



ICM Solutions

Participatory Beach Management Results in Improved Tourism in Occheauteal Beach, Preah Sihanouk, Cambodia

- Zoning is both a technical and political exercise. Zoning requires a strong understanding of both the environmental aspects and the sociocultural setting. Dialogues were conducted in Occheauteal Beach over a four-year period before the zoning could be fully implemented and enforced.
- Positive buy-in on the execution of the zoning plan for Occheauteal Beach, including investments by the private sector, is possible but requires getting the stall owners, municipal officials, and other private sectors involved in all aspects of planning and development of the project.
- Upon implementation of the zoning plan, taxes and user fees from Occheauteal Beach increased by more than 280 percent per annum. Part of the revenue is apportioned to environmental management, security, and safety, as well as contributing to the Provincial budget
- With the increased number of tourists, the stall owners are employing at least five more staff members from the previous two to three staff members only. The increase in income per stall owner went from US\$ 10,000–US\$15,000 per year to US\$ 25,000–US\$ 30,000 annually.



Context

In Preah Sihanouk, beaches are a major source of income for the province through tourism. But investments to improve or even maintain the beach and its facilities were scant. The steady upswing in tourist arrivals was matched by the development of an increasing number of tourist accommodations and establishments. In 1993, there were only 19 hotels and guesthouses but, by 2014, this has grown to 57 hotels and 221 guest houses. Despite the welcome economic benefits of coastal tourism in the province, serious social and environmental problems have arisen, including illegal construction along the beach area.

A 2004 study on beach tourism in Sihanoukville revealed that Occheauteal Beach (OB) is one of the most popular tourist beaches due to accessibility. Between 1993 and 2003, the domestic visitors to Sihanoukville increased from 4,585 to 83,888 and foreign tourists from 8,428 to 33,604 (Libosada 2004). By 2014, there were more than 1,000,000 domestic and foreign visitors.

Non-permanent structures, such as huts and stalls, in the beachfront and terrestrial areas had developed into “semi-permanent” structures, with concrete floorings and solid foundations. In 2004, there were 36 stalls situated in the two locations. The stalls generated revenue by renting out tables, chairs, and beach gear, as well as selling food and drinks. The zoning plan focused on the beachfront and the terrestrial areas as these were public lands and the location of most of the informal infrastructure.

There was very little effort to maintain the quality of OB, in terms of environmental protection and sustainable tourism. The huts/stalls were not well placed, or spaced. Most of the huts were situated in the beach area; the terrestrial area in front of the beach primarily served as a parking lot, temporary garbage deposit, and improvised toilet location.

Studies and site visits confirmed the lack of sanitation or wastewater disposal system caused unsightly and unhealthy conditions. Some toilets were situated very near creeks that emptied into the beach area. Wastewater pipes were also placed proximate to the beach area, significantly affecting beach aesthetics. A number of establishments lacked proper wastewater disposal facilities causing wastewater discharge onto the ground surface.

Photos taken prior to the start of the project in 2004.



A stall's outflow pipe, built directly in the middle of Occheauteal Beach



Improvised toilets and water containers



Wastewater discharging onto the ground surface.

Tourist Behavior in Occheauteal Beach

As a consequence of the beach environment, the following tourist behavior and patterns were observed:

- Primarily, tourists visited Sihanoukville as a gateway to either Thailand or Vietnam, and not as their main destination. This limited the duration of tourists' stay and spending. Visitors stayed for a maximum of two days, or for the duration of public holidays; and
- The illegal construction of stalls and huts made OB and other beaches unsightly. Further, the poor condition of such facilities turned tourists away as well as creating beach access problems.

From 2004 to 2008, various pilot projects were implemented under Preah Sihanouk's ICM program. With the burgeoning tourism industry in Preah Sihanouk, the coastal use zoning activities were completed with a special focus on zoning for tourism, which cuts across the three other priorities identified in the Province's Coastal Strategy (i.e., pollution, livelihood management and habitat protection).

Under the ICM Program, the tourism development and management pilot project in Occheauteal Beach was launched. The OB was identified as a pilot site to address the worsening problem of beach encroachment by tourism facilities and to demonstrate good practices in beach management through a partnership between the local government and the private sector.

