

Sustainable Eco-Resorts

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Abstract



Figure 1: Camping Lounge

This research paper intends to show the emerging concepts in sustainable eco-resorts. The purpose of the study takes in consideration a case study in order to define basic principles in eco-architecture and eco-urbanism to develop rural areas. The research methodology is based on a single-case study. The results achieved, points to the emerging of a new paradigm in architecture, urban planning and tourism, and particularly to new formal solutions and specifications in technologies and materials and the authors used the case of the most popular area at international level, in Portugal, to illustrate the concepts achieved. The results show that low-technology is possible to increase good architecture and design. This evidences and conclusions allow the emerging concepts to be used in Mediterranean geographical areas.

Keywords: eco-architecture, bioclimatic, eco-urbanism, eco-resorts, sustainability

1. Introduction

The purpose of this study takes in consideration a single-case study in order to define basic principles in eco-architecture and eco-urbanism to develop rural areas, taking in consideration the most relevant research and theories based on the real world of camping and holiday parks in Europe. In the real world of camping and parks, the main idea of architects, town planners, surveyors and managers is based on proposals to contribute and resolve the economic and financial crisis with solutions supported by solar and aeolian energy, sustainable vision on architecture and urbanism, water supplies and eco-maintenance of buildings and materials and low-technology.

The study case research uses experiences in France (Montpellier and La Rochelle), Spain (Tarragona) and Netherlands, to support new directions in resort planning and design, according to recent theories in architecture and urbanism, such as, the principles supported by European Directives, Charts, Conventions and Recommendations, that refer the emerging concepts based on eco-architecture and eco-urbanism. The research uses a holistic vision and takes in consideration the antecedents that had led to modify the change of the paradigms from an industrial consuming society for a model that points in the direction of urban ecological sustainability. The objective of the research is to systemize a set of emergent concepts in the areas of the architecture, urban and tourism, in the way to establish an innovative program and, consequently, an urban and architectural proposal for a real context in the south of Portugal, more properly in Zambujeira do Mar, (Odemira, Alentejo).

2. Literature review (the emerging concepts in eco-architecture and eco-urbanism)

Until the decade of 80, of XX century, the related global problems with the ozone depletion and with the climate change are apriority for a minority of scientists who did not hear its voice in the medias. The few that had attended the oil crisis of years 70 forgotten the problem that the “energy crisis” raised and, each time, raise more. Why the smashing majority of the experiences in architecture and urbanism consumes so much energy and produce a great impact in the environment?

Based on the consideration that we do not learn the sufficient with the good practical examples or we do not systemize the technical standards which answer with severity to the sustainable principles of human being survival according to actual standards of life. (Emmanuel, 2005).

According to Emmanuel (2005) the questions related with the global heating, the exhaustion of the energy resources and the bankruptcy of the speculative capitalist model meet in an impasse. Today we reach the border between the concerns of sustainable comfort and the projection of conducive secular shares to the survival of the species (Geyer-Allely, 2002).

Our generation, probably, is conditioned to prevent future cataclysms provoked for a set of factors that, cumulatively, has come to play a basic role in the constant degradation of the ecosystem conditions of the planet. Almost two decades that we are going to create knowledge capable “to support” the development model, guaranteeing the occidental way of life to emergent countries that

intend for in practical. According to possible scenes such as the considerable increase of the average level of waters of the oceans for saw of the global heating or the announced end of the fossil fuels, the world that we know would be obliged to move drastically (Stern, 2007). In such a way, we can consider that the climate changes, each time more visible, allied to the social changes and politics in the world provoked by the energy crisis need being equated according to a new “paradigm”. In this picture, it will be necessary to review the models currently acceptances for the organization of the built environment, in general, and of the architecture and urbanism in particular.

The “eco-resort” means a friendly environment development of the area and has assumed the figure of a concept of resorts whose localizations and destinations offer a set of products, services and animation related to the environmental questions. Referred by Baud-Bovy (1998) a resort is essentially a place developed for the sojourn of tourists, providing multiple facilities for their accommodation, recreation, entertainment, rest and other needs. Through the concentration of facilities the resort acquires an identity and character: it becomes a specific place to go to and to enjoy in its own right, in addition to serving as a gateway to other resources in the area. Tourist resorts enable the best use to be made of infrastructure and land and operational services.

