

Integrated beach management from the analysis of several beach quality awards in Latin America

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Abstract

Beach Quality Awards, such as European Blue Flag, are common in majority of northern countries, as European ones or USA, from more than 20 years ago. However these certification schemes have been less studied in Latin America and their usefulness to integrated coastal management practically is unknown. This paper do, in three chapters, an analysis of general features of eight Latin American BQA, requirements evaluated by them, and specifically the usefulness of BQA for ICM. A final list of 29 criteria grouping in 6 categories is obtained, stem from a list of 97 criteria founded in BQA reviewed. Furthermore 4 indicators of management are built and applied to each BQA, as well as a comparative analysis of sustainable development principles are done. Finally BQA are placed on ICAM Programmes, to establish their role in each stage of these plans. Main conclusion shows a low usefulness of BQA for ICM currently, though a big potential of improve them in Latin America is demonstrated at the same time.

Key words

beach quality award, integrated coastal management, coastal tourism, Latin America

1. Introduction

Coastal zones are unique areas, specially due to the interaction between sea, land and air, in an extremely dynamic manner (Kay and Alder 2005). The coastal ecosystems have a great wealth, but their equilibrium is very fragile to human activities. One of them, tourism, is the world's largest growth industry, with rates of growth near to 9% per annum, more than 50% only on the coastal areas (Williams 2004).

Several authors have identified tourism as one of the main activities on the coasts (Nelson et al 2000, Nelson and Botterill 2002, Williams 2004, Tudor and Williams 2006, Jimenez et al 2007) and majority of them have highlighted its importance within integrated coastal management. At the same time the beaches are the favourite places to develop this coastal tourism, receiving millions of tourist per year [Williams 2004, FEE 2006].

However this economical development of the tourism activity has several environmental impacts over beach's ecosystem, so in the sea water, as in the sand and habitats [Dadon 2005, FEE 2006]. But the impact of tourism is not only over natural systems, also human populations can be affected by unsustainable tourism, through overload of

sanitary infrastructure, litter's generation or loss of cultural values.

As a consequence of this environmental situation, governmental and non governmental organizations have developed many strategies to control the tourism activity, some of them maintaining its profitability. In this context, the beach quality certification schemes, or beach awards in general terms, become as a great option (Nelson and Botterill 2002).

Beach awards have been developed since 80's, mainly in Europe and USA (FEE 2006, LCR-FIU 2008), where non governmental organizations worried for the degradation of coastal zones, started campaigns to inform the public about the water quality and sanitary facilities on the beach. These initiative were voluntaries and nowadays the majority of the beach quality awards maintain this feature, which is a key for beach management. To date beach certifications have become in a catalyst to joint efforts of public institutions, private companies and non profit organizations around beach environment and facilities (FEE 2006).

Despite this advantages of beach awards, there are few studies focused in their usefulness for integrated coastal management, and majority of them were done only for European or North American beaches (Nelson et al 2000, Nelson and Botterill 2002, Williams 2004). Also majority of research and bibliography are focused in the perception of tourists about the award, or describing one or another award, but knowledge about awards as tool for sustainable development in other regions is still scarce.

As a consequence of this lack of information and the boom of beach quality awards in Latin America, this paper seeks to analyse several beach certification schemes in this region, compare their general features, the criteria used to qualify the beaches and establish their usefulness as a tool for integrated coastal management. Nelson and Botterill (2002) established "beach award schemes represent beach management, claiming to bridge the gap between 'recreation and tourism' and conservation", this milestone will be the start and final points here.

2. General features of beach quality awards in Latin America

2.1. Basic aspects

From 1985, when European Blue Flag was created, several beach certification has been developed. Only UK had three awards with application in whole country in 2000: European Blue Flag, Seaside Award and Good Beach Guide (Nelson et al 2000). At the same time in Wales was established other certification, the Green Coast Award, only for Welsh rural beaches (Nelson and Botterill 2002).

Many of these awards were represented in the form of a flag, to advertise the public about quality of the beach (Tudor and Williams 2006). However these proliferation of beach awards caused confusion between beachgoers, as many studies in UK have shown (Nelson and Botterill 2002, Williams 2004, Tudor and Williams 2006). In Latin America, however, beach awards is a new issue, the first beach award found by this study was Playa Natural of Uruguay, in 2003.

However not all beach awards are available for all beaches. Nelson et al (2000) remark

that awards should be appropriate to commercial as well as undeveloped beaches, because general awards can foster excessive infrastructure in pristine beaches, with their consequent natural degradation. Some beach awards are aware of this danger, as the lastly quoted Green Coast Award, which was created for beaches without the high tourist infrastructure asked by European Blue Flag (Nelson and Botterill 2002).

Normally beach awards work as quality or environmental management systems, which have a list of requirements to be fulfilled totally or above some level. These requirements vary from water quality analysis to tourist services and safety on the beach, according to the organization which promotes the award. However majority of these organizations have an environmentalist slant, due to that they focus on natural protection and water quality, although some awards are promoted by tourist companies or partnerships, focused in tourist facilities (ICTE 2003, Dandon 2005).

As a consequence of this diversity of beach awards, take in account the requirements of each one and their qualification system is important. For example, Jimenez et al (2007) establish as fundamental requirements for beach-users the cleansing of the water and sand, tourist services, access to the beach and availability of space. Meanwhile Williams (2004) has a fairly different list where safety, scenery and facilities are also included as important parameters to these beach-users.

A different pattern should be waited in rural beaches, due to their natural characteristics. However Nelson and Botterill (2002) show other results, then they found that lifeguards, facilities and toilets were the three main attributes for Welsh rural beaches, according to beach-users perception study. In USA, although the National Healthy Beaches Campaign divide beaches between urban and rural, only difference is the level of fulfillment of the same requirements (LCR-FIU 2008).

Within the previous reference framework, in this section will be analysed the general features of seven beach quality awards in Latin America, focused in those aspects related with management. Also will be analysed one award which is mainly applied in Spain, Marca Q, though this organization has coverage in some countries in Latin America. This award is very interesting for current analysis, mainly because it is proposed by an organization focused in tourist quality, more than environmental issues (ICTE 2003, Consumer 2004). The awards chosen are listed in the table 1.

2.2. Methodology

First task was a detailed searching of beach awards in Latin America. The thematic network Pro-Playas (<http://es.groups.yahoo.com/group/RedProPlayas>) was determinant to access to several experts in beaches in the region. Through official web pages, technical documents and information from members of Pro-Playas network, seven beach quality awards were found and almost all information of them was acquired. Marca Q also was included, as was explained before.

A complete review of each certification scheme was done, including general and specific features in a format made up for each award (Appendix 1). As a consequence of diversity of the data, the format was divided in three sections: a) General information of award; b) Award requirements; and c) Management framework. It is important to highlight that only one beach quality award for country was chosen, normally the unique available to review.

The first section commented was part of the analysis of features here explained, while the awards requirements was used for comparing criteria in the next chapter. The information from management framework was used to complement the features before mentioned and to support the results of the third chapter, referred specifically to integrated coastal management.

Later a resume table with general features of all awards was created (table 1). This table include information about coverage and length of each certification, year of creation, kind of beaches covered, amongst others. With these data the common features were analysed and grouping in awards with four similar characteristics: a. Kind of institution a charge; b. Coverage; c. Length of certification; and d. Kind of beach. Also a model beach quality award was done, joining the more frequent feature of all certifications.

It must be highlighted that this work did not required of or included field work, because it was done from official documentation, hence tourist surveys or similar methods were not necessary. However at least one person was contacted in the organization a charge of each award, to validate the information in the formats included.

2.2. Results and discussion

According to methodology described, eight different beach quality awards were reviewed, from 14 guidelines, audit check-lists and explanatory notes (MTD 2003, ICTE 2003, Dandon 2005, Cabrera etal 2006, FEE 2006, FEE 2007a, ICTE 2006, SEMARNAT 2006a, SEMARNAT 2006b, ECOPLAYAS 2007a, ECOPLAYAS 2007b, FEE 2007b, ICONTEC 2007a, ICONTEC 2007b).

