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ORGANIZATIONAL SUSTAINABILITY: FROM THEORY TO PRACTICE

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ABSTRACT

How can organizations contribute to sustainability? This article answers this question within innovative approach to Organizational Responsibility and Sustainability and seeks to address the impact of organizations actions as well as economic, social, environmental, and ethical issues that have affected the largest exclusively Brazilian River, the São Francisco. It aims to draw attention to ethical aspects of business actions and to contribute to the training of business students and future managers. It presents the action "How is Your Organization's Social Responsibility?" as a result of activities developed through the University of Birmingham's Visiting Fellowship Scheme which aimed to put learning skills into practice to promote interaction between students, researchers, and managers of corporations/ organizations, thus providing a collective teaching-learning environment to face challenges in this arena, through meetings, lectures, ecological walks, and discussion groups. From November 2015 to December 2017, actions were carried out, such as, for example, the observation of the black consciousness month, incorporation of CSR principles, Circular Economy, a commemoration of the 515th anniversary of the discovery of the São Francisco River, among others. In the end, the group chose the degradation of Sao Francisco River as the problem to be addressed; not only by CSR actions but also as an agenda for future research.

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INTRODUCTION

How can organizations contribute to sustainability? One possibility is through Corporate Social Responsibility (CSR) programs. CSR has been one of the most prominent themes over the past decades. In the academic context, it is approached from a multidisciplinary point of view, studied in the areas of financial administration, organizational strategy, corporate ethics, marketing, human resources, and in other contexts. The study on emergent themes in people management conducted by Barreto *et al.* (2011) demonstrates this premise. This theme's importance is also highlighted as an approach to sustainable development within the organizational sphere, in accordance with Delai and Takahashi (2012) and the ISO 26000 guidelines (ISO, 2010), which consider the topics

of human rights, the environment, consumer protection, fair operating practices, and community involvement aspects for developing CSR. Researchers have adopted the approach of Corporate Sustainability and Responsibility (CSR), thus maintaining the same acronym (Visser, 2012). Nevertheless, not only in common usage, but also in the academic context, whenever sustainability is mentioned, many people associate it merely with the environmental aspect, especially recycling, which limits its potential. It has thus become necessary to elucidate the real proposals covered this theme. Social Responsibility involves a series of theoretical discussions regarding what an organizations' real actions should be. Some of them suggest that companies should define their actions merely for the sake of economic goals or to meet the needs and demands of different interest groups. Other currents sustain that organizations should act as citizens endowed with rights and duties, insofar as they receive their legitimacy and permission to undertake their activities from society and that

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they must consequently solve any problems which result from their activities in the environment where they are located. (Santos, 2016). Discussions on CSR are permeated by diverse positions and specific actions. Many of these actions are isolated and rarely reach higher levels, as explained by Visser (2012) and detailed in Figure 1. The author criticizes the traditional approach to social responsibility, emphasizing its micro-scale character, and argues that it has not contributed to solutions to worldwide problems. According to the author, three reasons (or three curses) have contributed to this phenomenon, namely, that companies currently treat CSR in an incremental, peripheral, and uneconomic manner (Figure 1).

Figure 1. The Triple Curse of CSR 1.0.

Curse	Description
Incremental	CSR is treated as merely a process of continual improvement in overall quality, lacking both the true social relations and the global scale needed to respond to social problems.
Peripheral	CSR is not integrated into the company culture and is treated only as a specific functional area, separate from the company as a whole.
Uneconomic	CSR is obligated to bring returns to company shareholders at a given moment. This factor is principally linked to financial gain.

Source: Authors' adaptation of Visser (2012)

Visser (2012), in an allusion to the transition from Web 1.0 to 2.0, proposes a similar evolution to CSR 2.0, which he names Corporate Sustainability and Responsibility. From this point of view, he stresses the need to transition from the previously prescribed terms and approaches, based on the assumption that companies should be socially responsible. The author lists five basic principles of CSR 2.0: creativity, scalability, responsiveness, "glocality", and circularity (Figure 2).