In a next future the “eco” will have to be transversal to all this developments. A layer is not treated more than, a concept but yes of an imposition of market to the developments. This attitude came to be whichever the concept of the resort, the type of exploration or the classification for the development.

Based on this vision it is necessary to understand the emerging concepts in eco-architecture and eco-urbanism. Schwanke and al (1997) stressed that one of the primary objectives of resort planning and design is to create a sense of place and the effort begins with the setting. Planning and design are essential on shaping the setting, visitors’ or residents’ perception of it, and, ultimately, the sense of place conveyed by the resort in the context of its natural surroundings. Sustainability has become a widely applied concept – so much, that the meaning lost precision and definition; today, it probably acts more like a symbol of a necessary civilizational change, i.e. a different perception of human activities and values, in relation with an environment conscious attitude and accounting. According to Camagni (1996) and others (Marret, 1995; Fusco and Nijkamp, 1997; Lombardi and Basden, 1997), it is the following: “A process of balancing and integration (or co-evolution) between sub-systems, i.e. social, economic, physical (including the built heritage) and environmental”. This process should be able to guarantee both: “a non-decreasing level of well-being to local community in long term (quality of life) and the reduction of negative effect in the biosphere (environmental quality).”

The word sustainable suggests the idea of constant, permanent or continuous and it is translated to some language as durable (e.g. Dutch, Finnish and French) but this may change the meaning of the concept. In this study, it refers to the “opening process” of all the fifteen “aspects” in a built environment and its community. A specific definition has been provided by Lombardi and Basden (1997), saying that: “Sustainability in the built environment is a result of the subjects related to the built environment acting in line with the laws of all aspects in an integrated and balanced manner over the long term, and threats to sustainability come from going against or ignoring the laws of one or more aspects”. The concept of environment was also evolving, at the same time - from an almost identity with nature and the physical quality of its components affecting mankind, to the perception

and evaluation of the surrounding universe, through social, economical, philosophical and cultural criteria, focused on the more subjective goals of “quality of life” and “sustainable development”.

In the field of architecture, sustainability is now also becoming mainstream; but the seeds were already there for the last decades - mainly after the oil crisis of the 70s: - passive solar, bioclimatic, green and eco-architecture had often claimed for the need of a better relation with site, physical environment, resources, human scale and cultural diversity, pointing out the importance of local input and scale, towards a more humane architecture. Governments, specially of the industrialized northern countries, have supported the climate conscious approach that some of these trends proclaimed, on a saving energy policy basis; but up till now, failed to influence the majority of architects and public opinion - besides the first buildings formal inconsequence and certain lack of quality, the consumerist way of life that the industrialized world also sustained and publicized, and the civilizational blind faith on techno scientific solutions to dominate nature and mechanically solve problems, prevented a wide acceptance of an environmental attitude in the architectural process. A very representative number of architects and theorists choose the ecological principles as the reference to follow, in order to achieve the desired sustainability in architecture- even here with a wide range of attitudes. If one follows the original concept applied in the Brundtland Report, and besides the optimal resolution of the binomial relation between resources, management and quality of life, sustainability requires also other fundamental aspects: - continuity, which translates better in the dynamic adaptation of a building (or urban fabric) to the continuous changing ways of life and specially, ethical responsibility towards next generations, to incorporate local and civilization information, seen as the essential resource to understand the past and to provide alternative paths to build the future.