The information from these fourteen documents was included in the table 1. The most evident result is the voluntary character of the beach quality awards in Latin America. Only in Argentina is possible, not obligatory, establish the award as mandatory procedure. However the promoting organization, other feature analysed, shows 62,5% of public institutions, over only 25% of non governmental organizations and 12,5 private organizations (Figure 1). A strong relation between obligatory initiatives and public institutions would be expected, but the pattern shows different results.

About coverage of awards, the national focus is evident, with 75% of beach quality awards in this category, versus only one with international coverage and another one applied regionally (Figure 2). The length of certification, which is important to analyse periodicity of evaluation of criteria, is mainly three years. However 37,5% of awards are valid for one year and there was another more with two years of validity (Figure 3).

Finally, but very important, the kind of beaches certified by the eight beach quality awards reviewed was analysed. Figure 4 shows 36% of awards for tourist beaches, 18% for protected and urban beaches and 9% for rural beaches. At the same time 18% of awards do not do differentiation of kind of beaches, which means that these awards can be applied in any beach. This analysis was done including 11 certification schemes, because the Mexican and Peruvian awards have special requirements for each kind of beach, therefore they must be analysed as two and three awards respectively.

A general model of beach quality award resulted to take the most common features of

the awards reviewed. This general model can be taken as start point to new beach quality awards on the region, as well as a reference point to improve current certification schemes. It is important to remark on the final list of criteria obtained in the next chapter should be the complement of this model.

The main conclusion is the increasing interest in Latin America related with beach awards, as such the year of creation of each award shows clearly. An opposite trend is observed in European countries, such as United Kingdom, where high point of discussion was before 2004, when majority of beach awards have been created and analysed (Williams 2004).

3. Criteria of beach quality awards

3.1. General aspects

The tourist quality on the beach is able to be measured through several pathways. Normally the beach quality awards use a check-lists of criteria, which cover the main aspects related with the general objective of the scheme. For example, Blue Flag is focused in environmental education and information (FEE 2006), therefore several criteria is related with inform people about bathing water quality, code of conduct, sensitive areas, among others. At the same time awards promote by standard organizations, as such happen in Argentinian case, is focused in documentation (Dadon 2005).

Each scheme of award has its own criteria to measure quality on the beach. Main criteria used by beach awards in Europe vary from scenery and safety (Williams 2004) to toilets and dog's control (Nelson and Botterill 2002). In USA the National Healthy Beaches Campaign, the most developed award according to Williams (2004), include several environmental, services and security criteria, but criteria about beachgoers' information is not taking in account. However the same author (Williams 1999) had established the availability of information for the beach users as such one of the most important features for beach management.

Within thih jungle of criteria, and despite of wide range of approach used, the requirements can be grouped in four aspects: environmental management, tourist services, safety and beachgoers information. In Latin America situation is not far of northern countries, and each one of the beach quality awards reviewed has different criteria and they are organized in diverse ways.

Other particularity in each beach award is referred to level of measurement or control of the criteria. Whereas some awards, as Colombian or Mexican case, include a table with environmental parameters to be measure in bathing water, other awards only include a proposed list of parameters, as such Norma Q. This difference of measure's level force to homogenize the criteria towards an intermediate point.

3.2. Methodology

Initially each one of the eight beach quality awards was reviewed and their criteria were included in the format explained in the previous chapter (Appendix 1). As a consequence of the majority of awards are written as guidelines or audit check-list, each criterion was included as requirements to be fulfilment in the certification process or award audit. Some of these requirements were the criteria themselves, but in many cases one

requirement had several criteria, or one criterion was include in two or three requirements.

The information about award requirements was organized in the same groups of criteria that original guideline documents. Due to the diversity of information and organization of each award, was necessary create a row in which the observations or special features of each requirement would be put. Sometimes the requirement was the criteria itself, but in many cases the criteria were included in this observation's row.

Also that observation's row was used to explain details or particularities of some requirement. For example, some criteria of Blue Flag (FEE 2007) were mandatory in only some beaches on the world, and in other beaches were included as such guidelines or not necessary. As a result of this wide diversity of information, 86% of requirements needed some extra explanation or detail better their means. These observations are included in the requirement's format shown in the Appendix 1.

Several information, mainly related with management framework, was not included in the guidelines documents, due to that the institution a charge of each award were contacted. In the majority of cases answers to specific questions were received and later included in the format. However some information was assumed directly from other documents or the official web pages of institutions a charge of the awards (further information in Appendix 1).

From the original grouping of criteria, such as is showed in figure 5, a new grouping of criteria was created. These six categories were: a) Environmental requirements; b) Services requirements; c) Safety requirements; d) Education and information requirements; e) Management requirements; and f) Others requirements. This grouping emerged from analysis of each criterion and the similarities between them.

The environmental requirements are related with conditions and features of natural system on the beach, which are measurable and monitoring. These criteria include marine water, for bathing use or not, sand, air and ecosystems. Also the criteria related with sanitary aspects, such as hazardous litter or sewage treatment, were included. In general terms, all criterion which indicate or is cause of environmental impacts, were grouped in this category.

The services requirements are related with all infrastructure and commercial services created to improve the beach features for tourist use. These services can be offered by public institutions, such as beach cleaning service or sanitary facilities, by private organizations, as well as snack bars or sun's umbrellas, or both, such as parking areas or nautical facilities. Furthermore all criteria related with features of these services or infrastructure was included, such as disable facilities or environmental friendly buildings.

The requirements of safety were those criteria which include features or minimum conditions of both, safety and security. Safety related with health, such as first aid centres or banning access to pets on the beach, or safety related with accident prevention, were included within this category. Nautical and bathing water safety was also include in this category, because even lifeguards is a service, their function is maintain safe the tourists on the beach. Same analysis was done with security requirements and vigilance service.

Education and information requirements include all criteria directing to advertise something to somebody, normally the tourists who visit the beach. Also requirements defining features to this information strategies are include in this category, such as bi-lingual information.

Requirements related with management were specially important in this exercise, although any beach quality award did not include textually this category. The majority of beach awards which included groups related to management were focused on environmental issues. However here these management requirements cover all criteria which promote better organization on the beach, and also those seeking for a sustainable development of the beach and the town which it is placed on.

The criteria in this group vary from physical features on the beach, such as its geographical delimitation, till public participation in management of the beach. The last category is formed by all criteria which were not possible include in the former categories or because its objective is more focused in the award than on the beach as itself.

As it was told before, all criteria were included within these 6 categories, through a review of each award format. A matrix with awards in the rows, and criteria in the files, was created. Each criterion was allotted in the matrix when it was included in any award. Majority of times the name of some criterion was different, but its objective was the same with others. For example, the criterion of water quality analysis varied from requirement of specific bathing water analysis (Blue Flag, Colombia, Argentina) till a requirement of some general environmental parameters in the marine water (Mexico, Uruguay, Peru, Cuba, Marca Q).

The matrix was used for doing a statistical frequency analysis. The procedure was count the number of awards which had included each criterion and calculate the total of repetitions, or in other words, the frequency. Criteria with highest frequency was assumed as a representative indicator of the best criteria, taking in account whether majority of awards include some criterion, is because this criterion is widely accepted as important.

Due to Mexican and Peruvian awards have different criteria for each kind of beach (SEMARNAT 2006, ECOPLAYAS 2007) the criteria of those awards were counted as only one criterion, even if the same criterion was required in more than one kind of beach. Further information of the criteria included in each award, and the cases mentioned of each kind of beach, is shown in appendix 2.

Next step was create a new list of criteria with highest frequency ones, to become in a list for the model of beach quality award. Therefore criterion's proportion in each category of the whole list was calculated, and a new list with similar proportions established. A statistical analysis was done using percentiles from 60 to 90, and checking each proportion of criteria obtained (table 2). Finally, percentile 80 had the most similar proportion of criteria, such as table 3 shows. Also a frequency histogram of each category of the whole list were made (figures 6 to 11)

It is important to note that despite a relative small number of beach awards analysed, only eight, and the specificity of the data used, the standard deviation of category was wide, amongst 0.5 and 2.5. The software used for data and graphics was an electronic

sheet, in this case the open source software OpenOffice.org Calc™, due to simplicity of the statistical analysis.