Figure 2. Principles of CSR 2.0

Principle	Description
Creativity	Use of creativity and innovation as a means of creating sustainable solutions to resolve socio-environmental problems.
Scalability	Seeking to execute non-isolated actions on a global scale, spreading solutions so that they can be widely reproduced.
Responsiveness	Transparency of actions and critical analysis of the business model, as well as responses to society's challenges and expectations, and endeavors to minimize large social and environmental issues.
"Glocality"	Commitment to good global practices, regardless of the region, and promoting local improvement through global thinking and knowledge.
Circularity	Seeking to create a positive, sustainable continuous cycle, through recycling, upcycling, reuse, and reduction. Rethinking and redesigning consumer goods, in order to eliminate waste, with residues returning to the production chain as raw material.

Source: Authors' adaptation of Visser (2012)

In spite of advances in the area of Corporate Sustainability, other approaches have been presented due to the need for effective actions to promote sustainable development beyond the organizational scope. Specifically, on the aspect of circularity and innovation, Gunter Pauli (2010) created the Blue Economy, featuring innovative business models that are able to present competitive products and services to meet basic needs, while collaborating to increase social and environmental capital, and the Ellen MacArthur Foundation (2016) has developed the concept of Circular Economy, proposing a new way of attributing value to finite natural

resources to establish a mentality that goes beyond sustainability. As an alternative to the (linear) economic "take, make, dispose" model, where sustainability means "correct" disposal, Circular Economy arises with the aim of replacing the model which is based on excessive consumption of natural resources and absence of regeneration with a totally regenerative and restorative model in which a product or service's return to the biological or technological cycle is projected from the moment of conception. According to the Ellen MacArthur Foundation, the goal of Circular Economy is "to keep products, components, and materials at their highest utility and value at all times," transmitting the idea of "zero waste," to introduce systematic changes to consumption ranging from product design to the reuse of raw materials. Circularity advocates the use of healthy substances and materials, the use of renewable energy, and the enhancement of local biodiversity. In the same manner that nature does not produce waste, Circular Economy advocates that the chain of production be seen as a system in which all the materials can be infinitely reused in the industrial process or return safely to the environment. (Carvalho, 2016). While it is worthwhile to emphasize the existence of a plurality of CSR concepts, we would like to point out that the following concept guided our study. Corporate Social Responsibility is defined as "the responsibility of an organization for the impacts of its decisions and activities on society and the environment through ethical and transparent behavior," according to ISO 26000 (ISO, 2010). Furthermore, Santos (2015) reiterates the need to develop ethical, sustainable, and multicultural corporate policies as a continuous process, proposing five dimensions of business ethics: 1) sustainability, which incorporates economic, social, and environmental aspects known as the Triple Bottom Line (Elkington, 1998); 2. respect for multiculturalism; 3) continuous learning; 4) innovation; and 5) corporate governance.

The research issue is illustrated by the question, "How can organizations contribute to sustainability?" Studies have demonstrated the impact of anthropic activities, including business activities, on increasing global challenges. The Caatinga Biome, one of six Brazilian terrestrial biomes, located in the Northeast Region, is this project's geographic setting. In the Caatinga, the installation of agro-industrial companies, real estate expansion, criminal and accidental fires, and the discharge of raw sewage have greatly contributed to the degradation of the environment, especially with respect to water quality, ichthyofauna, and the riparian vegetation of the São Francisco River (Zellhuber; Siqueira, 2016). Social pressures have demanded that organizations fulfill their responsibilities by addressing these challenges, for example, in the United Nations' Talloires Declaration (1992), System B and Conference of the Parties (COP) 21 (Hirata, 2016; WECD, 1987) and, also, the 2030 Agenda for Sustainable Development, with its 17 Sustainable Development Goals (SDGs), which includes 169 targets, and the COP 23. (ONU, 2015; UNESCO, 2017). This study is justified by its economic, social, and scientific relevance. Examples include the recent corruption case in the Brazilian oil company Petrobrás, which had a prominent corporate responsibility program encompassing social, economic, and environmental aspects. Petrobrás's corruption scandal, however, evinced a discrepancy between the explicit and implicit model of CSR, according to Matten and Moon (2008). Visser (2012) points to the culture of greed in corporate DNA and also to executive dishonesty, for example, in the case of Enron, which went

