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CASE STUDY

ESG strategies to deal with COVID-19 in a Brazilian public research company

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ABSTRACT

Goal: The paper aims to describe and discuss some practices and strategies that have been taken place in Embrapa Soils – a public research company that develops research in soil science – to deal with COVID-19 effects during the year 2020.

Design / Methodology / Approach: We have chosen the ESG approach – Environmental, Social and Governance – as a theoretical background to analyze the strategies and practice we bring up in this paper. Information we have used was collected from internal management systems.

Results: Results show that the company has found many strategies to deal with COVID-19 in the three pillars of ESG. Positive results the company has reached rely on leadership, processes adaptation and the strength of personal and professional connections among the employees.

Limitations of the investigation: Strategies and practices we present are limited to the scope of one singular company. ESG is a methodology that we have used *a posteriori* to contextualize and analyze the situation.

Practical implications: Learning and reinforcing the ESG approach have been an important tool for the company to think about itself beyond the boundaries of financial approaches. It has the potential to spread to other companies or public agencies that do not profit directly from its activities.

Originality / Value: Sharing strategies and practices companies have used to deal with covid-19 is important as a benchmarking activity for other companies. This paper presents a consistent narrative of using ESG not only as a way of managing in normal conditions but making it the core business for managing in uncertain times.

Keywords: Covid-19; coronavirus; ESG; Embrapa.

INTRODUCTION

Covid-19 has deeply changed the ways companies work (Chowdhury et al., 2020; Crick and Crick, 2020). In Brazil, the pandemic has had its start by the middle of March 2020, and suddenly companies and workers had to adapt to a new reality that presents many obstacles to presential meetings.

Impacts of covid-19 have been felt by many companies, but it has affected some of them in a particular way (Kraus et al., 2020; Sharma et al., 2020).

Embrapa Soils is a unit of Embrapa – Brazilian Agriculture Research Corporation. As it is structured as a public company, the Federal Government of Brazil is its only owner. Embrapa Soils has its main purpose on researching and developing technologies that contributes to the sustainable management of tropical soils. It is located in Rio de Janeiro and counts 120

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employees. There is also another part of the team who is located in the city of Recife, on the Northeast of Brazil, counting on 30 employees. Embrapa has nowadays 42 unities of research and development spread all across Brazil. The distribution of Embrapa unities, as well as location of Embrapa Soils, are shown in Figure 1.

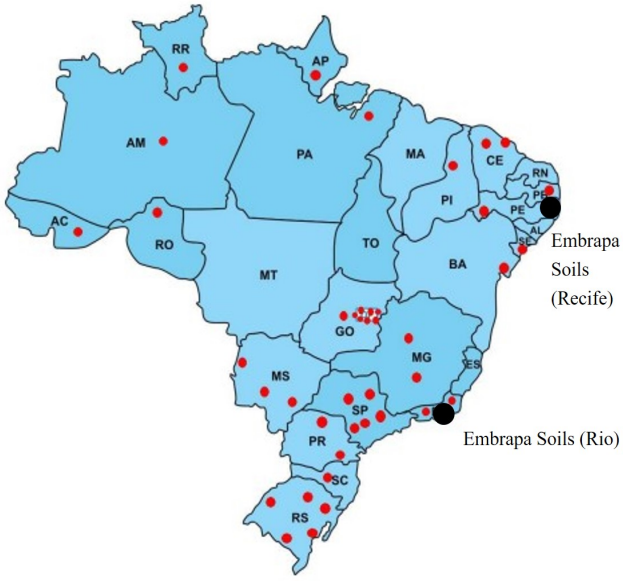

Figure 1 – Distribution of all unities of Embrapa and location of Embrapa Soils
Source: adaptation of Bertin et al. (2009)

Although Embrapa Soils could have stopped its presential activities on the pandemic, it worths remind that all R&D activities Embrapa does and all technologies Embrapa delivers to society and farmers have the purpose to be used mainly in the agriculture sector.

Agro value chain could not stop during covid-19 pandemic because of food production. Most of the cities' restrictions to be on the streets as well as the lockdowns have not affected hospitals and supermarkets. Healthcare and food commercialization (which includes all the value chain of food production) are essential services to the citizens even during one of the most severe pandemics planet have faced in the last 100 years.

Sustainability of supply chains as well as the impacts that come from covid-19 has been a topic well covered by research last years. (Khan et al., 2020a). The roles of supply chain and logistics have the potential to impact directly on economic, social and environmental performance of institutions (Khan et al., 2019). Different approaches on the subject may vary from the trade of renewable energy (Khan et al., 2021) to a model to reduce inequalities between rural and urban areas during covid-19 in order to better keep the operations of the food supply chain during the pandemic (Yu and Rehman Khan, 2021). Some studies also emphasize the use of new technologies, especially blockchain, to ensure the provision of food during covid-19 (Tasnim, 2020; Khan et al., 2020b).

Food consumption, and in a broader way, consumption in general, have been increasingly mediated by sustainability issues. Companies have thought and acted on sustainability through many management tools and strategic views in the last decades.

About these tools and views, we can mention Triple Bottom Line, which presents sustainability as a sum of economically viable, environmentally clean, and socially liveable (Carter and Rogers, 2008). It is also possible to mention the Balanced Scorecard model that understands sustainability as a path that comes from knowledge and internal processes to clients' satisfaction until the financial performance (Kaplan and Norton, 1992; Niven, 2015). Recently, not only companies but even public agencies and governments have been constrained to adopt measures on sustainability. Nations United has recently settled up the

SDG, the Sustainable Development Goals, which are an adaptation of previous UN's Millenium Objectives. They try to drive actions and goals towards a better world for all people. (Nilsson et al., 2016; Griggs et al., 2013). It is important to emphasize that SDG are a structure of governance, that comes from the UN and should spread to the countries and their public and private entities.