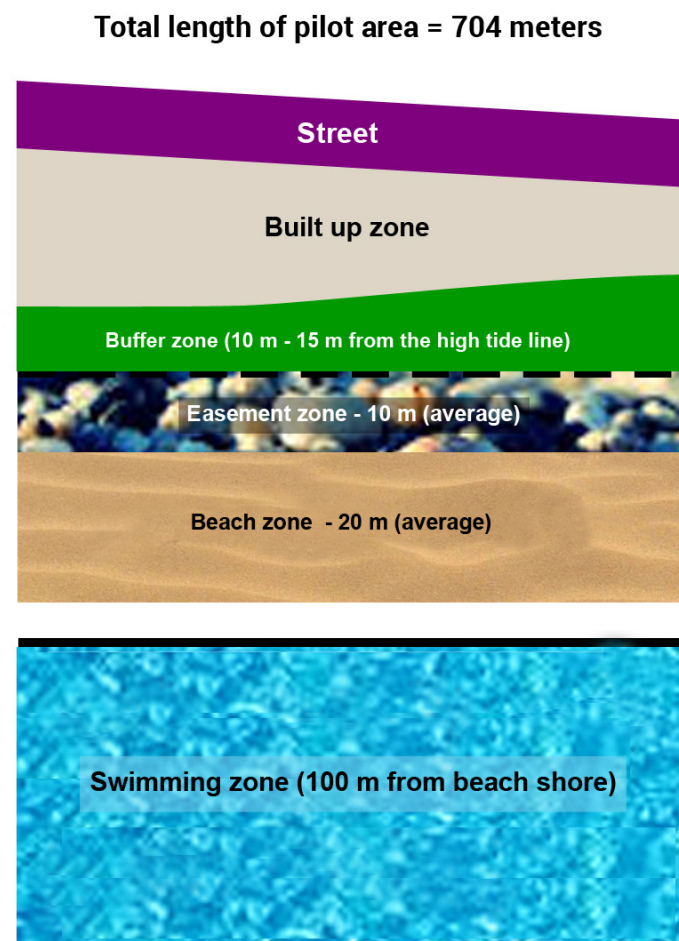
Development of a beach management plan for OB commenced with a series of workshops and initial studies on tourism dynamics and behavior in OB.

Bring the public and private sectors into the project. A series of consultations were conducted at the start of the project to identify the zones in the beach area, as well as permitted and prohibited activities within each of the zones. The provincial Government established a Task Team for the OB, to engage the various stall owners and private investors in the process of planning and development, particularly in identifying the activities allowed in each of the zones. Getting the stall owners, municipal officials' and other private sector groups involved in all aspects of consultations resulted in the positive buy-in on the execution of the zoning plan for the beach and in getting local investments.

Zone the beach area focusing primary use of zone and compatibility with environmental conditions. Four zones were agreed upon by the Task Team in Preah Sihanouk, namely: (1) swimming zone; (2) beach and easement zone; (3) buffer zone; and (4) built-up zone.

Swimming Zone. This zone is delineated as the waters extending 100 meters seaward from the mean high tide. The area is kept free from mechanized water craft to avoid accidents and conflicts over use. Prior to the implementation of zoning, no specific areas were devoted to swimming. Jet skis, boats and other water craft were allowed to park anywhere.

Figure 1. Beach Zoning for Occheauteal Beach (Pilot Phase).



Beach and Easement Zone. The beach and easement zone is a 20 m – 30 m band from the mean high water mark. The area is a no-build zone for permanent facilities. Only beach equipment such as chairs and umbrellas are allowed. An easement zone was identified to protect the beach area from unwanted sand erosion. Prior to zoning, most establishments were located in the easement area. Due to the uneven profile of the OB area, two easement zones had to be implemented — 20 m and 30 m from the mean high tide mark to 20 m to 30 m inland. Existing beach vegetation, which is part of the easement zone, were maintained and protected to prevent sand erosion. The relatively narrow easement zones were recommended to accommodate the limited built-up zone bordering the beach. Finally the easements help serve as an additional buffer against destructive typhoons.



Tourist facilities were too near the shore, causing erosion, as well as solid and liquid waste pollution.



A significant portion of the beach has been cleared of structures. This photo shows the beach area (green arrow), the easement (20-30 m, blue portion) and a part of the buffer zone (10-15m, brown arrow). Only umbrellas and chairs are allowed in the beach area.



Before zoning: failure to restrict water vehicle parking. As shown, tourist boats even occupied the swimming area.