bankrupt. Samarco's 2015 environmental crime, the Panama Papers scandal, the political situation in Brazil with several of its political leaders currently implicated in Car Wash Operation investigations that have resulted in the arrest of several businessmen, the former President of the Chamber of Deputies, and the former President Lula da Silva, evince the need for a revision of the concept of CSR on the national level, which would endow it with economic, social, environmental, and political relevance. Within the field of Business Management, specifically, our objectives are to guide students to reflect, to think critically and systematically about their roles as future managers and entrepreneurs, and to assess the impact of their actions on the environment. In addition, as emphasized by Jacobi (2005), there is a need to integrate environmental education into school spaces so that students will be able to seek critical and reflexive positions on sustainability and thus understand and intervene in socio-environmental crises. Promoting sustainable business practices requires training of ethical business people, entrepreneurs, and managers, with the result that they will not only offer jobs and contribute to economic development but also implement actions that will guarantee future generations the possibility of meeting their needs (WCED, 1987). Considering, therefore, that students of Business Management are the entrepreneurs and managers of tomorrow, it is necessary to integrate ethics into business and, thus, increase awareness of how enterprises' activities can affect the rights of local communities and the environment. Finally, it allows the university to fulfill its role as an innovator by putting research into action for studies on CSR practices in Brazilian and British companies.

Objectives: This study's aim is to describe the action "How is Your Organization's Social Responsibility?" This endeavor sought to promote interaction between researchers, managers of corporations and social organizations, and students; to provide a collective teaching-learning environment by disseminating innovative practices of Corporate Sustainability and Responsibility (CSR 2.0), Circular Economy, and respect for multiculturalism; and to work together to face the challenges of implementing organizational sustainability and responsibility in the contemporary context.

MATERIALS AND METHODS

This paper presents a cross-sectional study of CSR practices in Brazilian and British companies, researching organizations that participate in the production chain of fruit exported from the São Francisco Valley, in the Northeast of Brazil, located in the Caatinga Biome. In order to seek innovation and continuous collective learning and to move from theory to practice, which is of the utmost importance in developing countries, such as Brazil, a multidisciplinary research group open to the community and social activists was created. This provided opportunities for sharing sustainability practices, which are one aspect of business ethics, in accordance with Santos (2015). It is, furthermore, worth highlighting that this action is the result of activities developed at the University of Birmingham Business School through the University of Birmingham's Visiting Fellowship Scheme. The geographic context is the Caatinga Biome in the cities of Petrolina, Pernambuco State and Juazeiro, Bahia State, on the banks of the São Francisco River, located in a region known as the Lower-Middle Basin of the São Francisco River, which includes the states of Bahia, Pernambuco, and Alagoas, extending from the Sobradinho Dam in Bahia to Belo Monte in

Alagoas, covering about 117,351 square kilometers in the Northeast of Brazil. It is necessary to clarify that in addition to the region of the Lower-Middle, the São Francisco River includes three other physiographic regions: Upper, Middle, and Lower. Data collection occurred during meetings, lectures, visits, ecological walks, discussion groups, and community orientation, which took place from November 2015 to December 2017. Participant observation and activity logging techniques were used to record data (Roesch, 1999; Blaikie, 2010). All results generated by the social responsibility group's actions were shared with the community and the university during scientific events and through technical reports, newspapers, radio, magazines, and social networks. Figure 3 and 4 present synopses of the activities.

RESULTS AND DISCUSSION

The action "How is Your Organization's Social Responsibility?" has been developed since November 2015 as a strategy to meet the social demand inherent in higher education in Brazil, implementing the teaching-research-extension triad, which is understood as innovation derived from scientific research. It is important to state that the action started as "How is Your Company's Social Responsibility" and with the participation of other kinds of organizations, its name was updated to "How is Your Organization's Social Responsibility?" Its objectives were to promote interaction between researchers, corporation and social organization managers, and students and to provide a collective learning-teaching environment by disseminating innovative practices of Corporate Sustainability and Responsibility (CSR 2.0), Circular Economy, and respect for multiculturalism, in order to collaborate to face the challenges of implementing responsibility and organizational sustainability in this new era. With this in mind, several activities were carried out during this 25-month period, covering various themes such as the principles of CSR, different theoretical approaches to CSR, ISO 26000, Circular Economy, and the CSR actions developed by agro-industrial companies that participate in the global production chain of fruits for exportation, specifically, from the São Francisco Valley to the British market. Figure 3 summarized activities carried out during the first year (2015-2016) and Figure 4 demonstrates activities from the second year (2017).