3.3. Results and discussion

Main result about criteria in beach quality awards is the final list of them, supported in the statistical frequency analysis. However before to obtain this result, several intermediate results were reached. First of them was the structure of requirements of each award, which it was built from the official documents reviewed. The wide variety of structure of each award can be observed in the figure 5.

Some awards have a package structure, as such Blue Flag and Colombian award, which their categories of requirements are not organized in hierarchical way. At the same time several awards are organized as a sequence of steps, or a pathway to follow. Normally this structure starts with general requirements and later defines specific criteria, according to the case. This organization was found in Mexican, Peruvian and Uruguayan awards. As a particular case is quoted Argentinian award, which included general requirements as the last step, not the first.

The complex structure was found in Marca Q award, which it is organized as a package, but starting with steering action. From this first category is described the other categories, and later each category is described by itself in detail. Simultaneously the Cuban award is the simplest one, with only one category, called general requirements. It is important remember that Mexican and Peruvian awards have different requirements according to kind of beach, therefore their structure have different pathways to follow, even with non obligatory requirements.

Other result was the whole list of criteria. After the requirements were organized in the 6 categories above mentioned, a big list of criteria was obtained. In total 97 criteria were included on this list, where environmental requirements were 23% of criteria, services requirements 24%, safety requirements 16%, education and information requirements 14%, management requirements 12% and others requirements 11%. These proportion of criteria in each category varied in the final list, but in small proportion as table 3 shows.

Statistical frequency analysis produced several results. First of them were the histograms of each category, where concentration of criteria was evident. Environmental requirements histogram show only two criteria with maximum value of frequency, water quality analysis and litter disposal (Figure 6). This result is consistent with motivations expressed by studies of beach awards (Nelson and Botterill 2002, Williams 2004, Jimenez eta al 2007) which defend water quality and litter management as essential requirement to obtain good quality in any beach.

In the services requirements histogram there was not criteria with maximum value, however two of them had values on seven, and other two on six (figure 7). The former two were related with sanitary facilities and beach cleansing service, that means a strong relation with highest values in environmental requirements, quoted before. About histogram of safety requirements, only one criterion had highest value, lifeguards. However criterion of first aid centres obtained second high value with seven awards quoting it (figure 8).

Other three categories did not have high values, only five in two categories was the highest. Category of education and information requirements had similar pattern of concentration as the three former categories (figure 9), however management requirements (figure 10) and other requirements (figure 11) had majority of criteria include in only one award. Some explanations of these low values may be the particularities of each country, innovative schemes of certification or too focus on the management system than on the beach.

A special analysis is done with management requirements category, due to the objective of this paper is establish usefulness of beach quality awards in this area. Only one criterion was included in more than half of awards, the observation of regulations. However this criterion is related with several kinds of legal frameworks, from environmental till quality systems. It means that unique criterion commonly included is not a tool for management, only a reinforcement of well known duty.

Next two criteria have been included in three awards each one. First criterion, included by Mexican, Colombian and Marca Q awards, was the zoning of the beach. This criterion is important to maintain the organisation on the beach and the activities and services placed on there. The Colombian award even give a model of zoning. Second criterion was a surprise due to its low score, despite its important is widely known and quoted (Jimenez et al 2007). This criterion is the duty of measure the carrying capacity of the beach. Only Peru, Cuba and Marca Q consider important take in account the support of beach for tourist activity, and its consequent impacts. An unexpected result which will be analysed deeper on the next section of this paper.

Last criterion included in more than one award was related with differentiation of uses and users, a key task to start an integrated management in anywhere. The origin of the awards which include this criterion is very important for the purpose of this paper, then they are from Spain not for Latin America (Blue Flag and Marca Q). This situation shows a gap of coastal management issues in the Latin American awards.

The rest of criteria was included in only one award, despite some of them are clearly important to management, such as beach committees, beach management participative or peddlers organisation. Just now the influence of the evolution of beach quality awards explained before is clear, mainly from environmentalist or tourist organizations, not from decision making centres, as Vallega (1999) suggest.

After the intermediate results have been explained, the final list of criteria is easier to understand. From 97 initial criteria the final list has 29 of them, those which are included in enough awards based on percentile 80. As well as it was mentioned before, variation between proportion of criteria in each category in the whole list and the final list was small, being statistically representative. Moreover this final list has almost the same number of criteria than average of all awards reviewed, as table 4 shows.

The importance of quantity of criteria is related with ease of measurement and fulfilment by organization a charge of the beach. Each of those criteria will must measure several times during tourist season, increasing costs for organization responsible of the beach. Additionally in the Caribbean and tropical areas, as such Mexico, Colombia and Cuba, the tourist season is almost whole year, increasing even more the budget required to maintain a beach quality award.

Finally it is important remark that other statistical approach can be used to reduce or

increase number of criteria, as such to choose three highest value on each category, or an arbitrary number with the highest values. In any case costs and ease of maintain an award must be analysed according to features of each criteria, because measure water quality is different in both aspects than measure environmental friendly infrastructure or lifeguards service. An research about financial costs of maintain beach quality awards is suggested to do in the future.

4. Management framework of beach quality awards

4.1. General aspects

Beach awards have been quoted as tools to improve coastal management (Nelson et al 2000, Nelson and Botterill 2002), however their role into integrated management is not totally clear, at least within Latin-American conditions. According to Kay and Alder (2005) coastal management could be interpreted as the activities occurring on coastal lands and waters, and at the same time, it could be used to mean the overall control of the organisation related with these activities. Meanwhile Vallega (1999) include a holistic perception of integration, when he correlates the specific goals of the management with the pursuit of the integrity of the ecosystem, economic efficiency and social equity.

In this conceptual framework is evident three dimensions, which they are the same to sustainable development: environment, society and economy. Vallega (1999) also proposes six principles of integrated management, all of them related with the Agenda 21, and focused in the triple dimension mentioned. According to that, the best approach of beach awards would be when them allow to improve the life quality of local communities, whilst the tourist activity keep profitable without degrade the beach environmental quality.

Nevertheless technical bibliography about beach awards is focused in the management of the beach as unit, understanding this as isolated system on the coast. For example the conclusion of Nelson et al (2000), in their analysis of beach awards and management, is related to natural scenery and structures on the beach, but it does not go more away. The analysis of beach management within integrated coastal management is a realm ready to discover.

The role of beach stakeholders is another field less studied. Normally the bibliography and technical studies define two kinds of stakeholders on the beach: users and managers (Nelson et al 2000, Williams 2004, FEE 2006). However the stakeholders related with beach management are many, and they have several ways of organisation (Williams 1999), such as the Green Sea Partnership shows (Nelson and Botterill 2002). This aspect is extremely important in integrated coastal management, as Steer et al (1997) remain within the participative principle of sustainable development.

This fourth section of the paper, fairly the most important for its objective, analyse the relation between each one of the eight beach quality awards chosen, and their usefulness to coastal management. Also beach certification schemes are analysed as a tool to reach sustainable development on the coastal areas. It does not pretend to become in the unique truth about beach awards and management, but whether it wants to promote a deeper discussion about this issue.

4.2. Methodology

The analysis of management in beach quality awards had two main parts: the management in each one of the eight awards studied along this paper; and the beach quality awards, in general terms, within the integrated coastal management framework. The former was analysed through four indicators and the latter based on two core issues of integrated coastal management from two of the main authors on the world in this field.

The four indicators were built specifically for this research, and all of them are related with the same 14 technical documents reviewed along this paper. The first indicator was built with information about stakeholders integration or participation within each certification procedure. A two section's table was created and a list with 30 kinds of stakeholders was included in it (Table 5). The stakeholders were divided in four groups: public institutions, private organizations, non-governmental organizations and citizen's partnerships. The difference between each group is mainly based in their legal composition, their function on the beach and if they have or not profitable interests.

The list of stakeholders was made from a review of institutions and people who participated in the beach award elaboration, the institution or person who is able to ask the certification, the institution a charge of the award, and the institutions and people include explicitly in the guidelines of each beach quality award. Also some stakeholders did not quoted explicitly, but due to they are important in the Latin-American context, were included, such as peddlers.