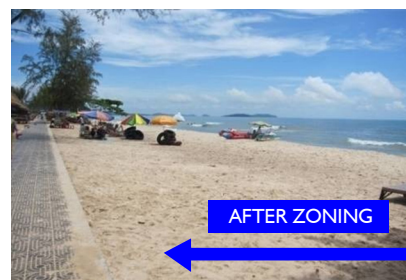
After zoning: a pier was established for vessel anchorage and as an embarkation point.



Buoys and markers identify the swimming zone's boundaries.



Concrete posts within the easement and buffer zones were established on public lands in the beach.



The easement zone ranges from 20 m to 30 m from the mean high tide mark. No permanent structures are allowed in this.

The Buffer Zone. A buffer zone of 10 m from the easement zone was established. This enabled existing beach vegetation to thrive and to reduce potential impacts from development occurring in the built-up zone. Most human movement, from the built-up zone to the easement and beach zones, occurs in the buffer zone. A walkway was established between the buffer and built up zones to facilitate access and also to serve as a landmark for the beach area, the buffer zone, and the transition between the buffer zone and the built-up area. The walkway also serves as the beach area boundary, beyond which no permanent structures were allowed. This also facilitated tourist mobility along the beach.



The buffer zone is the 10-15 m transition between easement and the built up zone. The walkway is part of the buffer zone. The trees lined up in this area were maintained to prevent erosion.

The Built-Up Zone. The open space or terrestrial area immediately beyond the buffer zone at the beach's back end was integrated with the built-up zone. Aside from beach-related facilities, utilization of the zone ensure that visitor activities can be done in different zones thereby providing a greater amount of activities for tourists.

The built-up zone is composed of two sub-areas: (a) the area immediately after the buffer zone, which is composed of semi-permanent huts; and (b) other permanent facilities beyond the huts. The semi-permanent huts were designed to prevent infrastructure loss and damage from erosion and other hazards. The rational and efficient use of the area has improved the whole beach.



The souvenir shop (left), lavatory (center) and a parking space beside the main road (right) were established as part of the built-up zone located beyond the semi-permanent huts.

Identify opportunities for public and private sector shared investment. To manage activities optimally and improve tourist facilities, it is important to identify facilities and services that can be cost-shared between the public and private sector. In this case, Table 1 summarizes the resources mobilized through the collaboration of the provincial government and the private sector¹. As indicated, PEMSEA's investment in the project was primarily related to the planning and consultation process, and some of the initial design. The local government and the private sector cost-shared the infrastructure improvements, including sanitation services, whereas the private sector invested in the upgraded commercial facilities.

The multi-agency OB Task Team, headed by the Vice-Mayor of Sihanoukville Municipality, worked regularly on enforcement, management, auditing, and development issues in relation to the public-private services collaboration.

To maintain these services, local operators were selected to manage daily business operations and share profits with the government for OB development and management. The government also generated revenue from the public lavatories, parking lots, and souvenir shops.

Table 1. Partners' contribution on beach management in Occheauteal beach.

<i>Description</i>	<i>Partners' Contribution</i>		
	<i>Government fund</i>	<i>Private sector contribution</i>	<i>PEMSEA Support</i>
Preparation, mobilization and masterplan			21,000.00
Infrastructure improvement	235,146.70	613,453.00	20,000.00
Parking lot	15,000.00		
Lavatories	75,000.00		
Souvenir shops (2)	24,000.00		
Walkway on the beach		21,453.00	
Rainwater drainage system	15,000.00		
Wastewater pipe, storage and maintenance	10,000.00		20,000.00
Landscape improvement and other signage	10,000.00		
Children's playground		10,000.00	
Kiosks, stalls and kitchens along the beach		492,000.00	
<i>Subtotal</i>	<i>374,146.70</i>	<i>1,136,906.00</i>	<i>61,000.00</i>
<i>Total investment made to date (government, private sector and PEMSEA)</i>	<i>1,582,052.70</i>		

Results

Increased tourism. Increasing numbers of tourists arrived in the province. From 144,995 in 2004, the number has risen to 1,327,748 in 2014. An initial study indicated that tourists to Sihanoukville visit the beach at least once during their stay. Additionally, the development of nearby Serendipity Beach has further dispersed tourist density to sustainable levels.

Despite the increased number of tourists, water quality has observably been maintained at acceptable levels as shown by monitoring tests conducted for OB from 2005 to 2012.