Social Responsibility: discussing principles and sharing activities: The first action took place in November 2015 with the commemoration of Black Consciousness Month, which was presented by Professor Almeida, along the lines advocated by Santos (2015). It dealt with respect for multiculturalism, which is one of the dimensions of business ethics that should be observed in CSR, and social justice, which is one of the principles of Circular Economy. This theme is very relevant to Brazilian society, considering both its history of slavery and its contemporary lack of racial equality. The second theme was "Incorporation of the principles of social responsibility," as analyzed by Smith (2015). The author presents seven guiding principles for organizations to manage CSR: 1) Accountability, 2) Transparency, 3) Ethical behavior, 4) Respect for the interests of interested parties, 5) Respect for the rule of law, 6) Respect for international standards of behavior, and 7) Respect for human rights. This took place in May 2016. After defining these principles, which should be carried out in a participatory manner and aligned with the organizational culture, the second phase consisted of formalizing them in order to

Figure 3. CSR activities (2015-2016)

Date	Theme	Organization	Public
25/11/2015	Black Consciousness	Federal University of the São Francisco Valley (UNIVASF)	Students Professors Alumni UNIVASF FACAPE Multinational beverage company Agroindustrial company
25/05/2015	CSR Principles	UNIVASF	Students Professors Alumni Irrigated agriculture company
12/07/2016	CSR Concepts and Practices in Action	UNIVASF	Students Professors Alumni Multinational beverage company Irrigated agriculture company
29/07/2016	Circular Economy	UNIVASF and Public Prosecutor's Office, Petrolina, PE	Students Professors Companies UNIVASF FACAPE "Matutando a Caatinga" Group Public Prosecutor of Petrolina
16/08/2016	Theoretical Alignment of CSR e ISO 26000	UNIVASF	Students Professors UNIVASF UNEB
27/09/2016	Event organization: 515 th Anniversary of the São Francisco River	UNIVASF	Students Professors UNIVASF UNEB
04/10/2016	515 th Anniversary of the São Francisco River: - "Velho Chico" Walk - Ecological Walk - "Velho Chico" Sunset	UNIVASF and Bahia State University (UNEB)	UNIVASF UNEB Public Prosecutor's Office Servas Brazil Gold Fruit Imp. Exp. Ltda. Professors Students "Mulheres Rendeiras" Association Center for the Recovery of Degraded Areas (CRAD) Fishing community Political representatives General community

Source: Authors' own work

Figure 4. CSR Events 2017

Date	Theme	Organizations
21 Feb	Discussing Corporate Social Responsibility Practices in the Sao Francisco Valley: Planning Activities.	Univasf, Uneb, Public Prosecutor's Office - Pernambuco State and "Matutando a Caatinga".
08 Mar	Women International Day: Sustainable Development Goal 5.	Shopkeepers' Chamber, Univasf Women Association Public Prosecutor's Office - Pernambuco State.
27 Apr	Panel CERO: The 2030 Agenda and the Sustainable Development Goals for the Caatinga Biome in Brazil.	Facape, Uneb, UPE.
03May	CERE: Organizational Sustainability at SESC's Environment Week.	Sesc, Uneb, Univasf
01Jun	Ethics and Sustainable Development	Public Prosecutor's Office - Pernambuco State, Uneb e Univasf.
05Jun	Environmental Questions and Actions in the Valley	Uneb-Research group ECuSS, Univasf.
24Jul	Ethics and Environmental Responsibility	IF Sertão, Univasf.
18Sep	Building a Sustainability Culture	Uneb- Research Group ECuSS.
24Oct	CERO: Introducing it to Freshman students	Univasf, Administration Students.
23Nov	Circular Economy, Innovation and Sustainability	Executive Secretary for the Biosphere Reserve of Caatinga, linked to UNESCO Man and Biosphere (MaB) Programme
13Dec	Ethics and Sustainable Development: Do not let the river die.	Univasf, Uneb, DINC, International Relations Organization. IFSertão.