The table was filled in allotting a mark to each stakeholder included in each beach award. The stakeholders explicitly defined as a charge of the beach were classify as 'active stakeholders' and include in the first part of the table, whilst others were classify as 'passive stakeholders' into the second part. After that, the number of marks of each stakeholder and each beach quality awards was counting, and the highest and lowest scores analysed. The scores were counted from each part of the table and with the sum of both.

Second indicator was built analysing the proportion of management requirements of each award, as well as was explained in the third section of this paper, but increasing the depth of analysis. Third indicator is related with promotion and efforts made by the beach award to integrate the stakeholders in the beach management. All criteria about 'beach committees' creation or management agreements were taken in account. Fourth and last indicator is carrying capacity. This indicator is based on the analysis of Jimenez etal (2007) in which they demonstrate that beach users density is one of the key variable to beach management. Value of this indicator is defined according to whether carrying capacity is absent or present in each beach award.

The second part of analysis spin around beach quality awards as a tool for integrated coastal management, or sustainable development on coastal areas, in other words. Hence the beach awards are analysed together and their particularities are not take in account. Additionally, there are several authors of books about integrated coastal management, therefore only two of them were included: Vallega (1999), and Barragan (2003). Selection was done mainly due to their innovative approach of coastal management, closely linked with systems theory, and their experience in Latin-America and the Mediterranean, where the eight beach quality awards are applied.

Initially, the sustainable development principles were linked with the final list of criteria

established in the third chapter. This list was assumed as the model of beach quality award, and at the same time as the point of reference from now to any analysis of beach awards. Also several specific bibliography was reviewed and each quotation about these principles was taken in account. Despite of this methodology, we are conscious about subjectivity of this analysis, and it is pertinent clarify that our objective is foster the discussion and new studies in this way.

Second analysis was the place occupy by beach quality awards within Integrated Coastal Area Management Programmes. ICM manuals of Vallega (1999) and Barragan (2003) were reviewed, and their approach were taken as start point. Each of them has very clear structure of ICAM programmes, and both are rather agreed with general definition of these programmes by UNEP (Brachya etal 1994). The analysis of each stage of ICAM programmes was done, and their scope used as reference point.

4.3. Results and discussion

The level of participation of stakeholders within the beach management is very low, mainly as an active manager, according to the first indicator evaluated. The first part of stakeholder's table shows only one beach award with at least three active stakeholders, the Mexican one (table 5). The others seven beach awards vary from only one institution a charge (Blue Flag, Playa Ambiental, Marca Q) to any stakeholder with out specify. Indeed four of the beach awards did not define a specific institution a charge of the beach, allowing to any kind of stakeholder to become in responsible of beach management. Although this approach allows participation of any one, at the same time the proverb "the land of everybody is the land of nobody" is clearly true here. Finally, the table shows municipalities as the unique stakeholder really active in beach awards, despite it is included only for three certification schemes.

Second part of table 5 shows a better scenery. The passive stakeholders are more included in the beach management, although an important level of 'undefined stakeholders' remain. Tourist authorities are widely included in the passive management, being Ecoplaya Award the only one which does not include this public institution, perhaps because it is promote by a non-governmental organization. Next passive stakeholders are environmental authorities and certification companies, with five marks each one. The characteristic of 'certification scheme' originated from the quality and environmental management systems (Dandon 2005), common to majority of beach quality awards, explains this pattern. Furthermore it can be concluded that environmental authorities are widely included in the management for two main reasons: sustainable development is the widest development approach on the world, and majority of beach awards were created by environmental organizations.

Another result is that only four stakeholders are really included into beach management: municipalities, tourist authorities, environmental authorities and certification companies. This result become in the following big conclusions: first, level of participation of a wide range of stakeholders in beach management is very low, only four of twenty-five of them (undefined stakeholders are not counting) are included, it means 16% of participation. Second, the beach quality awards still have a strong top-down approach, such as Nelson and Botterill (2002) already had been noticed. This conclusion is more clear

when three of these four stakeholders are public institutions, and the other are private companies focused only in certification, not in management.

Additionally, it is remarkable that only one of the non-governmental organizations and citizen's partnerships is an active stakeholder (beach committees in Cuba). Same situation, but less extreme, happen with passive stakeholders. Only educative organizations, as such universities, are widely included in the beach management, other kind of NGO's and partnerships are included maximum two times. Special importance is noticed about peddlers associations, because they are numerous and very important for local economies. Their totally absence as stakeholders include in beach management is understandable in Europe or USA, where peddlers are strange, but it does not happen in Latin America. These conclusions reinforce the need to adopt bottom-up approach within beach management, as soon as possible, and to encourage the cooperation with local community (Williams 1999).

The second indicator has a similar pattern. The table 6 shows all criteria of management requirements and the proportion of them included by each award. Through twelve criteria established in the analysis did in the third section of this paper, the number of requirements were below 50%. This highest score was obtained by Marca Q with 42%, followed by Mexican Award with 33%, and the next award with 25% was Blue Flag. It must be remember that Marca Q and Blue Flag are not awards created in Latin America, showing the management weakness in the region. Another four awards obtained 17% and only one, the Argentinian certification, obtained 8% of possible score.

The conclusion of this second indicator is consistent with the previous section of this document, the beach quality awards are more focused in the features of the beach for tourist activity, than in the management of this coastal space. Whilst in other requirement's categories the highest scores were above 50%, in management the value was really lower (table 7).

Next indicator was related with promotion of participation in beach management from each award. Six criteria were found as promoter of participative strategies, although they have very different scopes. Whilst one of them foster voluntary agreements between stakeholders, other one promote training of these stakeholders or create beach committees (table 8). Additionally, each one of these criteria were included in only one or two awards, therefore any of these criteria will not be in the final list due to their low scores.

The number of awards with participation's criteria also is important to be highlighted. Five awards have included this kind of requirements, and only Mexican one has two participation's criteria. Other four are Blue Flag, Colombian Award, Ecoplayas Award and Playa Natural. According to the system of indicators here proposed, a medium level of usefulness for integrated management can be allotted.

Last indicator is carrying capacity as a mandatory requirement to get the beach quality award. In the previous chapter was remarked the unusual pattern of this criterion, because it was included in only three awards, the Colombian award, Marca Q and Ecoplayas Award. This surprising result is contradictory with several bibliography, which propose carrying capacity as key variable in coastal management in tourist areas (Amador etal 1996, Roig 2003, Jimenez etal 2007).

Several features on the beach, as such safety, availability of services, or environmental quality depend of the beach users density (Jimenez et al 2007) and carrying capacity can control affluence of beachgoers and avoid overcrowding beaches. However the low scores of this criterion within the eight beach quality awards analysed show other perspective. This is another result indicating the weak link between beach awards and integrated management. Table 9 shows the value of each indicator analysed.

The general conclusion of the management indicator's analysis is a low interest of Latin American beach quality awards in management issues. They were created to support and contribute the beach management, as well as majority of their guidelines documents justify, however this study demonstrate another pattern. It will be irresponsible affirm the beach awards, and the institutions which promote them, are not interesting in becoming as a useful tool for beach management, however it is evident currently they are not. This conclusion should be taken as a warning, more than as an affirmation to demerit the extremely important role of these voluntary schemes.

Second part of analysis about management was done with out to specify each beach quality award, therefore the model list of criteria was used. Initially the sustainable development principles was done according to definition of them did by Steer et al (1997), which it is focused in the coastal areas. The principles chosen were: precautionary, prevention, efficiency, participation and equity. Moreover equity was taken in account from two meanings, first related to avoid external environmental costs of tourist activity, and second to allow access of natural resources and their services on the beach for anybody.

In the table 10 is shown the final list of criteria and which principles they promote or support. The prevention principle obtained the strongest relation with beach quality awards, followed for the precautionary principle. It can be understood as an interest of beach awards in to keep the current environmental status, as a first priority, as Nelson et al (2000) have highlighted. Next principle was equity, with a relation quite smaller than two formers. The equity is associated in this case with access to the natural resources, more than environmental costs. Finally participation and efficiency had the weakest relation with award schemes.