Some authors consider sustainable architecture impossible, if a strict meaning is applied to the concept; in the context the definition was presented above, but it can be considered a redundancy, because a responsible architecture should always incorporate those fundamental aspects referred, regardless of programmatically, economical, formal or other conditioning aspects in the process of architecture design and implementation. However that is still not yet the case for the majority of the architectural approaches all over the world, and so, rather than another trend or formal style, sustainable architecture should stand for a basic integrative attitude to introduce in all levels of the architectural process. The bioclimatic architecture consists of the conception of buildings having in consideration the local climate, using to advantage the available natural resources (sun, wind, vegetation) with the purpose to get through the drawing and with low energy consumption a degree of comfort raised in the use of the building. The bioclimatic architecture integrates some climatic, ambient, cultural knowledge and partner - economic finding only solutions for each design. The application of bioclimatic strategies in the buildings is essential to reduce energy consumption and carbon emission. A bioclimatic architecture is that one that takes care of all climatic conditions in the conception of project, using passive solar systems of form to increase and energy efficiency. Not to confuse with the active solar architecture that is associated with the use of mechanic instruments, for example, solar and photo voltaic panels, hybrid systems of cooling for evaporation, etc.. These active concepts are out of the bioclimatic definition but they find in sustainability vision the justification. Based on the roots of empiricism, the bioclimatic architecture is unproved of the one of technologies to acclimatize or to illuminate. Such constraints compelled to an efficient and inserted construction in the surrounding climate, using the local materials mainly. The sustainable construction is defined as a

constructive system that promotes interventions on the environment, adapting it to the use necessities, production and human consumption, without depleting in this intervention the natural resources. Thus the systems of exploitation of pluvial waters, passive heating and cooling, quality of air and the water, maximization of the natural illumination as well as the use of renewed energies and impact of the used materials, are in pair and integrated in its global with the programmatically and aesthetic questions in the conception of the buildings. As result of sustainable construction we have a building that generates the resources rationally such as the energy, the water and the impact of the materials used in construction, taking care as a building to all estimated calculus of resistance of time, to allow the continuity of its function of shelter for a definitive use based on the waited indices of comfort. To relate that the sustainable construction is transversal to all the concepts, styles and stylistics languages adopted and employed in the buildings. The used passive measures can modify the form but never the language of the building. As action base we have to find a good relationship of the building with the local climate searching in its selective permeability the capacity to accumulate and to absorb heat or cold, to renew air and to control illumination.

3. The research methodology

The methodology adopted was based on “case study” in accordance with Robert Yin (1994), one of the most appraised authors in the use of this methodology. According with Alho (2000) the research identifies a contemporary problem which intends to study emerging concepts to the architecture and urbanism level specifically in rural areas. Based on Yin (1994), the researcher does not have control on the data, going to use only one case study or multiple cases as form to prove and to generate knowledge for new research. Single cases may be used to confirm or challenge a theory, or to represent a unique or extreme case (Yin, 1994). Single-case studies are also ideal for revelatory cases where an observer may have access to a phenomenon that was previously inaccessible. These studies can be holistic or embedded, the latter occurring when the same case study involves more than one unit of analysis. This technique, being sufficiently including, must be flexible and to use, at the same time, others techniques of research associated in order to produce final results which can be confirmed by another researcher that, following the same methodology, would arrive to identical conclusions (Hinks, 1996). According to Denscombe (1998) case studies characteristics are:

- spot light on instance,
- in-depth study,
- focus on relationship and processes,
- tend to be holistic and,
- the case study is a naturally occurring phenomenon. (Yin, 1994)

The authors take in consideration in special case study advantages (Denscombe, 1998):

- deal with the subtleties and intricacies of complex social situations,

- the use of multiple methods and multiple sources of data in order to capture the rarity,
- no pressure on the researcher to impose controls or to change circumstances,
- concentrating effort on one research site,
- theory testing and building.

Finally take care with the disadvantages of case study approach (Denscombe, 1998):

- credibility of generalizations made from its findings,
- perceived as producing “soft” data,
- boundaries are difficult to define and poses difficulties in deciding sources of data,
- negotiating access to people and documents can generate ethical problems,
- the presence of the researcher can lead to the observer effect,

4. Findings and discussion of case study proposal

To create a playful park with two different sources of clients, first destined to a floating public who will go there only to spend the day and usufruct the varied equipment which will offer, second destination to the public that will lodge and privilege comfort and the benefits of nature in bungalows or mobile homes. The eco-resort will function as a self-sufficient island, where the guests will find satisfaction for one varied gamma of interests and leisure, like sports, environmental and regional culture in a combination that attends de demands of different age levels.