Source: Author's own work

incorporate them into corporate strategies. Codes of ethics, codes of conduct, declarations, and charters of principles have been configured in initiatives used to guide decisions and activities. Additionally, it further integrates the process, training stakeholders who are directly involved in organizations' decisions and activities to apply these principles and monitor their compliance. Subsequently, the representative of a fruit-growing company presented its CSR initiatives and concluded that there is a need for greater integration to

increase the effectiveness and efficiency of actions, as advocated by Visser (2012). In order to facilitate this exchange, a group was created on a virtual communication platform, enabling the members to communicate more effectively and to exchange information to plan CSR actions. A CSR model, Corporate Sustainability and Responsibility, CSR 2.0, coined by Visser (2012) was presented and discussed during the following month, as a way to improve collective learning. Subsequently, ISO 26000 and its guidelines, which

enable organizations to develop policies and practices based on sustainability and social responsibility, were discussed. At this time, the manager of a multinational beverage company shared some CSR practices implemented in his organization. According to him, the company has been developing a series of social responsibility policies for its business code of conduct, such as more sustainable products, decreasing the sale of unhealthy products in schools, reusing and preserving water resources, reuse of waste from coconut production, among others. In addition, he highlighted the partnership between the plant in Petrolina, Pernambuco State and a center that provides care for children in vulnerable situations. Internally, the "Semear Program"¹ was created to encourage employees who had yet to complete high school (a common situation among Brazilian farm workers) to resume their studies. Promoting gender equality among employees was also a topic of discussion. During this meeting, the professor who coordinated the action shared experiences from England, primarily linked to the optimized use and preservation of areas near bodies of water for ecological tourism. It was pointed out that the Thames River was declared biologically dead in 1957. Following this situation, coordinated actions of revitalization improved the process of biodiversity restoration. This form of learning, in line with the principle of "glocality," may be used to avoid the degradation of the São Francisco River.

Social Responsibility and Circular Economy: Petrolina's Public Environmental Attorney contributed to the fourth meeting which focused on Circular Economy, as one of the principles of CSR, as described by Visser (2012), with an emphasis on creativity and innovation. The attorney, who is a scholar on the subject, stated:

Circular Economy proposes that industrial production imitate nature in biological space, in the biosphere. The authors of the cradle-to-cradle theory, McDonough and Braungart (2002), created the neologism "technosphere," referring to industrial, technological space. In today's "technosphere," for example, a can of soda is recycled countless times. And this is due to the fact that the aluminum industry adds value to this material by repurchasing it. Thus, after a musical show in a large open space, individuals who collect recyclable material rush to pick up cans, which may be returned to the factory, and they are remunerated. The attorney further stated that Brazil is the largest recycler of aluminum, followed by Japan, emphasizing that the aluminum can was not designed to be recycled indefinitely. This situation arose as a result of chance and called the attention to the fact that icons of modernity, such as mobile phones and personal computers, contain numerous substances that are carcinogenic (causing cancer), teratogenic (causing malformations), or mutagenic (causing genetic mutations). The attorney thus emphasized that Circular Economy proposes that we think about product designs that ensure indefinite recycling in the same way as the soft drink and beer cans. Moreover, areas such as Engineering, Design, Biology, IT, and Education play an important role in disseminating of the concept of circularity, with the goal of developing a systematic vision of the scenario for using or consuming goods and services in the future. The attorney also cited the three basic principles of the Circular Economy, which are: 1) raw materials are nutrients; 2) renewable sources of energy; and 3) social justice, which celebrates diversity. The attorney declared that it is already known that the consuming

