

## **The Sound of the Landscape - Prainha, Vila Velha, ES.**

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**ABSTRACT:** This paper describes the activities of a workshop with a group of students, taught at the event "Coletânea Arq-Urb 2015", at University of Vila Velha. The workshop aimed to present the theme of Soundscapes and identify Sound Events of open spaces with public use at Prainha, a neighborhood in the city of Vila Velha, Espírito Santo. The historic and foundational character of this area to the state of Espírito Santo justified its spatial delimitation. Measurements were taken on a collective Soundwalk with drifting paths on October 28th 2015, during 10 minutes. The collected data were systemized on a map and the sound files were shared in an online platform. This paper describes the content presented, activities practiced and considerations on the analysis done in group. The results indicate the acoustic perception of the students and also contribute with data for the development of a methodology for collective sound mapping activities.

**Keywords** *Architectural Acoustics, Music - Acoustics and Physics, Sound, Landscapes, Maps.*

## 1. INTRODUCTION

The European colonization of the state of Espírito Santo began on May 23rd 1535, with the arrival of Vasco Fernandes Coutinho, on the portuguese caravel ship Gloria. The first contact occurred with indigenous inhabitants of the area near to the Moreno Hill (Oliveira, 2008). Later the portuguese colonizers erected defense, housing and prayer facilities as initial buildings. Following the portuguese tradition of urban planning, opposite to the central square it was raised a chapel dedicated to Our Lady of the Rosary while on its surroundings it was settled local streets and other buildings.

By the year of 1550, the village was considered the headquarters of the captaincy, later transferred to the Saint Antonio Island, formerly called Vila Nova and today, the city of Vitoria (Mendonça, 2006). This region had a better strategic location, protected by the Fonte Grande Hill, inside the bay and with difficult access. The city of Vitoria was founded on September 8th 1551 and the development of Vila Velha proceeded then slowly.

Currently, Prainha, this foundational site for the state of Espírito Santo, located in the city of Vila Velha, preserves its historic character with buildings and two main squares: the Bandeira Plaza and the Prainha Park, the last one developed on a landfill site. In the surroundings area are observed the main heritage buildings listed by the National Historical and Artistic Heritage Institute and the Municipal Council of Culture: the Church of Our Lady of the Rosary, Homero Massena Museum and the House of Memory of Vila Velha.

The sound and acoustic context of the site evidences the existing sounds of the past, through reports, photographs, transportation systems and observation of the natural landscape. During a soundwalk in the area, the sounds of today can be better identified.

Soundscape is the sound ambience or any portion of the sonic environment when viewed as a field of study (Schafer, 1997). It also relates to the way individuals and the culture perceives and responds to the environmental sound (Truax, 2001). In these studies, data collection can be done statically, when the equipment and the researcher remain in the same place, or recordings can be made during dynamic routes. Soundwalk is one of the methods of apprehending soundscapes widely investigated by the Canadian researcher Hildegard Westerkamp since the 1970s.

Westerkamp (1974) states that soundwalks can be run individually or in a group, in a large or small geographical area, with or without recording. While leading collective soundwalks, Adams (2008) recommends that its participants shall remain silent, concentrated in the sounds, in order to identify the emission sources. After the recordings, participants discuss the results and respond to a questionnaire. McCartney (2013) also recommends discussions to be done in groups, after the soundwalks. In this way, data can be provided to feedback the methodology, integrating the considerations of the participants.

On excursions to listen to the environment, McCartney (2013) explains that they can also be made listening a narrative or using audio guides. Some guide tours incorporates soundscape recordings of the place where the course is being held in order to create an imaginary soundscape of the past.

Studies on soundscapes were initiated in the 70's in Vancouver, Canada by a team of researchers at Simon Fraser University, led by composer Raymond Murray Schafer. The studies showed concern with the growth and industrialization of the city and its effects on the environmental sound. Currently, several governments started adopting action plans for noise management in their countries. These initiatives were primarily established due to standards such as Directive 2002/49/EC of the European Parliament and Council of the European Union (2002). But it is understood that the sound management of a community goes beyond the actions for noise control.

Researches on soundscapes enables the observation of patterns, the changes of sounds over time and, as Schafer suggests (1997), helps on the creation of an acoustic project. Exercises such as collective soundwalks, ear cleaning and meditation techniques, are fundamental for the development of a sound project for a community. Schafer (1997, p.311) exemplifies his perception during a meeting with a group of architecture students, concluding that the "study of the sound enters the modern school of architecture only as reduction, insulation and sound absorption."