This design project differs from its similar in camping, for the raised standard of quality that it reflects in the following areas:

Functionality

While unitary, this eco-resort intends to take care of two types of different visitors and the functionality was divided in four functional sectors, as it can be observed in the master plan (figure 2).



Figure 2: Eco-Camping-Resort Master Plan

1º Sector 0 - Lodging

The lodging area, foresees beyond a dimensioned parking, a generous reception, and a cycle-center (to rent bicycles), which precede a central square, where the first contact with the resort will arrive, with a set of services and activities, and leisure, such as restoration area, commerce and entertainment complemented for units of entertainment like amphitheatre, mini-golf, toys, sports and so on.

This central square will function as a distribution zone linked with the remaining areas. Its localization is central and privileged in relation to the entrance in the complex and relation to the elements of bigger landscape attraction and offers several activities.

2º. Sector A - Shelter

This camping leisure will be the nuclear area of the complex, and will agglutinate the biggest number of users and will offer a different concept of lodging linking with the nature. It corresponds to the camping zone, with diverse sources lodging like: tents, caravans, motorized caravans, until the most definitive solutions, such as bungalows (figure 3) and mobile homes (figure 4), and it will enjoy a great autonomy of functioning and management of resources, and it is the sector that will make the project economically viable.

This sector, on which was based this case study, is the most structural base of the complex and will be supported by a diversity of activities and services that complement a panoply of existing activities in the other sectors and it is also responsible for the landscape and environmental development of the

complex, with the creation of a biological swimming pool as well as a big tent (the camping lounge or ZEN tent) that provides this area of a social meeting point (figure 1).

3° Sector B – Aquatic leisure

This sector corresponds to the main zone of the aquatic entertainment, where more traditional equipments are proposed, presenting more options on the sport offer. Complementing the wealth of the beautiful beaches in the proximity, this sector endows this complex with an attractive of great importance for the resort.

This sector counts on swimming pools of diverse activities (swimming pool/beach with waves, *Jacuzzis*, lakes, islands, rivers, cascades, aquatic animation and nautical, health club and winter swimming pool, etc.), persecuting the main objective of working all the year.

4° Sector C – Environmental animation

This sector beyond usufruct of the natural resources will improve and rent areas of the park, with activities of preservation and environmental animation, such as sport of the nature, programs of sensibilization and environmental interpretation, agricultural activities, fifth of animals, environmental and cultural animation.



