

## Media and Environment: a case study at portuguese television

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**Abstract:** Mass media play a determinant role in the dissemination and construction of social threats and risks. Studies have shown that public learns a lot of things about science through consuming mass media news. The present paper examines media discourse about the environmental risk and the importance of the environment communication. In order to perform this analysis we have selected the environmental programs on portuguese television broadcasted between january 2010 and december 2011. This sample of programs has been recorded and viewed in order to select the news we wanted to analysis. We have selected all the pieces of news that either directly relate to any environmental problem (pollution, climate change, global warming...) or refer in any other way to the environment and the nature (about the weather, earthquakes, hurricanes or other meteorological event). Qualitative techniques of analysis have been applied, in order to categorize the information, looking for common and divergent discourses at some dimensions, such as: causes; consequences; possible solutions; and discourses. The media have to enhance environmental science communication, since within the majority of portuguese public sphere this is the only way of environmental knowledge.

**Keywords:** media, television, environment, communication

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### 1. Introduction

The present paper examines media discourse about the environmental risk and the importance of the environment communication on environmental programs of portuguese television broadcasted between january 2010 and december 2011.

#### 1.1 Environmental crisis

Nowadays, global environmental change can be attributed to anthropogenic activities since human activity consumes Earth's resources and exhausts on the planet's capability to assimilate/absorb wastes. Global environmental change includes changes in terrestrial and aquatic ecosystems and the magnitude and nature of these impacts are yet unknown. In fact, most of environmental issues have global significance, whereas environmental degradation affects all mankind on a global scale. Human dimensions of global environmental change must be more than ever on the focus of science and policy makers alike (Rechkemmer and von Falkenhayn, 2009).

Given that natural resources are not inexhaustible, it is imperative to preserve them and in this sense reducing the environmental impact should be the concern of the whole society (Mucelin and Bellini, 2008).

The culture of a community characterizes the form of use of the environment, customs and habits of consumption, generating intense assaults on the environment (Mucelin and Bellini, 2008) and as more resources are consumed it's clear that the link between economic growth and adverse environmental impacts are a key to sustainable development (Fraga, Dinis and Mota, 2005).

Sustainable development was defined in a 1987 report named "Our Common Future" as "development that meets the needs of the present without compromising the ability of future generations to meet their own needs" (Roseiro and Takayanagui, 2004).

### 1.2 Social agent's responsibility

Given the magnitude of today's environmental problems, environmental responsibility must have a play role on political, economic, and social dimensions of society, thus including formal or informal, private or public, centralized or decentralized institutions (King and Toffel, 2007).

Only recently, environmental issues have emerged as a new dimension on the political agenda of advanced industrial democracies (Rohrschneider, 1988).

According to Schmidt (2003), environmental policies in Portugal clashed with three serious problems that explain their frustrating results:

- The later collapse of the rural society and the abrupt and tumultuous way as ran
- The lag compared with the international procedure
- An unfavorable to the installation of environmental concern in the country's public cultures.

As consumers, we can play a key role in reducing the adverse impacts on the environment (Silva, 2006), since the solution lies in environmental perception (Mucelin and Bellini, 2008) and the implementation of environmental education and an effective environmental communication are seen as a way to achieve a responsible participation by all citizens (Martinho and Gonçalves, 2000). Thus the awareness towards the protection and conservation should be developed with in each individual.

The ultimate goal of environmental education whether it is formal or non-formal is to create awareness among the citizens of a country. In this sense environmental education needs to share information to more participatory and creative ways of learning.

In Portugal, in order to create a society that has knowledge, attitude, skill, motivation and commitment towards the solution of current and future environmental problems, the government should include environmental education in the formal education, integrating it into the ongoing curricula of schools. Children must have environmental awareness on a multi-disciplinary basis and seek to improve their most basic skills of struggling for a sustainable society.

It is important to highlight that many environmental organizations, national and international non-governmental organizations (NGOs), are important partners in creating environmental awareness since disseminate information, organize community initiatives and practice non-formal adult education. Citizens should work together in influencing policy at both national and international levels in order to seek environmental protection (UNESCO, 1999).

### 1.3 Media have a play role in environmental education

The international community took decisive steps to what today might be called the globalization of environmental problems, when the United Nations Conference on environment and development took place on Rio de Janeiro in 1992. Since then, the press began to report more about the environment, with news and articles of the most varied subjects within environmental area published in a great variety of the media. The environment is the subject of constant research ever since.