These results must be discussed in the context of the main economical activity developed on the beach, namely tourism (Barragan 2003). The main interest of tourism is related with safety and good environmental conditions (Williams 2004), it means preventive and cautious behaviour. The organizations which have created the beach awards have been conscious of this issue, therefore they have supported the certification in these aspects. About equity must be taken in account the strong interest of tourist organizations and beach managers in increase each time more the number of tourist on the beach, based on the fact that beaches are a big business (Tudor and Williams 2006), but it require wide access to this coastal space too. The principle of participation was widely analysed before, however it is important to notice that sustainable development of beaches can only be fully achieved if communication, and its means participation, is improved (Nelson and Botterill 2002).

Finally the efficiency represent the biggest weakness of conventional tourism, starting by its autophagic behaviour (Barragan 2003). Efficient use of natural resources is not a priority for tourist companies, which are more focused in offer comfort and leisure than promote environmental friendly behaviours (Fraguell and Sansbello 1998, in Barragan 2003). A clear demonstration of that is shown when no criterion related with rational

resource use was included in the final list of criteria, here obtained. Further analysis about tourism on beaches and autophagic process should be done in the near future, and for that the synergy between beach managers and academia will be of the utmost importance (Williams 1999). This aspect would become in the core variable to achieve the real sustainable tourism on coastal areas, more than isolated environmental impacts (Botero and Diaz in press).

The last analysis in this chapter about management was based on the main books of integrated coastal management of Adalberto Vallega (1999) and Juan Manuel Barragán (2003). The former proposed a six's stages ICAM process, and the latter a seven's stages one, however their schemes are fairly similar. The table 11 was built integrating each stage of both ICM process, and establishing the role that a model beach quality award would have. This result is consider of high utility for beach managers and people involve in planning of integrated coastal management, because it allows to situate the beach quality awards in any stage of the ICM process.

The main conclusion from table 11 is the demonstration of the usefulness of beach quality awards to integrated coastal management, whenever the award has specific focus on management issues and its requirements foster stakeholders participation. Williams (1999), quoting Barwise (1996), comment about strongly oriented to action behaviour of managers, disliking reflective activities, however the awareness of the usefulness of beach awards in whole ICM process, as here is demonstrated, will force them to think widely.

With this last result of the paper, planners and managers will discover that Integrated Beach Management is just ready to start. To date, beach certification schemes have been isolate tools which try to help the management of some punctual aspects on the beaches. However the framework to improve their role to reach a sustainable development in these coastal spaces are given, from now the institutions a charge of beach quality awards have the challenge in their hands.

5. Concluding remarks

Beach quality awards are a new development in Latin American countries. When this paper started this situation was noticed, and now it is confirmed. Whereas in Europe there are beach certification schemes from more than 20 years ago, in Latin America the first one was created in 2003. During five years almost all countries in the region have implemented some kind of beach award, from the well known Blue Flag (Brazil, Costa Rica, Caribbean Isles) to isolate and courageous efforts by private groups of people, as Eco-Playas in Peru. However despite of that, and the opportunities to share information allowed by globalisation, those beach quality awards are really different from ones to others.

A vast diversity of criteria was found in only eight beach quality awards studied. For example, though average of criteria per award was 30 items, the list with all criteria had 97 different requirements, it means more than three beach awards together. Also structure of each beach certification is different, as here was shown. This general result is surprising if it is taken in account the few diversity of institutions a charge of these awards, mainly public institutions oriented by standards organizations. A bigger similarity would have been expected, but it was not the case.

About the organisation of these criteria, it was evident the origin of beach awards from

environmental and/or tourist institutions. Almost 50% of all criteria were included in only two categories: environmental and services requirements. At the same time, management requirements, those more important for the purpose of this paper, were less than 15% of total criteria. Although beach managers do big efforts to demonstrate that beach quality awards are excellent tools for management (LCR-FIU 2008), here this affirmation was not so clear.

The better example of this weakness of management by beach awards is the results obtained in this study. From four indicators created to measure the management usefulness of certification schemes, only one obtained medium value, for the other three their value were low. Then, if the institutions a charge of each beach award promote them as a tool for better management of the beach, why do these results so low?

An explanation can be taken from approach used for understanding the coastal management. Whereas majority of coastal managers still understand the coast as a sum of components (biological, social, economical, legal, etc.), the analysis done here was focused in the holism of the beach, it means in the comprehension of these components without separate them. The coastal systems, and the beach as one of them, is understood as a structure moves toward the achievement of an objective, as Vallega (1999) defined, not as a simple sum of components.

Other explanation can be due to the approach used to manage the coast from institutions a charge of beach management, which normally are responsible of beach awards. Here supremacy of top-down approach was demonstrated. Until majority of stakeholders of the beach will not be included in the beach management, all efforts will be only partial solutions. Beach quality awards can be useful tools for management, but they must focus on integration and participation, otherwise human impacts on the beach will continue and increase indefinitely, though regulations become more and more strict.

Furthermore the weakness and even non-existence of a defined authority on the beach is a common element in the majority of beach awards evaluated. This weakness is related with the overlapping competences placed on beaches and coastal areas (Steer et al 1997) which, despite that a Beach Management Committee would exist, to identify a unique authority on the beach is difficult. This lack of control become in several difficulties to aware stakeholders and beachgoers in to reach the sustainable development of the beach, specially because they are a diffuse and variable public. As a consequence of this complex situation, it is explained why the institutions a charge of beach quality award have been more focused on information than on management.

However this study shows several opportunities for integrated beach management in Latin America. From the hypothesis of Jimenez et al (2007), according to which beach users density is the key variable of the beach management, carrying capacity of the beach would become as a crucial requirement in any beach quality award. Nonetheless methodologies to measure it and control density of beachgoers should even be developed and proved in tourist beaches of Latin America.

As a consequence of that, it is interesting to note that within the final list of 29 criteria here established, carrying capacity was one of them. This fact can be taken as first demonstration that the final list may be a guide to Latin American countries to evaluate and adjust their own beach awards. This list emerged from them, showing the similarities and hiding the differences, and becoming in a general framework applied to all.

Second, despite beach quality awards and integrated coastal management are not well integrated yet, potential of the formers to support and improve the latter was widely demonstrated. Nowadays that several ICAM programmes are been elaborated and implemented in Latin America, a beach quality award more focused on management criteria, would be extremely useful. Beach certification should change from a tool in the implementation or executive stages, to a tool included from first stages in any ICAM programme.

Such as a feedback to the first concluding remark, it can be said that Latin America has a big advantage as a region to improve their current and new beach quality awards and promote an integrated beach management. This final concluding remark is supported on the high number of new awards, which means current interest of beach managers, on the cultural similarities between Latin American countries, which means close management approaches, and on the high increasing of the globalisation, which means facilities to share information, experiences and tools. There are several studies to do before real integrated beach management happen in Latin America, however as A.T. Williams said from year 1999, if interaction between academia and beach managers is promoted, to improve and to sustain the quality of the beach environments will be reached.

