

**VIABILITY OF THE IMPLEMENTATION OF ISO/TC 228/WG 5 FOR  
BEACHES' CERTIFICATION – STUDY CASE FOR THE PRAIA BRAVA,  
ITAJAÍ, SANTA CATARINA – BRAZIL**

**VIABILIDAD DE LA APLICACIÓN DE LA NORMA ISO/TC 228/WG 5 PARA  
CERTIFICACIÓN DE PLAYAS – ESTUDIO DE CASO PARA LA PRAIA BRAVA, ITAJAÍ,  
SANTA CATARINA – BRASIL**

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**RESUMEN**

Las normas que sustentan una eficiente administración de los sistemas de gestión de playas se fundamentan en la aplicación de requisitos, tales como los señalados hasta la fecha para obtener la certificación ISO/TC 228/WG 5. Este tipo de estándares ayudarán a la prestación de servicios de calidad para los usuarios de las playas. Es posible comprobar si los requisitos de una norma se cumplen mediante la inserción de ellos en una matriz de evaluación que constituye una adaptación del Modelo de Evaluación del Desempeño de Manejo Costero Integrado. De este modo se puede determinar la eficacia del sistema de gestión existente. Este artículo se centra en la percepción de 11 instituciones involucradas directamente con el turismo local en la playa brasilera Praia Brava, para la cual se verificó la eficacia de los sistemas de gestión allí utilizados. Se utilizó esta playa como un estudio de caso particular para demostrar el manejo deficiente de los ambientes costeros en Brasil.

**PALABRAS CLAVE:** Manejo costero de playas, playas turísticas, estándar de calidad de playas.

**ABSTRACT**

The standards by which beach management systems are efficiently managed are best achieved through the application of strict guidelines and requirements, such as those that will be necessary to achieve ISO/TC 228/WG 5 certification. Standards such as these will aid in providing quality services for beachgoers. It is possible to verify that the requirements of a standard are met by inserting them into an evaluation matrix that is adapted from the Model for Performance Evaluation of Integrated Coastal Management. Thus, we can ascertain the efficiency of the current management system. This paper focused on the perception of 11 institutions that are involved directly in local tourism in one Brazilian beach, Praia Brava, for which the effectiveness of applied management systems was checked. This beach was used as a particular case study for proving the inadequate management of Brazilian coastal environments.

**KEY WORDS:** Beach coastal management, tourist beaches, beach quality standards.

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## INTRODUCTION

The regulatory processes that address Brazilian beach environments are today derived from a basic consensus of best practices for use and management of resources, including large territorial areas; they do not focus on individual, distinct environments. For example, the fundamental legal mark for coastal management at the national level in Brazil is the “Plano Nacional de Gerenciamento Costeiro” (Brasil, 2004); its equivalent at the state level is the “Plano Estadual de Gerenciamento Costeiro” (Brasil, 2006) in Santa Catarina. Both coast management schemes dispense basic guidelines stipulating what is permitted and what is inappropriate for the respective areas regarding infrastructure and generic land use.

Since the solutions found by the various Brazilian municipalities to address this problem are sectorial, they lack institutional and functional applicability. This lack of an effective legal framework results in several actors, both public and private, performing simultaneously. This creates a complex interaction and complicates the influence of each actor over its proper space, often resulting in conflicts as the laws that each produces become more and more difficult to understand.

Environmental management systems not only play an important role in promoting regional beaches, but they are also responsible for all actions that impact these beaches. Planning effectiveness can be verified through certifications issued when managers consider relevant an application; however, such certifications exert influence over an area in many ways. Specifically, certifications that are awarded after a standardization process are issued only to beaches that provide an acceptable standard of services and equipment, ensuring the continuous viability of tourism there (Yepes, 2004; Micallef and Willians, 2009).

According to Polette (2004), Brazil must adopt standards for its beaches if the beaches are to be fully optimized. This is because management has so far failed to address the fact that the coastal patrimony has been deteriorated

due to the impact of different sectors as well as a failed system of public regulation.

ISO/TC 228/WG 5 has been designed to regulate the environmental management system for beaches. ISO certification, which is achieved after inspectors evaluate the structural processes from planning to operation, stands out among other standards. This checklist focuses not only on sectorial factors of interest, but also on understanding how various factors affect all of the processes.