standards of so-called developed societies are unsustainable. Thus, it is urgent that products be recovered after consumption so that they may be upcycled. Furthermore, she explained that upcycling improves reused products in relation to their initial use, thus leaving a positive footprint. This is because, according to McDonough and Braungart (2013), when we recycle (noting that we recycle a miniscule quantity, namely, less than five percent of what we produce), the material in every cycle decreases in quality. In reality, she argued: we do not recycle; rather, we downcycle, meaning that the "best-case" scenario is that a product from our linear economy eventually ends up in a landfill. In other words, we are not doing good when we downcycle, we are doing less harm, which is not the same as doing good. The harm continues; it is only diminished. The second principle of Circular Economy is the use of renewable energies from clean sources. For example, solar, wind, hydroelectric, and tidal energy are utilized as alternatives to finite fossil fuels and sources of energy that generate hazardous waste, such as atomic energy. The third principle is social justice, which the author interprets as the celebration of biodiversity and the appreciation of biological, cultural, and conceptual diversity. She declared that success may come from a series of mistakes and pointed out that Brazilian culture is one that demands that we "get it right," but making mistakes is part of learning. Thus, one must be open to diverse thoughts and the innumerable ways of meeting a demand. Brazil is rich in biodiversity, and this heritage continues unrecognized to this day. Our biodiversity, especially in the Caatinga biome is not widely known. All of this emphasizes that Brazilians have much to study, discover, develop, and explore, and they have great potential to grow, enrich, and prosper.

Another highlighted point was Brazilian and international laws and standards. The Brazilian Constitution guarantees the right to an ecologically balanced environment. Brazil's legal and environmental framework is extremely progressive. It states that economic order is based on the value of human labor and free initiative and that it is intended to ensure that all citizens (not only native citizens but other residents of Brazil) enjoy a decent existence according to the dictates of social justice, prescribing the observation of the following principles: national sovereignty, private property, social function of property, free competition, consumer protection, environmental protection, reduction of regional and social inequalities, the pursuit of full employment, and treatment which favors small and medium-sized enterprises, among others. Everyone is guaranteed freedom of economic activity. It is necessary to stress that private capital and companies are subjected to these principles, which include social responsibility and respect for the environment (BRASIL, 1988). Another Brazilian environmental standard is the National Policy on Solid Waste. Principles of Circular Economy which are present in the National Policy on Solid Waste include respect for biodiversity and cooperation between different spheres of power from the public to the private sector and other segments of society (BRASIL, 2010). *Non-generation* is one of the objectives of the National Policy on Solid Waste. It is, then, of vital importance to emphasize that Brazilian legislation, both in economic and environmental terms, serves as the basis for the production of goods and services that do not generate waste. In the international context, the World Economic Forum, which brings together the hundred largest corporations on the planet, has published a report of approximately 160 pages with the heading "Toward

¹"Seed Sowing Program"

the Circular Economy,” confirming that the eventual scarcity of natural resources points to the exhaustion of the linear production model and calls for us to explore new paths (WEF, 2014). The United Nations 2030 Agenda for Sustainable Development, which comprises 17 Goals of Sustainable Development (with 169 targets) aims to guide the world over the next 15 years. The lecturer concluded that it is necessary to implement a new form of production: Circular Economy is innovation with inclusion. Brazilian environmental legislation not only supports this; it also stimulates the transition from the linear to the circular model. Social responsibility is inherent in Circular Economy. When circularity is integrally implemented, nature and humanity are defended and protected. Nature is prosperous and abundant, not scarce. If everyone continues to produce in this linear form, to consume at this rhythm, humankind is going to exhaust its natural resources. Circular Economy’s proposal is, thus, that we produce as nature produces, indefinitely, favoring prosperity, development, and abundance.