Acknowledgements

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Table 1. General features of Beach Quality Awards reviewed

Figure 1. Institutions a charge of Latin-Americans' BQA

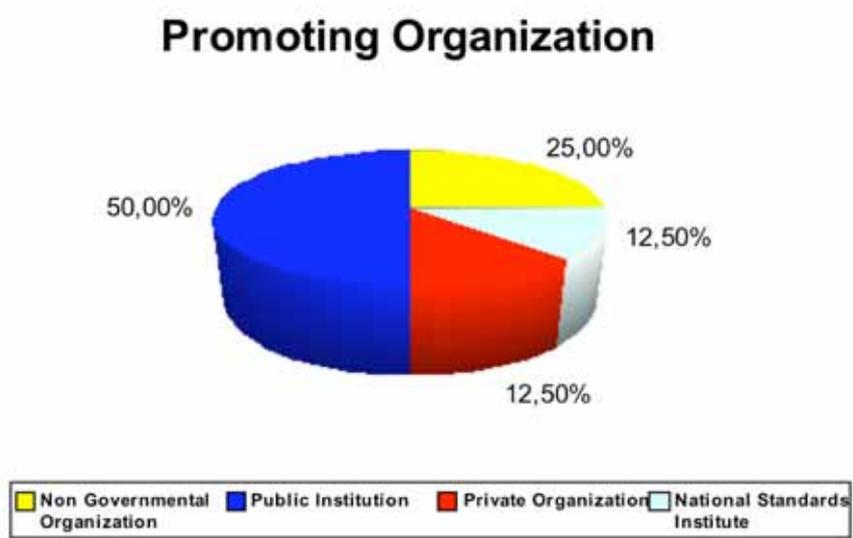


Figure 2. Coverage of Latin-Americans' BQA

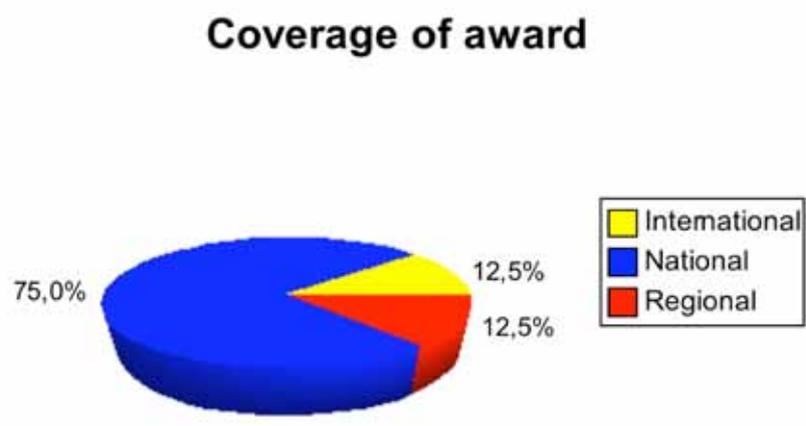


Figure 3. Length of certification of Latin-Americans' BQA



Figure 4. Kind of beach certified by Latin-Americans' BQA

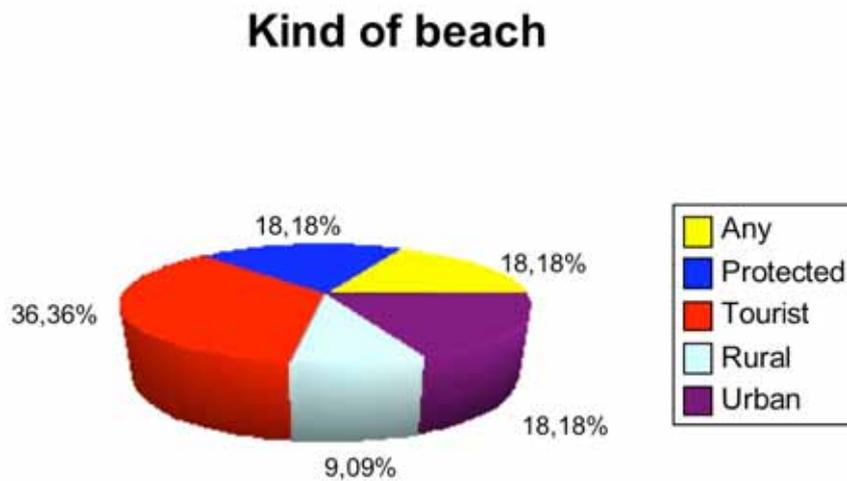


Figure 5. Grouping and structure of Latin-American BQA reviewed

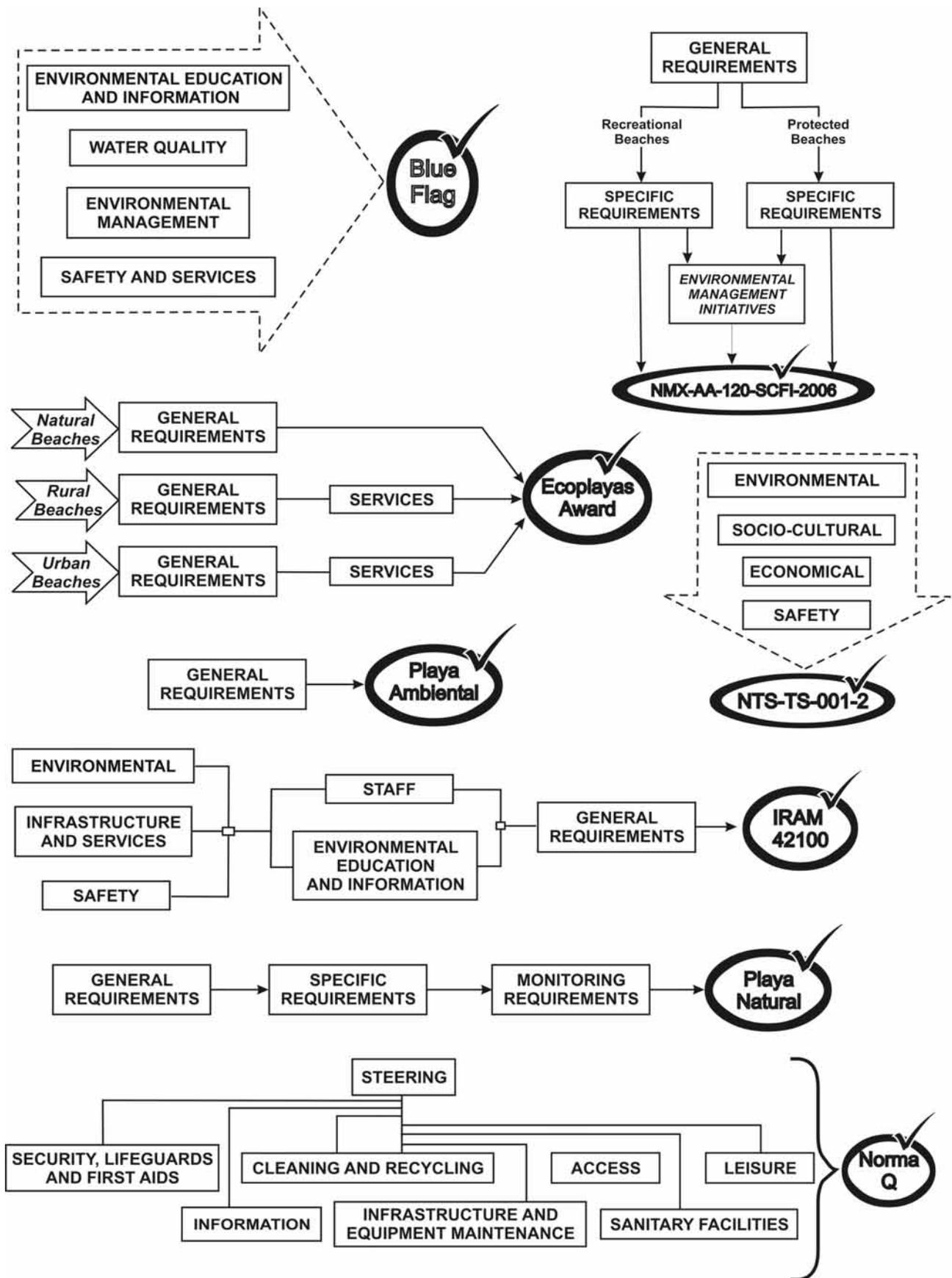


Table 2. Statistical information of criteria categories

ENVIRONMENTAL		SERVICES		SAFETY		EDU-INFO		MANAGEMENT		OTHER	
<i>Frequency</i>		<i>Frequency</i>		<i>Frequency</i>		<i>Frequency</i>		<i>Frequency</i>		<i>Frequency</i>	
8	2	7	2	8	2	5	2	5	1	2	1
8	2	7	2	7	2	4	1	3	1	2	1
6	1	6	2	6	1	4	1	3	1	2	1
5	1	6	2	6	1	4	1	2	1	2	1
4	1	5	1	5	1	3	1	1	1	1	1
4	1	4	1	2	1	3	1	1	1	1	
3	1	3	1	2	1	2	1				
3	1	3	1	2							
3	1	3	1								
2	1	3	1								
2	1	3	1								
			1								
PERC 90	5,9	PERC 90	6	PERC 90	6,6	PERC 90	4	PERC 90	3	PERC 90	2
PERC 80	4	PERC 80	4,6	PERC 80	6	PERC 80	4	PERC 80	2,8	PERC 80	2
PERC 70	3	PERC 70	3	PERC 70	4,4	PERC 70	3,1	PERC70	1,7	PERC 70	2
PERC 60	2,6	PERC 60	3	PERC 60	2	PERC 60	2,8	PERC60	1	PERC 60	1
STD-DEV	2,22	STD-DEV	2,03	STD-DEV	2,5	STD-DEV	1,45	STD-DEV	1,29	STD-DEV	0,5