Fifty-eight countries, including Brazil through the “Cômite Brasileiro de Turismo” (ABNT/CB-54), are seeking to achieve a regulation which is currently in discussion and review stage. This regulation, which is concerned with seven areas of interest, will focus on the process involved in providing activities to support beaches and encourage beach users. These seven areas are as follows: Management Process, Information Services, Clean and Waste Removal, Process and Equipment Maintenance, Access to the Beach, Sanitary Services, and Leisure Services. These categories will establish the baseline by which guidelines and requirements for beach tourism will be regulated and certified (ABNT, 2011).

## MATERIALS AND METHODS

### Study Area

Praia Brava Beach is one of the six beaches in the Brazilian city of Itajaí, located in the state of Santa Catarina (Figure 1). This area was chosen because of the impact that urban development has had on it. This beach has become a subject of great economic focus in the construction sector due to the planned construction of high-standard condominiums there. In the area of tourism, this beach will witness a significant increase in entertainment geared towards nightlife, gastronomy, and sports. Finally, its landscape values will be threatened by all of this development because the region is one of the few that still have a level of native vegetation that is commonly associated with a low degree of urbanization (Santos, 2006).

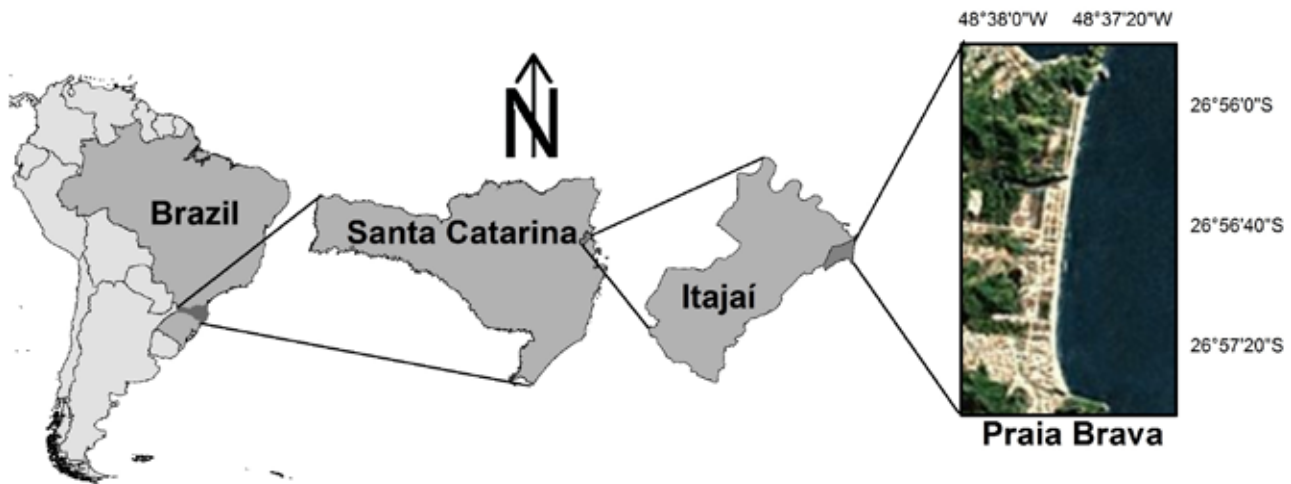


Figure 1. Praia Brava Beach, located in the city of Itajaí, state of Santa Catarina, Brazil.

Maciel et al. (2008) demonstrated that the physical carrying capacity—in which beachgoers achieve satisfaction, are comfortable, and value the quality of the beach—of Praia Brava corresponds to 8,993 users. This is worrying since only one of the several ventures planned for this area will, when completed, provide accommodation for around 5,000 people. As others projects planned for Praia Brava will also increase the number of users, the whole local infrastructure could be exhausted. For this reason, management of this environment must be the most efficient possible to prevent a bad outcome.

### Methodology

The first methodological stage entailed listing all of the processes and activities deemed verifiable and liable to performance evaluation through the perceptions contained in the ISO/TC 228/WG 5 regulation. The model adopted was a performance evaluation matrix proposed by Lowry et al. (1998). This methodological approach produces solid information for performance

diagnostic and also generates a relevant feedback for managers.

This model has been adapted for this study by grading the scenarios according four different categories. Specifically, the first scenario, a totally unfavorable situation, received a valuation of 0 (Bad). From this, the scenarios progressively improved until, at the fourth scenario, reaching the category “Ideal”, in which a 3 (Excellent) was awarded (Tabla 1). The results obtained by the appraiser were then added to each category together with the responses of the other appraisers; in this way, we obtained an overview of the area studied. This process focused on the perception of appraisers belonging to 11 institutions directly involved with local tourism. Of these institutions, 7% were hotels, 36% were restaurants, 29% were bars, and 29% were others types. The public environmental organ at the local level (FAMAI) also participated in this evaluation. The baseline for this evaluation was the performance in Praia Brava of the 11 institutions during the summer of 2011/2012.