Environmental Education: The São Francisco River’s 515th anniversary: The goal of this activity was to raise awareness of the situation of the São Francisco River and the process of degradation, stressing that it is necessary to take care of the river on a daily basis and not only on commemorative occasions, given this body of water’s current status. The São Francisco River, considered the river of national integration, has its source in the Serra da Canastra in Minas Gerais State; it discharges into the Atlantic Ocean, bringing water to five states. It provides riverside communities with prosperity; however, over the years, numerous instances of environmental impact that compromise its trajectory have been registered. Among these, it is necessary to highlight the uncontrolled utilization of the river’s banks, in violation of the Permanent Protection Areas (PPA). The riparian vegetation in the Caatinga biome includes a variety of species and is principally made up of trees (Lacerda *et al.*, 2005). Many of these trees are of economic importance to the population, mainly among traditional peoples (Albuquerque *et al.*, 2002; Ferraz, Albuquerque & Meunier, 2006; Monteiro *et al.*, 2006; Lucena *et al.*, 2008), increasing anthropic pressure on them and even further reducing the possibility of conserving these environments. The São Francisco River’s riparian forests suffer strong anthropic pressure, arising from the installation of agro-industrial companies, real estate expansion, criminal and accidental fires, discharge of raw sewage, and other sources. Beyond the environmental impact occurring in riparian zones over time which companies correct through the use of legal requirements and certificates, the widespread use of toxins in agriculture pollutes the river, not to mention the unrestrained waste of water during a moment when rational use is indispensable (Alvarenga, Botelho, Pereira, 2006).

Furthermore, the remnants of the riparian areas within the Caatinga are fractional and isolated (Rêgo, 2007). The isolation of these fragments reduces gene flow between communities, limiting the chances of plant survival. In some localities, deforesting actions in riparian areas are so frequent that they reduce riparian vegetation to irregular, isolated occurrences of individual species in the landscape. Currently, areas of the Caatinga riparian forest, as is the case in several other environments, are very uncharacteristic from a structural and floristic point of view. This is principally due to the fact that farmers prefer these areas, given that the most fertile soils are found in riparian area and that proximity to the river

reduces irrigation costs (Araújo & Ferraz, 2003). The actions in defense of the São Francisco River were organized in three moments: Velho Chico Walk in Orla I, in Petrolina, Pernambuco State; Ecological Walk on the Campus of UNEB in Juazeiro, Bahia State; and Velho Chico Sunset in Petrolina, with the distribution of pamphlets on the São Francisco River and seedlings for plantation. Passers-by were also approached and invited to discuss the importance of the river and its preservation. In order to ensure the survival of the trees, seedlings were delivered to the locations where they were to be planted. Families were provided with orientation on how to take care of them, and a report on the planting experience was solicited with a release date of October 4, 2017. The activities carried out in defense of the São Francisco River were broadcast from two radio stations and from the most widely viewed television stations in the cities of Petrolina and Juazeiro, as well as in blogs, social networks, and the websites of two universities, UNIVASF and UNEB. The text which was distributed follows:

In order to minimize the impacts that have occurred over time, we all MUST INTEGRATE TAKING CARE OF THE RIVER INTO OUR DAILY LIVES AS A NECESSITY, through concrete, daily, permanent, and long lasting actions, such as:

1. Preserving riparian vegetation,
2. Reducing the discharge of raw sewage,
3. Promoting discipline and respect for environmentally protected areas in the banks of the river and reducing the pressure arising from real estate speculation and the installation of agribusiness,
4. Reinforcing the river banks to minimize erosion, landslides, and silting which reduce water quantity and quality,
5. Protecting ichthyofauna and biodiversity, as well as conserving plant species endemic to the riparian area and encouraging their replanting in impacted areas along the banks of the São Francisco River.

For this reason, it is necessary to carry out social, economic, and environmental diagnoses that identify how riverside communities utilize permanent protection areas; to develop environmental education actions; to collect seeds in areas where there are remnants of riparian vegetation; to produce seedlings of native plants and identify their potential, be it ecological, melliferous, ornamental, foraging, or related to the production of fruit, wax, oil or fiber; to stimulate the reasonable management of these species; to establish areas of restoration (demonstrative production units); among others.

During the year of 2017 events were organized for general discussion of CSR, SDGs, Business Ethics, Sustainable Development, Environmental Management and Responsibility, Circular Economy, and Innovation. This culture of sustainability and water preservation may be represented by the São Francisco River, the longest river which runs exclusively in Brazilian territory. Finally, the group chose the São Francisco River as the problem to be addressed, not only in the CSR actions but also as an agenda for future research. Thus, the final activity, in December, was a panel: *Ethics and Sustainable Development: Don't let the river die*, with the participation of the Irrigation Management company, three higher education institutions, an international relations organization, among others. The panel was open to the public and was attended by both undergraduate and graduate students.

