterways, dug by humans, which served as drainage channels and irrigation canals. This network of canals, interconnected with each other and to rivers was also used for water traffic between population centers found along the Bassac and Mekong Rivers. In areas close to the sea, this system of waterways helped to regulate the degree of salinization from the sea. Waterways in the Oc-Eo region seem to have run from north-northeast to south-southwest, following the general gentle slope of the terrain.

# C) Natural Environmental influences on the Typology of Khmer Traditional Boats

Cambodia is located in a tropical region and under the influence of seasonal monsoons. These weather patterns provide abundant water and forests are a dominant element in the Eco-Environment of the Kingdom of Cambodia. During the wet season access by land is sometimes difficult as the region is often penetrated by floodwaters. Winds are moderate and predictable with monsoons blowing from the west or south in May-August and northwest or northeast in December-March. The temperature of freshwater is uniform, encouraging fisheries and there is an abundance of wood near the river banks suitable for boat-building. These access factors were conducive for our Khmer ancestors. They used the waterways and maritime sea-lanes to supply the needs of their daily life. Artificial canals connected rivers or the Great Lake to cities and villages which required many kinds of craft to move over.

It is unfortunate that today some types of traditional boats, especially sea-craft, have disappeared. Traditional boats are described in detail below. The information is primarily focused on the riverine boats that ply the Mekong River, the Tonle Sap and the Great Lake. It is sometimes difficult to precisely define the function or record the original name of boats so they are identified by either method and/or materials-used in their construction:

- ▶ Royal Barge is called Tuok Ke Hauv (early 20<sup>th</sup> Century)
- ▶ Boat Cabin is called Tuok Koeng (late 16<sup>th</sup> century)
- ▶ Racing Boats is called Tuok Ngor (Angkor period «802-1432»)
- Sugar Palm Trunk Boat is called Tuok Thnaot (French Colonia «1863-1953»)
- Touk Mead or Tuok Bilan (late 20<sup>th</sup> century)
- Bamboo Raft in called Kbone Russei (Angkor period «802-1432»)
- ▶ Fishing Boats (early 20<sup>th</sup> century)
- ▶ Pleasure Craft (Early 20<sup>th</sup> century)
- ▶ Ferry Boats (late 20<sup>th</sup> century)
- ▶ House Boats (around 17<sup>th</sup> century?)



Figure 3a. Royal Barge called Tuok Ke Hauv, early 20<sup>th</sup> Century (National Museum), historic photographs



Figure 3b. Royal Barge called Tuok Ke Hauv, early 20<sup>th</sup> Century (National Museum) (cont.), modern photographs

# V. Notes on underwater archaeology that provide scope to current and future project requirements

Underwater archaeology fieldwork is not unlike its parallel sub-discipline of terrestrial approaches, in that it requires broad scanning methods and detailed visual inspection. The photography, recording, and surveying use the same general principles as on land, however it is more time consuming, cumbersome and dangerous.

## A) The assessment process of underwater archaeology:

i) Site identification: chronological position, date and nature of the site fundamentals

ii) Contents of the site: what type of evidence is expected to be encountered will dictate the excavation strategy

iii) Condition: what are the condition of the site as well as the conditions at the site (depth, currents, boat traffic i.e. in a port, or offshore)

iv) Recovery techniques: what if anything will be recovered and how, and the resources that make recovery possible

v) Post-excavation/recovery: what samples should be considered for analysis, specialists need, and the specific requirements of the post-excavation / recovery

vi) Conservation requirements: limiting exposure to air of fragile artifacts, and facilities to care for the immediate and long term preservation of organic and fragile finds.

# B) General view of UCH

Not all underwater archaeology concerns ships. In areas where the land has been altered either naturally or manmade, the possibility of human habitation exists that should be explored and studied. Canals, wetlands<sup>1</sup> and other manmade engineering features make for possible sites too. Sites are evaluated according to the following:

1. Site discovery

- 2. Initial assessment and research design
- 3. Excavation
- 4a. Feature and artifact recording and rising
- 4b. Structural recording, mapping and tracing
- 5a. Artifact and Spatial Analysis: activity area
- 5b. Structural disassembly, raise; record; rebury Cargo lading, ballasting
- 6a. Shipboard life
- 6b. Shipbuilding techniques

# VII. 2001 Convention

This section is to provide clarity as to what Cambodian authorities understand the 2001 Convention to entail. It is a complement to other like international conventions.