Therefore, the observation of the acoustic impact and sonic sensitivity skills are fundamental to the future planners and architects, assisting them in design decisions, as well as considering the acoustic ecology of places. Zaganelli (2014) starts the application of these studies in a survey to characterize the soundscape of six plazas located in the neighborhoods of Centro and Moscoso Park in the city of Vitoria, ES. In this research, the data were collected and analyzed by the researcher in dynamic measurements during three days in four periods. The results were presented in graphics, expressing the categories of sounds presented and its representation in the soundscape.

In order to develop this first collective record of sound events of open areas and public use in Prainha, Vila Velha, a workshop for graduate students in Architecture and Urbanism was guided during the "Collection Arq-Urb 2015" at the University Vila Velha. In this foundational and historical site for the state of Espírito Santo, the two main squares were selected, the Prainha Park and the Bandeira Plaza. This article describes the activities with the group of nine participating students, analyzes and discusses the results.

## **2. MATERIALS AND METHODS**

Initially, on October 7th 2015, it was made a preliminary visit to test the methodology. During this visit, detail settings could be done and also the collection of physical characteristics of the environments, buildings surrounding the areas, and other observations. The site determined for study was the two main squares of the district, the Bandeira Plaza and Prainha Park (Figure 1). The date followed the schedule of the event and it was held on Wednesday, October 28th 2015, from 8 to 12a.m.



Figure 1 - Location of Prainha Park and Bandeira Plaza. Source: Prepared by the author from Google Earth, 2016.

A blogger page was created, "The Sound of Landscape" to present the initial instructions to the participants on the website <<http://osomdapaisagem.blogspot.com.br>>. The student's material was a small map of the area, to be printed, and it was required for them to bring a portable clipboard. It was recommended the use of mobile phones, with an audio recording application, an accessible technology for all. Participants were invited to join the group "The Sound of Landscape", created on the Soundcloud audio platform. Comfortable shoes and clothes were recommended, observing the capacity of minimum production of noise through steps and movements.

In the beginning of the workshop, in the classroom, it was presented a few concepts related to sounds and soundscapes, the methodology and also applied a few practical exercises to raise noise awareness and listening skills. Then followed a short walk to the parking lot, starting the process of attention and sonic perception. The transportation to the site was made on a minibus. Two walks were started: the first, guided and with the group and the second, individual and with drifting paths.

The first soundwalk was done in a group, in a historical circuit accompanied by explanations of educators and monitors of the project "Visiting Prainha". Initially in the Prainha Park, by the sea it was presented the history of colonization of the Espírito Santo (Figure 2), followed by visitations of the Bandeira Plaza and the historical buildings.

During the second soundwalk, the data was collected. Individually, students walked in a drifting path, according to the concepts of Guy Debord cited by Jacques (2003), recording the sound events. Students used the voice recorder application on their cell phones, generating files in MP3 format. The routes were started simultaneously at the same place and time, and the soundwalks lasted for 10 minutes. At the final meeting point, after gathering all participants, we returned to the classroom using the minibus.



Figure 2 - Prainha Park - near the sea, in Vila Velha, ES.

At the classroom, a big printed map with the limits of the area was prepared for the students to identify collectively their routes, events and sound emission sources perceived. After identifying the sound events, followed a qualitative analysis. Sound events were categorized according to the classification suggested by Zaganelli research (2014), based on the concepts of Schafer (1997) and Krause (2008), using the main groups of Antropophony, Biophony, Geophony, Quiet and Silence.

With the soundmap done, a discussion followed with the observation of the identified categories, concluding with the subsequent sharing of the audio files. Individual audio files were uploaded on the online platform Soundcloud (2014), at the address <<https://soundcloud.com/groups/o-som-da-paisagem>>. To gather the individual recordings, it was created a playlist "Prainha Vila Velha" and used the hashtag #OSomdaPaisagem.

In the research conducted by Zaganelli (2014), the data collected from the soundscape were analyzed using the technique of content analysis, defined by Bardin (2009). The sound events were identified by the researcher, counting the frequency of occurrence and using the software Sonic Visualizer (2013). In this workshop, the data were identified by the students at the classroom and the paths were drawn on a printed map.

### 3. RESULTS AND DISCUSSIONS

The squares both have different physical and sound ambiances. Prainha Park has civic, leisure, sports and contemplation functions. As urban facilities there are sports courts, seating benches and light fixtures. The landscape contain a few trees, palm trees and the floor has predominantly grass with paths in concrete slabs interspersed with grass. In the surroundings, there are parking lots for buses and smaller vehicles. The back of the park is in front of the Vitoria Bay and close to a fishing community.