Table 3. Proportion of criteria in each category

Category	Whole list		Final list		Variation
	Number of criteria (#)	Proportion of criteria (%)	Number of criteria (#)	Proportion of criteria (%)	
ENVIRONMENTAL	22	22,7%	6	20,7%	-2,0%
SERVICES	23	23,7%	6	20,7%	-3,0%
SAFETY	15	15,5%	5	17,2%	1,8%
EDU-INFO	14	14,4%	4	13,8%	-0,6%
MANAGEMENT	12	12,4%	4	13,8%	1,4%
OTHER	11	11,3%	4	13,8%	2,5%

Figure 6. Histogram of environmental requirements

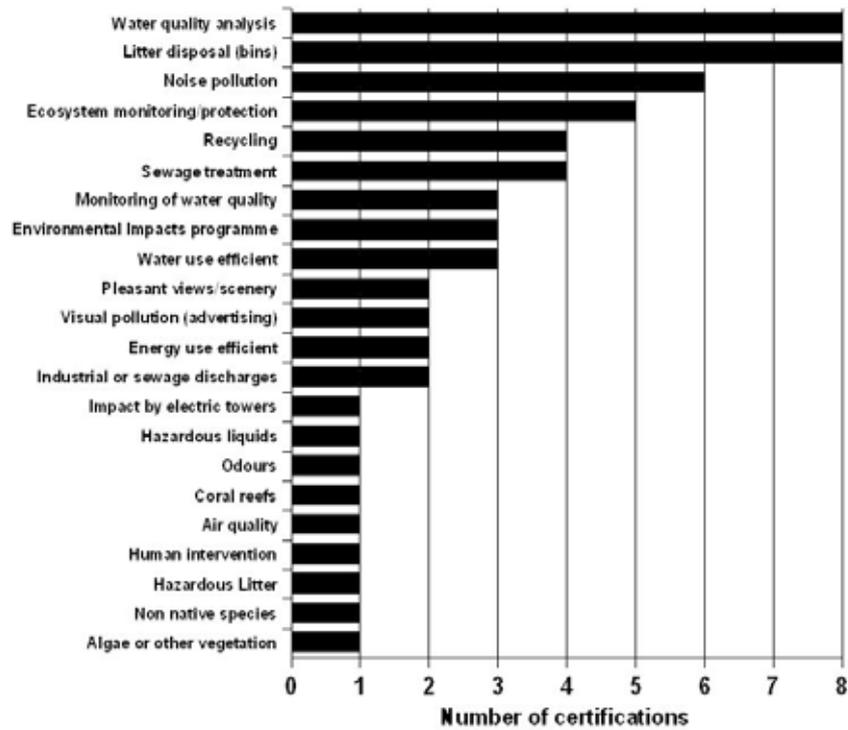


Figure 7. Histogram of services requirements

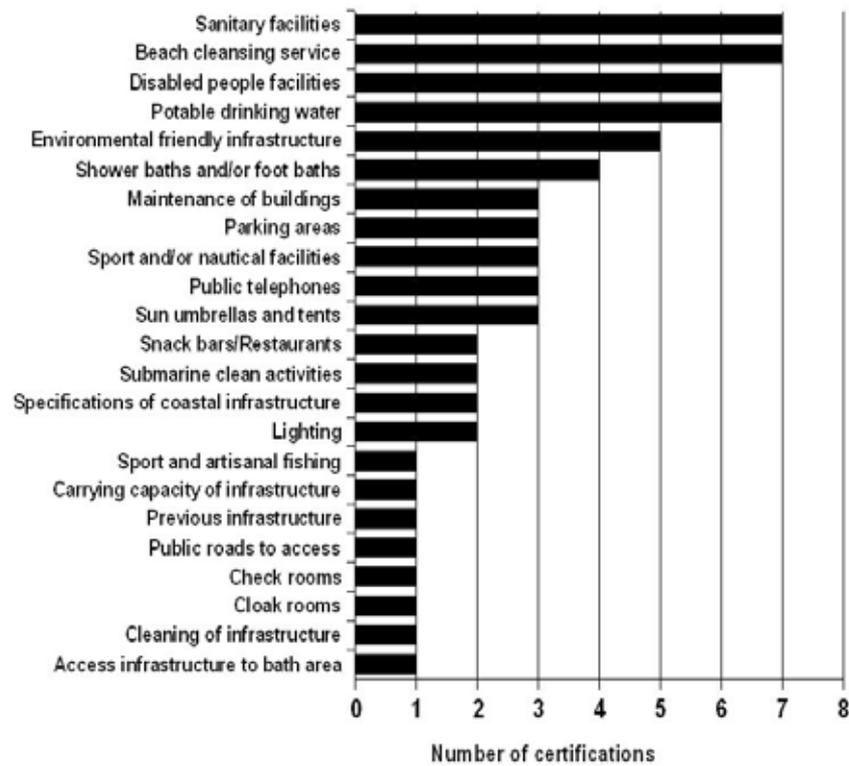


Figure 8. Histogram of safety requirements

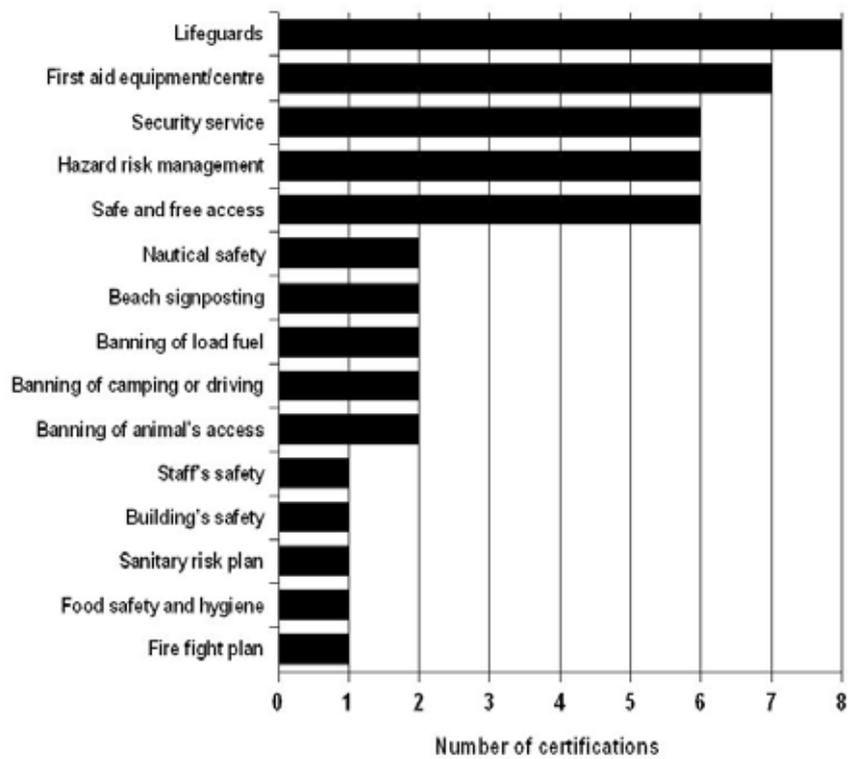


Figure 9. Histogram of education and information requirements

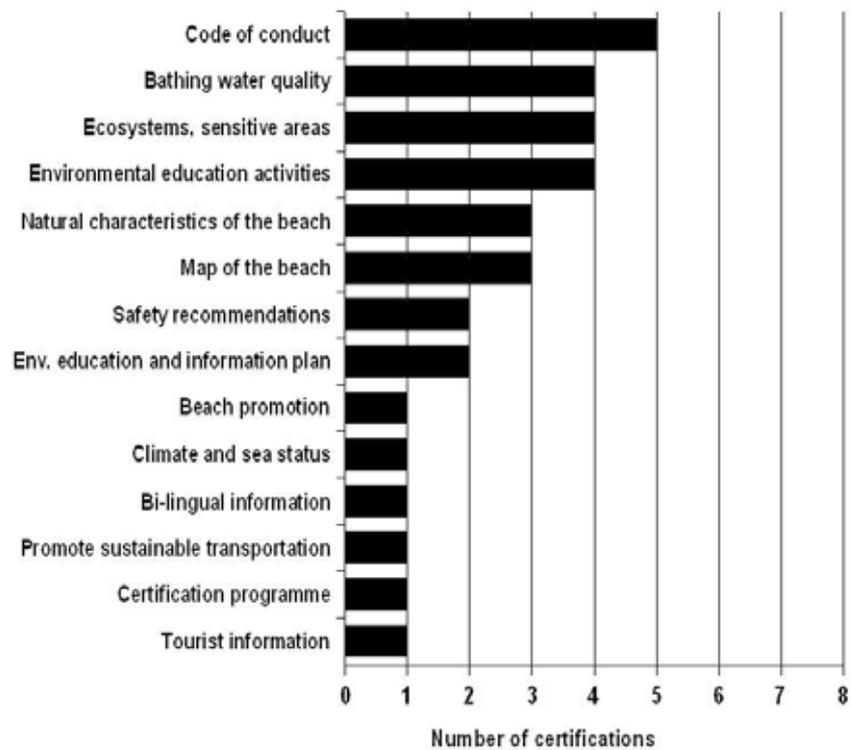


Figure 10. Histogram of management requirements

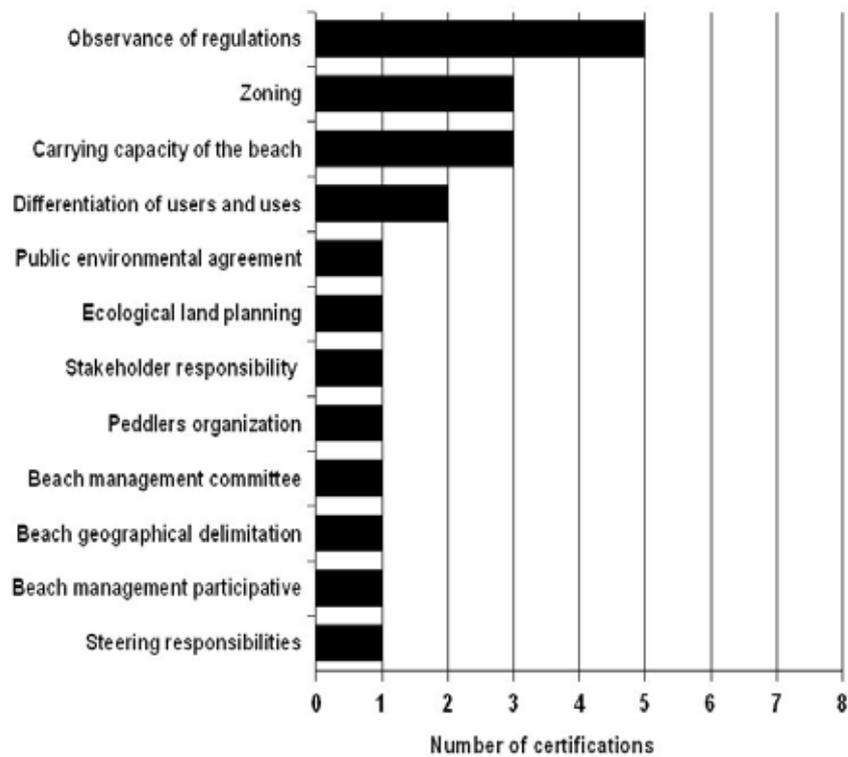


Figure 11. Histogram of other requirements

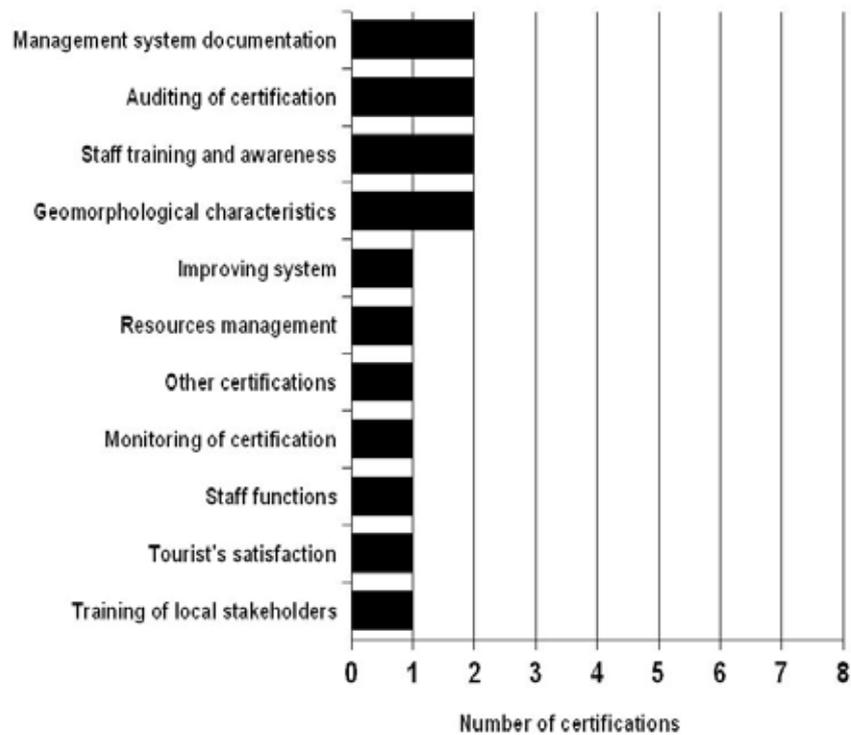


Table 4. Number of criteria in each BQA

Number of criteria	
Blue Flag	29
NMX	22
NTS	35
RAM	36
Ecoplayas	25
Playa Natural	23
Playa Ambiental	26
Marca Q	48
AVERAGE	30
Final List	29

Table 5. Beach's Stakeholders Matrix

Table 6. Management requirements of Latin American BQA

Table 7. Proportion of requirements in each Latin American BQA

Table 8. Criteria for promoting participation in beach management

Participation's Criteria	Award
Beach management committee	Blue Flag
Beach management participative	NMX
Environmental Management Initiatives	NMX
Public environmental agreement	Playa Natural