Communication Mechanism: Regarding the communication process, a social networking group called “How is Your Company’s Social Responsibility?” later updated to “How is Your Organization’s Social Responsibility?” (CERO, acronym in Portuguese) was created so that activities, texts, and monitoring and evaluation reports could be shared. In addition, a communication group was created on WhatsApp. Actions are also published on the Careers and Skills Development research laboratory’s social network and shared with the press office at UNIVASF, which forwards communications to other departments and local and regional media.

Conclusion

As higher education institutions seek to fulfill their social role by meeting and working with social demands, the preservation of the São Francisco River represents one of the greatest challenges, given that scientists are warning of its inexorable extinction (SIQUEIRA-FILHO, 2012). The São Francisco River’s riparian forests suffer strong anthropic pressure, arising from the installation of agro-industrial companies, real estate expansion, criminal and accidental fires, discharge of raw sewage, and other sources. Beyond the environmental impact occurring in riparian zones over time which companies correct through the use of legal requirements and certificates, the widespread use of toxins in agriculture pollutes the river, and water is wasted. Thus, in order to minimize the environmental impacts that have occurred over time, it is necessary to develop and execute the following: a riparian forest restoration program, based on socio-economic, environmental, and cultural diagnoses; continuous, lasting, and permanent Environmental Education actions; the identification of different types of vegetation that are autoctonous to the river and their respective potential; and the creation of adequate conditions to stimulate the natural regeneration of degraded areas, seeing that every time that an area is exposed ecological succession occurs, (Monteiro *at al.*, 1985). This may be fomented through the enrichment of the areas and/or the planting of seeds and seedlings. The activities of “How is Your Organization’s Social Responsibility?” are centered on the articulation of research and innovation actions through collective learning.

Alignment allowed all group members to share and proliferate ideas in the organizations in which they participate. Group members also share solidary responsibility for decisions, planning, and articulation of actions proposed and discussed in monthly meetings. These activities have allowed for the sharing of CSR knowledge through lectures, discussion groups, ecological walks, meetings, and other broad events that were open to society. Thus, Social Responsibility is approached from an integrated point of view, constituting actions that integrate society by connecting students, teachers, alumni, professionals, entrepreneurs, and other stakeholders. All actors’ contributions enrich their personal repertoire and make it possible to raise awareness on the importance of sustainability. It also promotes the *diffusion of new practices and themes* in order to reapply these actions in the business environment and to extend corporate responsibility throughout the region. In summary, from November 2015 to December 2017, 32 actions were carried out, with the participation of four higher education institutions; the Public Prosecutor’s Office of Pernambuco State; the Executive Secretary for the Biosphere Reserve of Caatinga, linked to UNESCO’s Man and Biosphere (MaB) Programme; Social Service of Commerce

(SESC)² companies in the beverages, fruit importation and exportation, and agribusiness sectors; and social organizations, including the Mulheres Rendeiras Association and the Matutando a Caatinga Group. The activities covered the collective teaching-learning process on the themes of respect for multiculturalism, observation of Black Consciousness Month, the incorporation of CSR principles, Circular Economy, and the celebration of the 515th anniversary of the discovery of the São Francisco River. A lesson from previous years was that it is important to deliver seedlings to the place where they will be planted and provide suggestions on how to care for them in order to pursue a higher success rate. It has become necessary to follow the principles of CSR 2.0, coined by Visser (2012), and the corporate responsibility guidelines proposed by ISO 26000 for scaling Corporate Social Responsibility programs, considering a corporate ethical approach that goes beyond Sustainability. In this same manner, one hopes that more companies and entities will join in these actions. The formation of a network will contribute to the development of CSR far beyond philanthropic actions, favoring greater effectiveness in these actions and, thus, stimulating a sustainable development, which considers the expectations of different stakeholders and local and global issues. Furthermore, it is essential that organizations comply with local legislation and international norms and incorporate CSR into their strategy as a central point of organizational ethics. Finally, as a continuous CSR activity and research agenda, it has been suggested that these actors’ diverse actions converge in favor of the preservation of the São Francisco River.

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