The soundscape of this square can be characterized as urban-maritime. Its reserved location by the seaside ensures an atmosphere of quietness, with the presence of

Antropophony, Biophony and Geophony. The sound categories identified are presented in Table 1.

Table 1 - Sound categories presented in the Prainha Park.

Anthropophony	Human Sounds	Sounds of the voice	Speaking
	Sounds and Society	Sounds of places	Town Soundscapes
		Music	Music
	Mechanical Sounds	Transportation Machines	Internal Combustion Engines
Factory equipment		Machines	
Biophony			Birds
Geophony	Air		Wind
	Water		Oceans, seas and lakes

The Bandeira Plaza has contemplation functions, with seating benches, monuments and light fixtures. The landscape is inserted into demarcated gardens, with trees, palm trees, grasses and herbs. The flooring uses interlocked concrete blocks. Its environment is surrounded by local streets and by buildings with 1 to 3 floors height .

The soundscape of this square can be identified as urban. Its location, inserted in the urban environment, presents Antropophony and Biophony, as shown in Table 2.

Table 2 - Sound categories presented in the Bandeira Plaza.

Anthropophony	Human Sounds	Sounds of the voice	Speaking
	Sounds and Society	Sounds of places	Town Soundscapes
	Mechanical Sounds	Transportation Machines	Internal Combustion Engines
Biophony			Birds

Among the results, it is observed that due to the geographic location and urban context, the sounds that prevail in the soundscape of the squares are distinct (Figures 3-4). In the Prainha Park prevails the sound of Biophony and Geophony, with the predominant presence of the sounds of nature. Rather, in the Bandeira Plaza, was noticed a predominance of sounds from the category of Antropophony, the human sounds and its machines.



Figure 3 - Soundmap with paths, sound events and sound sources, prepared by the students.

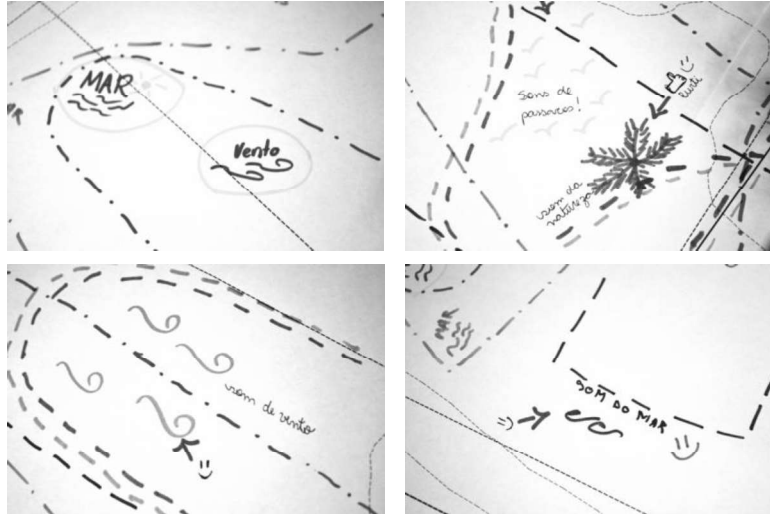


Figure 4 - Soundmap details.

Subsequent to the period of the workshop, the generated recordings were sent to the group "The Sound of the Landscape", in the Soundcloud platform, and shared on the website <<https://soundcloud.com/groups/o-som-da-paisagem>> (Figure 5). The results of the workshop were also presented in a final meeting of the event, on October 29th 2015.



Figure 5 - Audio files organized in the group "The Sound of the Landscape" in the Soundcloud page.

#### 4. CONCLUSION

The results indicate the sound perception of students and they contribute with data to develop a methodology for collective soundscape activities. The methodology of group soundwalk was beneficial for the simultaneous characterization of the environments. Observing the path and the identification of sounds captured, it could be registered simultaneously a broader range of sounds in relation to a individually made record.

The inclusion of two soundwalks enriched the sound experience. Students from other states of the country had the opportunity to understand the local history, as well as visit this historical site. The touristic and historical guide reports contemplated the memory of some sounds of the past and their impacts at the time and today.

The four-hour workshop duration was sufficient for the total experience, from the initial exercises of noise awareness to the discussion of the collected data. As a suggestion for future soundwalks, there is the possibility to better detail of the sound cartography, with individual hearing of the recordings. The hearing and subsequent analysis of the records in a laboratory environment will contribute to a more attentive perception of sounds recorded in the field and also quantify its representativity.

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