Increased Length of Stay. Length of stay in the beach has increased from two days (Saturday and Sunday) to an average of four days (Thursday to Sunday). This has resulted in an increased daily income among stall owners to about US\$ 80 – US\$ 100. Stall owners invested an average of US\$ 20,000 in building up their kitchens, and huts and expect a return-on-investment within four to five years.

The appreciation for beach management and its benefits has instilled a sense of responsibility among stall owners. A recent survey revealed that stall owners are willing to contribute to beach management, the majority of whom are willing to provide a US\$ 25 – US\$ 30 monthly contribution.

Job creation. In 2004, each stall employed only three workers. As indicated in a 2012 survey, this has increased to five. Similarly, in 2012, the majority of stall owners reported an annual income of US\$ 25,000 – US\$ 30,000. Previous earnings prior to project implementation in 2004 showed stall owners earning less than US\$ 10,000 to US\$ 15,000 per year. In a 2014 survey conducted by the Taxation office, annual income has risen to US\$ 30,000 – US\$ 40,000.

Positive demonstration. Encouraged by the progress made through beach management, other nearby stall owners adopted OB as a model for beach management. Resultantly, 35 stalls, as a cooperative effort in beach management, voluntarily moved to Serendipity beach to replicate the OB model. The government, in a similar recognition of the benefits of beach management, has improved road access to O'tress beach to accommodate increased tourism. Also, after stakeholder consultations indicated willingness to implement zoning, a 1-km long buffer zone designed as a beach garden was established in O'tress Beach.

Strengthened government and private sector participation. The development of the built-up zone has brought the local government together with local businessmen forging a strong foundation for future cooperative efforts as well as a dynamic channel for access and dialogue.

Greater political commitment to beach management. Having demonstrated its capacity to manage its beach, the Province applied to become a member of the Club of the Most Beautiful Bays in the World. While the initial application included only Preah Sihanouk, the Government has amended its application to include the Cambodian Bay covering all four provinces. Its membership was approved on 25 May 2011, strengthening the national government's resolve to consciously consider the coastal and marine resources in the development planning for the country.

Prior to project implementation, the national government only collected revenue through the value-added taxes (VAT) and issuance of business permits. By 2014, the Taxation Office started collecting taxes on business profit. Further, part of the income from daily operations is apportioned to environmental management, security, and safety, as well as contributing to the Provincial budget. An annual average of US\$ 47,375.00 is being collected in the form of taxes and user fees from Occheauteal Beach.

Scaling up. Learning from the implementation of the beach management in Occheauteal, the project expanded from the demonstration site to the two scaling up sites, block Kit Meng and Serendipity Beach as shown below:

- 2008–2009 : 39 stalls
- 2010–2011 : 65 stalls
- 2011–2012 : 74 stalls

Scaling Up project



Lessons Learned

Varied information sources enable effective management. In 2004, there was not enough data on the erosion rate and scientific bases for zoning the beach. One of the proxy indicators utilized was the observed rate of erosion in the adjacent O'tress Beach. A maximum of 1 meter of beach was being lost per year in some areas in O'tress. This was used as a benchmark and basis in convincing the stall owners to move their establishments farther away from the shore.

The zoning scheme and implementation plan were also based on the premise that moving permanent structures away from the beach would be beneficial, not only for the beach but also for infrastructure investments. The main consideration was protecting the beach; hence, the baseline for zoning was from the beach towards the inland areas.

Zoning is both a technical and political exercise. Zoning requires a strong understanding of both the environmental aspects and the sociocultural setting. Zoning and development of less than a kilometer of beach faced several issues and challenges, particularly existing illegal structures in the easement zone. Dialogues were conducted over a four-year period before the zoning could be fully implemented and enforced. Part of the agreement between the government and stall owners was a three-year moratorium on the payment of land rental to the government to allow the families to recover their initial investments.

Showing results brings recognition. As with other environmental projects, understanding and appreciation of environmental importance come after people see concrete economic benefits from their activities. Compared to the initial negative perception, a recent survey indicated a full agreement and appreciation among stall owners for the beach management initiatives. Informal discussions with stall owners during monitoring of the beach activities indicated that they have observed more local tourists willing to pay for services and food along Occheauteal. They also expressed that while they were apprehensive of the initial steps to relocate their huts and improve them, they now recognize the benefits as more local tourists are spending time in the beach and spending money for tourist services and food.

Public-private partnership is the key. Obtaining the buy-in from stall owners, not only in the collaborative efforts, but more so in individual compliance and projects, was important in the absence of government funds for infrastructure development.

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