Tabla 1. Example of scheme used for evaluate one category of services in the proposed matrix.

Component	Question	DEGREE OF RESPONSE				Score
		0	1	2	3	
<b>SECURITY</b>						
Activities employed by lifeguards	The practices employed in rescue activities developed by lifeguards.	The rescue practices are totally unsatisfactory	The rescue practices are satisfactory, but has lot limitations	The rescue practices are satisfactory, with few limitations	The rescue practices are satisfactory, very well employed and without limitations	

## RESULTS

### Management Processes

In the Brazilian city of Itajaí, the municipal secretary of tourism bears primary responsibility (42%) for management of the beaches used for leisure tourism; management of these beaches is thus a local issue. In fact, institutional responsibility for Brazilian beach management lies with a public local environmental body, which makes about 32% of decisions related to beach tourism activities. However, Brazilian local environmental bodies do not have either a specific plan to prevent threats to the beach environment nor structural processes to address what might occur on beaches (for example, development issues), much less a definition of responsibilities, which leaves their function uncertain.

Therefore, was also evaluated the process of management in this area. The results of our evaluation demonstrated that even those tasked with performing these evaluations did not know who held real responsibility for management. Accordingly, the Management Processes item was given 69 of the 132 points allotted for this category.

### Security Services

The Corpo de Bombeiros de Itajaí is responsible for surveillance and providing employees to staff the lifeguard rescue service at Praia Brava. The security services satisfy most of the standard requirements. After a first look, we founded that performance was rated Good by 37% and Excellent by 36% of the appraisers. Surveillance towers on the beach are being rebuilt, since

they were previously constructed of concrete over the dunes. The performance and number of these structures are an important variable in assessing the activities that ensure the safety of beach users, rated as Regular in this both cases (46% and 64%, respectively). Accordingly, the Security Services item was given 52 of the 99 points allotted for this category.

### Information Services

The information boards that display information related to environmental issues—including topics such as the degradation over time of materials, the disposal of waste and garbage, and water quality—were mainly evaluated as Good (46%), although the information provided addressed only the principal aspects of conservation. Other instruction boards for beachgoers addressed topics such as the meaning of the colored flags placed on the surveillance towers. This and other information related to tourist safety was rated as Regular by 55% of the appraisers.

It was found that signs often do not prevent users from infringing on imposed restrictions. This fact was demonstrated by a trail crossing protected sandbank vegetation—a violation of posted restrictions on trampling the sandbank—and also by warning signs because of adverse sea conditions that were similarly ignored by bathers. Accordingly, Information Services received 24 of the 66 points that could be awarded for this category.

### Cleaning and Waste Removal

While garbage receptacles are provided at the beach for the use of visitors, there is no evidence of forethought

in the number provided or spacing between them. This lack of preplanning led most of the appraisers to rate this topic as Bad (64% and 73%, respectively). Moreover, the lack of standardization has led to garbage being strewn on the sidewalk, creating a negative visual impact. Worse yet, the beachgoers frequently use the edge of the sidewalk as a waste dump. Therefore, cleaning and waste removal in public spaces along the beach was rated poorly as problems existed in several distinct elements. This lack of good service resulted in appraiser ratings of Poor (37%), Regular (27%), and Good (36%). Cleaning and Waste Removal was thus given a score of 24 out of the 66 points that could be accrued in this category.

### Process and Equipment Maintenance

A problem on Praia Brava Beach is a lack of maintenance in several places in which fences have been built to protect the sandbank. This makes the vegetation more susceptible to trampling. From a material perspective, the material used in construction was substandard at various points on the fences. The appraisers also found that the equipment used to maintain the fences lacked standardization. This was especially true along the southern portion of the beach, which is marked by small fences that have no apparent function, and along the northern portion of the beach, where tall fences are more successful in protecting native vegetation from being trampled.

Holes, poor cleaning, and a lack of maintenance are noticeable in the sidewalk, and little is done to remove intrusive vegetation that impacts the movement of people along it. The maintenance of fences and the sidewalk were jointly rated in the evaluation matrix. Yet despite the fundamental problems, a Good (55%) rating was given to these areas.