The media contributes to create a kind of minimum basis of common understanding, shared, of social reality, as it offers behavioral models, definition of social roles, and actions of people on society, assuming not only the social life is constituted by and through a continuous and multifaceted process of communication but also that people and social groups have the power to encode and decode the emerging meanings of this process.

According to Dessai *et al.* (2001), several studies have shown that, in New Zealand, the media were the sole source of information on climate change for most of the citizens, and in the United States, the media were also identified as the primary sources of climate change knowledge. Holt and Barkemeyer (2012) note how the media has played a key role in setting climate change discourse and setting the agenda of how such discourse reaches the public.

The media plays a key role in the development of public discourse on environmental issues that shapes global citizenship: acting as a civic forum, a mobilizing agent, and a watchdog, by heightening public attention to issues (Holt and Barkemeyer, 2012).

Communication is increasingly emerging as a protagonist in the process of environmental awareness, especially the two levels of analysis:

- perceptions about the environment are to established by cultural contexts, views, lifestyles and value judgments that are acquired through processes of communication
- criteria and options for decisions on environmental issues are influenced by public discourse and communication alternatives.

The media can communicate environmental citizenship, by creating campaigns to disseminate the importance of the environment, disseminating values of good environmental citizenship, raising awareness of dangers that come from the destruction of nature, coercing people that act badly, sensitizing all generations to respect the environment. Therefore the media can be considered as an agent capable of participating, on the one hand, in shaping, in successive reconstruction and in change of social reality and, on the other hand, in building on individual action.

It has been noted that the media play a crucial role in creating environmental awareness through the broadcast channels and print media. Kapoor (2011) emphasizes the potential of mass media in influencing knowledge gain, public attitude and behavior and that mass media plays a key role in creating environmental awareness, whereas radio and television are important tools for dissemination of quick information.

Environmental education is considered by UNEP/UNESCO/OECD Paris cited in UNESCO (1999), "a permanent process in which individuals gain awareness of their environment and acquire the knowledge, values, skills, experiences, and also the determination which will enable them to act individually and collectively to solve present and future environmental problems".

#### 1.4 Television

It is widely acknowledged that the media can broaden environmental debate among the public and promote their intervention in environmental management. Environmental communication is present today in the information space and advertising. In fact, effective communication of an environmental message can determine the fate of an environmental campaign, showing us the importance of advertising in society, nowadays, by using information structures for the representation of the object in people's minds.

According to Gurses and Yuksel (2009) the features that make television exceptional in environmental education are, among others: familiar media for everyone, connects motion and movement in one setting, makes the complicated and abstract concepts explicable by the way of visual simulation, has effectiveness in presenting the unknown and new environments, has an option of content repetition, can summarize the issues at hand, has effectiveness in presentation.

Same authors say that eventually television is one of the most important electronic means that can be utilized in mass environmental education (Gurses and Yuksel, 2009).

The first appearance of television in Portugal arises in September 1956, in Feira Popular de Lisboa, where is invaded by a mob with enormous expectations to witness the manufacture of the first images (Schmidt, 2003).

Television appearance in Portugal has fulfilled information and training key role of environment awareness, as the public have little access to other sources. It was the first, if not the only, way of environmental knowledge, because environmental culture, was absent from school and other institutions. Television helped in building environmental awareness, contributing to an expansion of public opinion on environmental issues, distributing knowledge, setting up much of what the public perceives of environment (Schmidt, 2003).

Statistics show that, overall, television covers the subjects when they become social and awarding relevant in other countries and with repercussions in Portugal, whether the purpose is either energy crisis, either

pollution or globalization of environmental problems with major disasters. A surprising data is the almost total media inattention to the environment in the early years after Portugal revolution in 1974, indicating that the new democratic public space and the construction of civil society did not include environmental problems. Environment theme took place in the Portuguese media only since 1980 (Schmidt, 2003).

In Portugal, private televisions brought great media projection to the entire environmental theme, changing the way environmental problems were analyzed and catapulting them to the stage of public and political concerns (Schmidt, 2003).

If, on the one hand, public television has disregarded environmental problems, on the other hand, has made a decisive contribution to the understanding of public opinion on the environment. So, one might say, the media is, at the same time, developer and inhibitor of the development of public space which in itself contains (Schmidt, 2003).

Nowadays the importance of raising awareness of environmental issues is increasing. With the appearance of Portuguese private channels in the 90s the importance to the environmental theme had increased.

## 2. Methods

This research was dual.