1-Is a comprehensive international instrument on the protection of maritime cultural property.

2-The convention fills the gaps in the UN Convention on the Law of the Sea

Imbedded within the charter is the need for building capacity for heritage management and conservation of artifacts in the coastal zone of the Kingdom of Cambodia. Capacity building denotes the development of a core group of highly motivated professionals to manage the heritage and cultural assets associated with the coastal zone and inland waterways.

# VIII. Objectives

The team must be able to develop and expand six key objectives:

### A) Knowledge and understanding

i) Maritime archaeology management;

- ii) Threats to underwater cultural heritage;
- iii) Role of the maritime museum; public interpretation;
- iv) Marine archaeological conservation; and

v) Marine archaeological protection.

### **B)** Cognitive mastery

i) Assessment of maritime landscapes with respect to the application of management skills;

ii) Assimilate issues relating to legislation and preservation of marine archaeological resources;

iii) Public awareness, and best practices of marine artifact conservation; and

iv) Independent research.

### **C)** Practical application

i) Assist in establishing framework and legislative systems changes to benefit protection of heritage;

ii) Apply best in class conservation, management, and preservation practices; and

iii) Develop future framework and systems.

### D) Transferable skills

i) Research;

ii) Conferences and seminars; and

iii) Develop educational plans for future generations.

### E) Tasks

i) Develop public interest in the historical environment with solid leadership, effective partnering, and a sound base with which to develop policies.

ii) Develop the full potential of the historical environment as a learning resource.

iii) Develop accessibility to the site, knowledge base

iv) Protect and sustain the historical environment for future generations

v) Develop the historical environment's importance as an economic asset.

### F) Special traits to be understood in current marine archaeology

i) The site can be located outside the territory of their state of origin.

ii) The discipline is poorly understood and as a result a poorly developed research framework.

iii) The sites are situated in a hazardous environment subject to continuous and rapid change.

iv) The sites are not easily accessible and manageable without specialized skills, techniques, and equipment.

v) The undertaking of marine archaeology as a result of the above is expensive.



Figure 4. View of shipwreck sites along the coastline provinces in the Kingdom of Cambodia

### IX. Summary

The 'Project' approach to heritage management provides a proven process and procedure that can be adapted and refined to meet all the requirements of planning, executing, and controlling a specific group of tasks that develop a unique product that will be on time, within budget, and conform to all required specifications. It is only now that Cambodia is beginning to progress and build its capacity in maritime archaeology after the country became the first, and only, Southeast Asian country to ratify the 2001 Convention.

The Ministry has established an UCH Unit to lead the national efforts in the field of underwater archaeology, heritage protection and preservation. This team is currently conducting research and fieldwork surveys to establish a preliminary cartography of the heritage within the boarders of Cambodia. The preliminary cartography of underwater cultural heritage in Cambodia will be finalized and published at the end of year 2011.

The UNESCO Phnom Penh Office has been working on a project dedicated to the inventory of Cambodia's UCH. The result of which will be a document that provides a synopsis outlining a three year plan to introduce a capacity building project that will allow for locating, protecting, conserving and studying the underwater legacy of Cambodia. This will lead to the development of a framework that will eventually enable a permanent public exhibition of this legacy. It will therefore be publicly accessible and will have the potential to be appreciated by people around the world. Within the framework of ongoing cultural

activities and with the objective to preserve UCH, UNESCO is supporting the project <u>The</u> <u>Preliminary Cartography of UCH in Cambodia</u>.

Through the efforts and resources of organizations and the sound project management of the people involved, the initiative to implement a world-class functioning Underwater Heritage Management and Archaeological Organization within the Ministry will be successfully achieved.

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