Stakeholder responsibility	Ecoplayas
Training of local stakeholders	NTS

Table 9. Indicators of integrated beach management in Latin American BQA

Management Indicator	Value
Stakeholders participation in the beach quality award	Low
Management requirements in each beach quality award	Low
Promotion of management by the beach quality award	Medium
Inclusion of carrying capacity as a mandatory requirement	Low

Table 10. Sustainable Development Principles and criteria of the model BQA

BQA Criteria	Sustainable Development Principles				
	Precautionary	Prevention	Efficiency	Participation	Equity
Water quality analysis	1	1			
Litter disposal (bins)		1			
Noise pollution	1				1
Ecosystem monitoring/protection	1				1
Recycling		1	1		
Sewage treatment	1				1
Sanitary facilities		1			1
Sand clean service		1			
Disabled persons facilities					1
Potable drinking water					1
Environmental friendly infrastructure		1	1		
Shower baths and/or foot baths					
Lifeguards					
First aid equipment/centre					
Security service					
Hazard risk management	1				
Safe and free access					1
Code of conduct		1		1	
Info of bathing water quality	1			1	
Info of ecosystems, sensitive areas		1		1	
Environmental education activities		1		1	
Observance of regulations	1				
Differentiation of users and uses					
Zoning					1
Carrying capacity of the beach	1	1	1		
Management system documentation			1		
Auditing of certification				1	
Staff training and awareness				1	
Geomorphological characteristics	1				
TOTAL	9	10	4	6	8

Table 11. BQA in Integrated Coastal Area Programmes