Figure 3: Cluster of Bungalows

MOBILE HOME T2 VERSÃO B

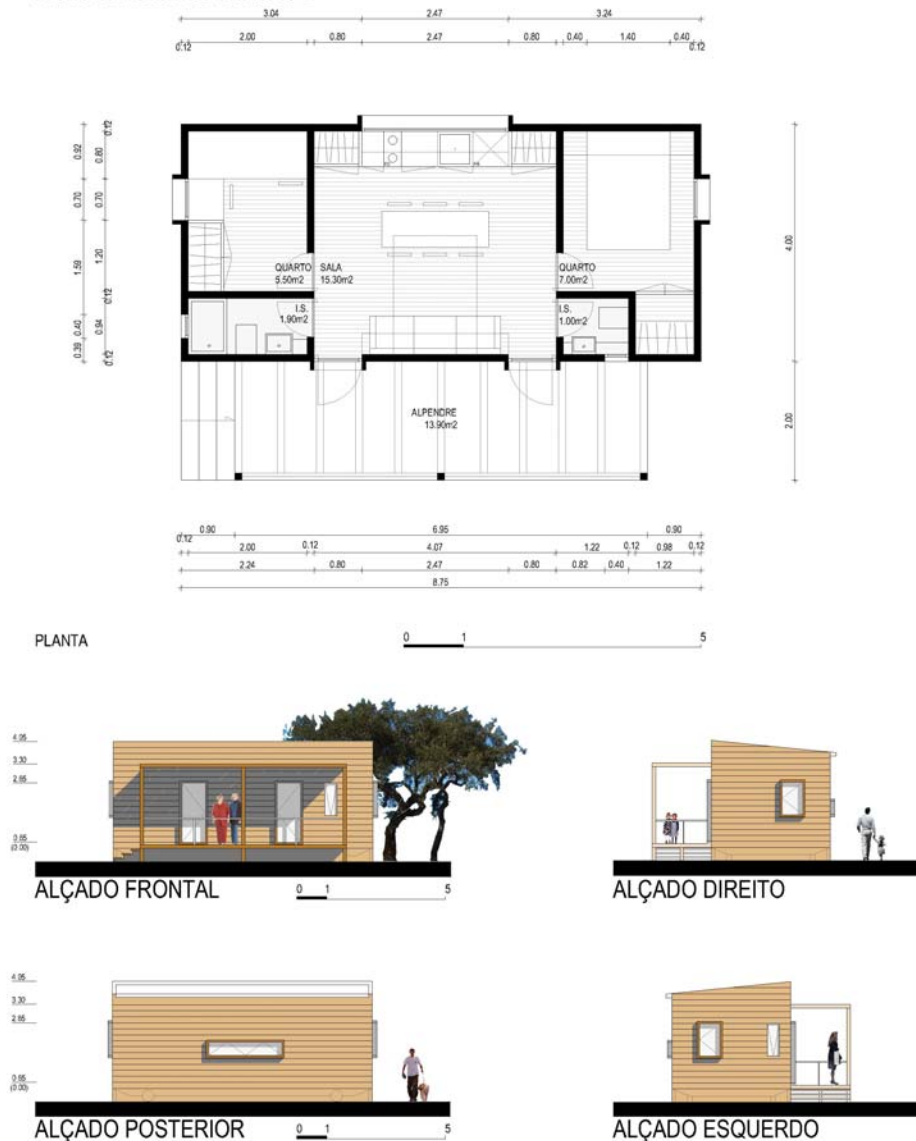


Figure 4: Mobile home, typology T2 version B

5. Conclusions and recommendations

Eco-camping resort gains a new importance in front of the new paradigm and it seems to appear in the camping leisure, two different and opposite forms in evolution.

In an upward direction, where this proposed project is integrated, expresses sophistication and the constant institutionalization, earning new contours pointing until the new classifications of “Luxury”. In descending direction, the provisory lodging becomes in a form of permanent residence for a considerable part of population with modest incomes.

Thus, made these considerations of this case study, it seems us pertinent to take off the following conclusions:

- Tourism is to move, answering the new ecological and environmental concerns and also to a dramatic problem created by the development of masse tourism, that aggravate from Second World War until present, leaving entire cities structures that are not used during half of the year, what configures a clear problem of sustainability.
- That, will make the industry of tourism, on the XXI century, go thought substantially structuralized changes, and surely, make it more responsible, environmental and socially speaking.
- The proposal of echo-camping resort that configured the presented case study is surely a new reply to a new program of tourism, looking for creative standards of quality and to propitiate a bigger contact of the customers with nature, as well as minimizing the negative impact of tourism.
- Thus, it makes sensible to conclude that the lodging in tourism of nature, in the case of eco-camping, is probably the evolution on the direction of sophistication and comfort, in the physical and architectural type of lodging, as well as in the number and quality of the leisure equipment.
- The notion of “luxury” is changing, and the close link to nature, related to unpolluted areas and harmonious natural environment is one of the great luxuries today.
- Solar and aeolian alternative energies had come to be and are in a primitive period of training development and will go to prosper and reach efficiency standards that at this moment still are considered utopian.
- As well, architecture and urbanism will go to follow development standards supported on “low” and “high” technology concepts. In the first case, simple and economic traditional constructive processes will be retaken and improved. In the second case, new, lighter and sophisticated materials will be developed, as well as, new equipments in order to achieve and improve technology.
- The “economic” and “efficacy” notions will walk along with energy efficiency, comfort and human well-being and in harmony with nature preservation.
- Eco-camping-resort appears as a valid option to the construction of a new conventional tourist enterprise, and search to create permanent employment.
- In conclusion, changes in society creates new human and physical conditions on the built environment witch defines emerging concepts for eco sustainable resorts in rural areas of Europe.

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