First, a review of television programs that either directly relate to any environmental problem or refer in any other way to the environment and the nature, broadcasted between January 2010 and December 2011 on Portuguese television, particularly on public channels: RTP1 and RTP2.

Second, a qualitative analysis has been applied, in order to categorize the information, looking for common and divergent discourses at some dimensions.

## 3. Assay

### 3.1 Sample (the corpus)

The *corpus* of this research consisted on the collection of four environmental programs broadcasted on public Portuguese television (with biggest and most balanced national coverage) in the first week of each month between January 2010 and December 2011:

- "Biosfera"
- "Sociedade Civil – Energias Renováveis"
- "Desafio Verde"
- "Bom Dia Portugal – Minuto Verde"

The analysis and classification of the programs was made from texts taken from the programs, noting the following format indicators: program start date, duration, aim, schedule, target audience, speech function, and inferences According to the Theory of Knowledge.

Summarizing, in data collection we have chosen the following criteria:

- environmental programs broadcasted on public Portuguese television
- period from January 2010 and December 2011
- observed categories (based on Grounded Theory (Glaser and Strauss, 1967)): sustainable development, recycling and waste separation, air pollution, water saving, energy saving, noise pollution.

### 3.2 Analysis

#### "Biosfera" – RTP2 channel (Figure 1)

**Aim** – show the steps to take to maintain biodiversity, how to have greener attitudes, how to better manage energy consumption and which future trends for the environment

**Duration** – 20 minutes

**Start Date** – 2007

**Schedule** – Tuesday - 7 PM

**Target Audience** – adults

**Speech Functions** – the reporting function but without ignoring the persuasive

**Inferences according to the Theory of Knowledge** – this program increases social differences, the extent to which the public is directed, already with a certain level of knowledge, acquired more gradually

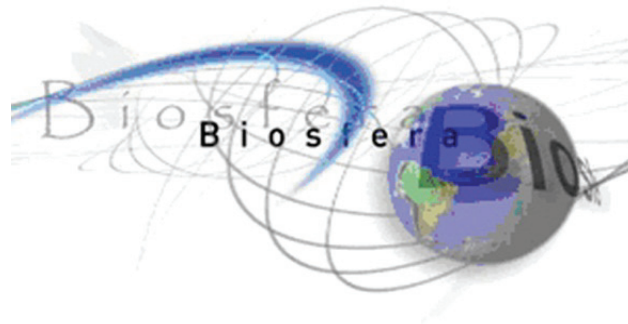


Figure 1 – Image of the “Biosfera” Program

**“Sociedade Civil – Energias Renováveis” – RTP2 channel (Figure 2)**

**Aim** – bringing people who are dedicated to improving our lives, people with extensive experience in solving problems, people over 60 organizations mobilized for solutions in several areas

**Duration** – 90 minutes

**Start Date** – 2008

**Schedule** – Monday to Friday – 2 PM

**Target Audience** – adults and includes deaf-mute

**Speech Functions** – the reporting function, but without ignoring the persuasive

**Inferences according to the Theory of Knowledge** – this program increases social differences, the extent to which the public is directed, already with a certain level of knowledge, acquired more gradually



Figure 1 – Image of the “Sociedade Civil” Program

**“Desafio Verde” – RTP2 channel (Figure 3)**

**Aim** – The Desafio Verde team enters consumer home looking for ecological attacks, transforms them into a clean and green paradise. Throughout this process, the biggest challenge of all is of educating families and spectators

**Duration** – 45 minutes

**Start Date** – 2009

**Schedule** – Saturday - 9 PM

**Target Audience** – all people

**Speech Functions** – the reporting function but without ignoring the persuasive

**Inferences according to the Theory of Knowledge** – this program doesn't promote the social differences since is directed to a large public and makes use of a simple speech



**Figure 3** – Image of the “Desafio Verde” Program

**“Bom Dia Portugal – Minuto Verde” – RTP1 channel (Figure 4)**

**Aim** – this program is a partnership with Quercus (portuguese NGO) that advise citizen to improve environment awareness

**Duration** – 1 minute

**Start Date** – 2006

**Schedule** – Monday to Friday – repeated three times on the same day (8 AM, 9 AM, 10 AM)

**Target Audience** – adults

**Speech Functions** – the speeches are eminently informative but are also based on a persuasive purpose, sometimes resorting to advertising for certain products that help sponsor the mission of a healthy world

**Inferences according to the Theory of Knowledge** – this program increases social differences; the extent to which the public is directed, already with a certain level of knowledge, acquired more gradually.