Lighting structures, which on Praia Brava Beach are discrete and designed to appear as an integrated part of the scenery, have recently been standardized across the central and southern portion of the coastal border. Until this work was finalized, however, the northern portion of the coastal border had no part in the standardization process. This lack exerted some influence on the way in which the lighting structures were rated. Specifically, 82% of the choices were scored as Excellent and 18% as Bad. The Process and Equipment Maintenance item was accordingly awarded 55 out of a potential 99 points.

### Access

Two types of access are provided to the beach. The first is via wood footbridges, which were evaluated as Bad by 91% of the appraisers, because they are mostly in a bad state of repair. For this reason, users often feel safer crossing through an area of vegetation despite their awareness of the damage they are inflicting on beach ecology. To address this issue, a new experimental footbridge is being tested for strength, durability, and visitor acceptance at the beach. This footbridge is built of plastic wood (70% vegetable fiber and 30% plastic), being offered as an acceptable answer to the ecological use of recycled plastic. The second type of access to the beach is trails that cut across sandbank vegetation. This type of access is most used by beachgoers because, even despite the deleterious impact to native vegetation, is closer to the arrival point for many of them.

Parking near the beach is provided through an informal commerce activity in which empty lots are used for this purpose. The sides of roads also are equipped with parking spaces; and, in most cases, these spaces are filled. Nevertheless, both parking schemes support the beach infrastructure because they allow the effective exchange of tourists arriving from other areas. Therefore, this is considered an important factor in supporting tourism and has been inserted into the performance evaluation matrix. The parking structure category was given a rating of Regular (64%).

There is a noticeable absence of facilities geared to assisting People with Special Needs (PSN) on the beach. Access points for this class of users were not characterized by appraisers as safe. This lack led to a rating of Bad by 100% of the appraisers. Therefore, the Access item received only 9 out of a possible 99 points that could be achieved.

### Sanitary Services

Portable toilets as an aid to bathers are randomly located along the shore. Kiosks and bars also provide sanitary services for customers. However, as the availability of toilets along the beach qualifies as an important support service for users, 64% of the appraisers rated both this services and their cleaning as Bad (64%).

Some of the kiosks and bars provide showers that provide an important support service for beach users.



However, the appraisers rated these structures as Bad (64%) and also scored their availability as Bad (100%). For the Sanitary Services item, a rating of 15 out of 132 points was given.

### Leisure Services

Also noteworthy is the intense use of a sandy strip on which kiosks, bars, and restaurants of all types distribute tables and chairs to expand their service areas. In some cases, beverage storage areas have been especially adapted for direct placement on the beach surface. A significant percentage (46%) rated this performance element as Regular. This can be due to the fact that most of the actors involved in performing our evaluations come from the commercial sector.

It should also be noted that at some points of Praia Brava, informal commerce occurs in the form of ambulant vendors who supply clothing, drinks, and food and who also rent out umbrellas and chairs to beachgoers. While these activities provide service support to consumers, there is no formal oversight over them. Therefore, appraisers categorized these services as Bad (55%). Leisure Services were awarded 29 of the 99 points that could be allotted.

### DISCUSSION

It is clear that, in Brazil, there is an urgent need for programs and projects that can manage public spaces in a satisfactory and efficient way. The Praia Brava Beach is still far from conforming with this tourist norm, since our evaluation of it led to a total compliance score of 277 (33.09%) out of the total 833 points (100%) that could be reached according the ideal scenario. Accessibility, sanitary services, cleaning services, and leisure services were among those rated worst in satisfying the needs of beach users. It is therefore crucial that public policy stipulates that a process—in this case, the “Projeto Orla”—be put in place that will regulate Brazilian beaches. It is anticipated that Projeto Orla will provide a means whereby municipalities will manage the tourist beaches by providing guide processes as well as a means of developing and implementing programs in the coastal zone that are supportive of tourism.

The use of ISO/TC 228/WG 5 as a standard by which Brazilian beaches can be judged may not only help to

establish a series of procedures based on the structuring elements analyzed in this study, but also to support the model of government and environmental issues characteristic of Brazilians beaches, by adapting this standard to methodologies that seek to evaluate performance, as pioneered here via use of this norm in Brazil. If so, it will provide an easy way to monitor and diagnose current management processes by focusing on key processes imposed by the norm as minimum requirements. The application of ISO/TC 228/WG 5 as a standard can therefore challenge coastal municipalities that seek to alter positively their reality. It can also guide the decision makers on the requirements necessary to develop local management because it will require more critical postures from society, private sector, and government, especially at the local level.

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