**Figure 4** – Image of the “Minuto Verde” Program

## 4. Results and Discussion

These are the first results of a project which is yet taking place.

### 4.1 Characterization of the sample

In a universe of two public television stations were screened four programs during the period in question. According to Graphic nº1, one can observe that the most frequent themes were: sustainable development, air pollution, recycling and waste separation, water saving, energy saving, and noise pollution.

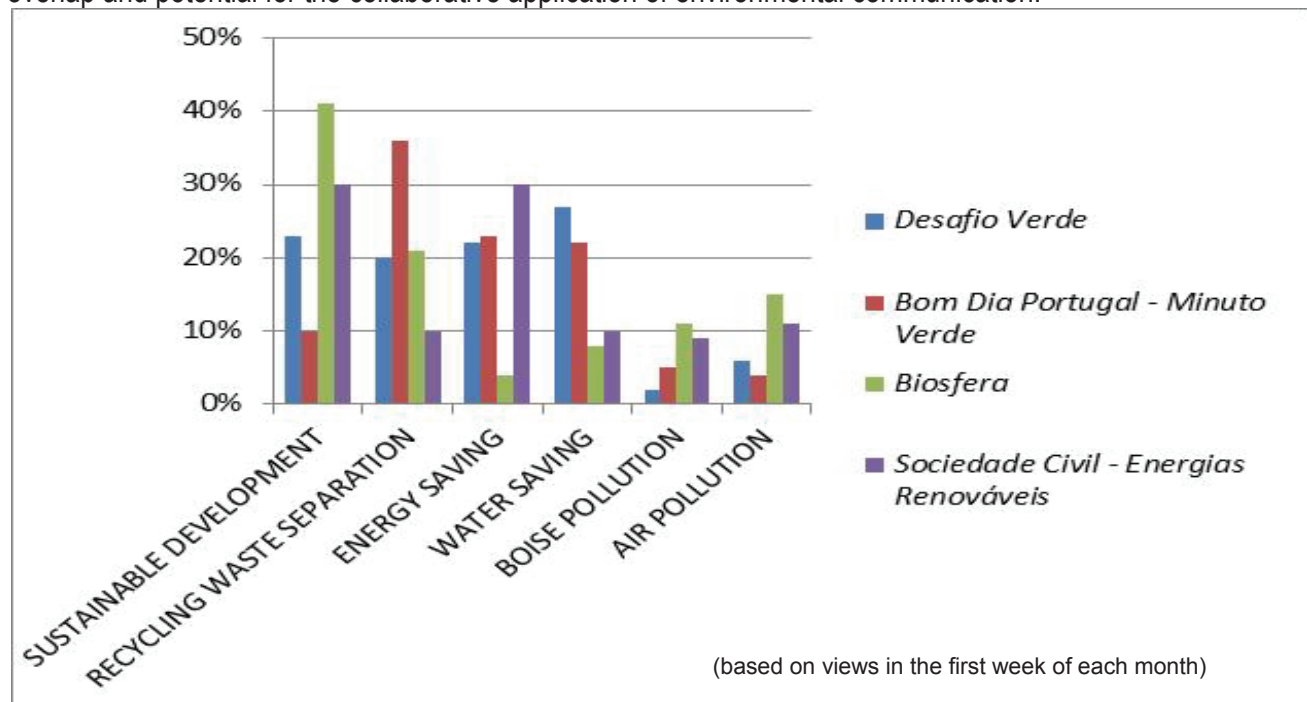
### 4.2 An exploratory study

This study was based on Grounded Theory (Glaser and Strauss, 1967). For selected elements, we proceeded to a content analysis. Each text was analyzed individually and classified according to the selected categories, which were chosen by the frequency of those themes in the programs in order to consider the most relevant themes.. The main classified categories were according to information which gives about environmental negative impacts.

For the category **sustainable development** we considered the subcategories: "sustainable", "climate changes"; for the category **recycling and waste separation** we considered the subcategories: "waste" "pollution" "recycle"; for the category **air pollution** we considered the subcategories: "air pollution", "ozone levels"; for the category **water saving** we considered the subcategories: "drought", "water pollution", "water saving"; for the category **energy saving** we considered the subcategories: "alternative energy", "oil", "saving lamps"; for the category **noise pollution** we considered the subcategories: "noise".

In addition to the items mentioned above, this study allowed us to account for some emerging categories such as: protection feeling towards the environment, increased care towards the environment, and the need for environment education and for environment communication.

The following graphic (Graphic nº 1) illustrates some of the specific issues on which there is significant overlap and potential for the collaborative application of environmental communication:



Graphic 1: Categories

## 5. Conclusion

In conclusion, it can be said that there is urgent need for effective communication strategies to create environmental awareness among citizens. Thus, role of the media, especially television, in science communication is very crucial to bridge the gap between science and society since there are inherent differences in language, in both lexicon and usage Boykoff and Rajan (2007). In order to achieve holistic environmental education, we need to focus on environmental science communication and consider that the media has become the most common source of scientific information for the general public. In this sense, more efforts have to be done in order to conceptualize and produce more television programs of environment protection (Kapoor, 2011).

Somehow, the programs on environmental issues on portuguese television have been aimed mainly to adults and its discursive approach has not been the most effective. No wonder we are, for example, one of the countries of the European Union with one of the lowest rates of recycling of municipal solid waste.

One basic and major conclusion it can be said is that portuguese public television have most of environmental programs with adults as target audience. Moreover, Portugal does not have environmental education into school programs and most adults have a gap on passing environmental awareness, which is reflected on the lack of environmental knowledge of children.

According to Lance Bennett cited in Boykoff and Rajan (2007) "few things are as much a part of our lives as the news ... [it] has become a sort of instant historical record of the pace, progress, problems, and the hopes of society" reflecting the influence of the mass media on individuals.

The media has been responsible for its dissemination and miscommunication, being a strong influence on public opinion and policy.

Holt and Barkemeyer (2012) noted that the rise in media coverage of sustainability-related concerns and increasing levels of public awareness have not developed homogeneously over the last two decades inferring to both issue-attention cycle and punctuated equilibrium models.

Punctuated equilibrium model suggests, from a biological perspective, that evolutionary shifts occur in infrequent transformative punctuations to a new species and within management research suggests that systems remain relatively stable for long periods of time but are punctuated by short periods of rapid change in the form of punctuated equilibrium. This model has already been applied to the evolution of environmental policy. The issue-attention cycle model explains the fluctuation of reporting of environmental issues into the following stages: pre-problem; alarmed discovery, euphoric enthusiasm; realizing the cost; gradual decline of interest; and post-problem (Holt and Barkemeyer, 2012).

Holt and Barkemeyer (2012) suggest that shifting from one stage to another in the issue-attention cycle may be linked to the timing of a punctuated shift, in other words, they consider this as a symbiotic process since the issue-attention cycle appears to play a key role in moving an issue towards a punctuated shift.

Same authors say that application of these models to study communication and awareness building is an important contribution towards understanding the role of the media and that we can perhaps see how to keep sustained attention on engaging the public, and promote increased levels of awareness and knowledge of environmental and social issues in our societies (Holt and Barkemeyer, 2012).

Although they could not fully explained the portuguese media cycle for climate change with Downs framework (issue-attention cycle), they suggest that portuguese media coverage on climate change follows a cycle, having already identified the stages "alarmed discovery" and "realizing the cost", as stated on their study (Dessai *et al.*, 2001).

It should be noted that there are glimpses in Dessai *et al.* (2001) study that show that portuguese media focus on climate change is mostly centered on international climate events, whereas national articles remain, however, mostly irrelevant.

Television environmental programs can shed light on many unanswered knowledge questions, but is not sufficient to change perception of the portuguese public to this global environmental problem. The media



have to enhance environmental science communication, since within the majority of portuguese public sphere this is the only way of environmental knowledge.

Such considerations can lead us to consider the utility of public television as an environmental education tool as noticed by Boykoff and Rajan (2007). They also noticed a declining attendance at face-to-face educational events and considered that video-based materials might be more effective. In this sense, some authors are apologist to focus on how to generate interest, especially for those citizens who do not have the initial interest or who might feel that they do not possess the appropriated educational background.

Therefore, it is important to target the right population and channel sufficient quality and quantity of information; it is important to considerer the basic understanding of citizens about the environmental issues, the quality and quantity of their knowledge and their awareness on environment; it is important to realize that media coverage is related to (and can influence) the level of awareness of specific issues and public attention on environmental issue (Holt and Barkemeyer, 2012; Sampei and Aoyagi-Usui,2009; Boykoff and Rajan, 2007).

Such considerations can provide insights into many other important topics, and so guide valuable information of environmental awareness to each of these programs.

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