Once mentioning sustainability, it is also relevant mentioning greenwashing (Chan, 2013) and social washing practices. Greenwashing can be defined as "[...] a limited adoption of green production methods and policy, while continuing with a mostly 'business as usual' economy [...]" (Borel-Saladin and Turok, 2013, p. 217). On the other hand, social washing means the same, but when it applies to social initiatives (Troje and Gluch, 2020; Rizzi et al., 2020)

There is a strict link between SDG and the practices of green and social washing. When Sustainable Development Goals and their specific targets are defined, there is a structure of governance that controls what goals and targets are being achieved, in which countries it is happening, and so on. The governance of SDG is very important to avoid they can be used in an uncontrolled way. That governance makes it harder for those who adopt SDG to use them just as a greenwashing or social washing on their entities. So, we can see that not only environmental and social issues are relevant for public or private entities, but also governance must play a role in that context.

In this sense, one of the most emerging theoretical backgrounds to deal with sustainability in companies is the ESG approach. ESG is an abbreviation for Environmental, Social, and Governance.

We can see ESG referring to environmental, social, and governance attitudes some companies present to create more value for their clients and stakeholders. It is very common on literature to find quantitative approaches on ESG (Nollet et al., 2016; Wang and Sarkis, 2017; Cheng et al., 2014) and also perspectives that link ESG practices with some financial results (Friede et al., 2015; Wang and Sarkis, 2013; Lee et al., 2016). More recent works present some relations of ESG and covid-19, understanding ESG pillars as business risk mitigators. (Broadstock et al., 2020; Ferriani and Natoli, 2020).

Particularly in Brazil, ESG is trendy. We have some recent papers that study ESG in Brazil (Miralles-Quirós et al, 2018; Garcia et al., 2017). Besides the academic approach, ESG is being used by financial institutions (Buallay, 2019). ESG has also been the front page of one of the most relevant business magazines in Brazil. (Lima and Kastner, 2021)

The current financial structure of Embrapa does not enable it to financial profit from its activity. Maintained by the government with the money from Brazilian citizens, Embrapa has to show its results by delivering to society good research, development, and innovation for agriculture.

The financial structure of Embrapa is relevant because ESG could not be pushed aside against yield and financial issues. Due to its nature, ESG ends up being on the core business of Embrapa.

So, this paper aims to answer the question about how ESG could be used not only in a normal context of a public company but at such adverse conditions as the covid-19 pandemic. In fact, can ESG improve the performance of the company or does it bring more problems than solutions? Can ESG be a way of managing that presents quick results in turbulent times? And finally, is it possible to approach environmental, social, and governance as three separated pillars, or may they be strictly linked to each other?

We bring up and discuss some strategies on ESG Embrapa Soils has used during this pandemic of covid-19 in Brazil. Results and discussion we will present contribute to the literature of ESG approach at the companies as well as to the managing challenges during covid-19 pandemic on the world.

This paper is structured as follows: after this Introduction, section "Methodology" presents the methodology we have used to collect data and information. The next section, "ESG strategies" will present the nine strategies Embrapa Soils have used during the covid-19 pandemic. It contains three subsections, one for each pillar of ESG – Environmental, Social, and Governance. The section "Discussion" will present a combined approach of strategies the

company has adopted, linking each of them not only to one of ESG pillars (environmental, social, or governance) but to all of the three ESG pillars. This section also presents three managing elements that were crucial for implementing strategies we have brought up - leadership, processes adaptation, and strength of employees connections. Lastly, the "Conclusion" section closes the paper, resuming the main results as well as pointing out some paths for new researches on ESG, covid-19, and related subjects.

METHODOLOGY

This work is mainly descriptive. We describe some ESG strategies Embrapa Soils have adopted during the pandemic of covid-19. Data and information collection comes mainly from the final reports of Embrapa Soils at the end of the year 2020.

At that time, there was an online meeting with all the employees. It has been led by the CEO and it has had the purpose of showing how Embrapa Soils performed in that very peculiar year.

We have selected nine strategies Embrapa Soils has adopted on each of ESG pillars to describe here on this paper. Initially, our division was done considering three strategies for each of ESG pillars (environmental, social, and governance). However, all of them end up being linked to the three ESG pillars as we can see in the Discussion session.

It is worth mention that all strategies we have selected to show here have been presented on that final-year ceremony, to which the authors had access, which summarized all the performance Embrapa Soils has reached (or not) during the year 2020.

At the end of the Discussion session, we also point out three elements that contributed in a very direct way to the possibility of performing the strategies we bring up. The three elements (leadership, processes adaptation, and strength of employees connections) are articulated by the authors considering the feedback employees have done to that end-of-year ceremony, which was also accessible for the authors.

We also emphasize the importance of the descriptive method when we are talking about an event that is very recent to workers and companies, and whose impacts on the workflow are scarcely discussed by academic journals. (Carnevale and Hatak, 2020; Kramer and Kramer, 2020)

Next section we will discuss all the nine strategies Embrapa Soils have adopted, considering each of the pillars of ESG – environmental, social, and governance.

ESG STRATEGIES

Environmental

Environmental issues were one of the most difficult to build on pandemic started. By the end of March 2020 in Brazil, we have faced a strict lockdown, which has, among other problems, suspended all trips researchers usually do to carry on their researches and projects as well as has kept all employees at home. So, as everyone was temporarily torn apart from the environment, it was hard to develop some activities and practices that could approach environmental aspects at this moment.

However, it is important to notice that even in this context food production has not stopped (O'Hara and Toussaint, 2021; Rodrigues et al., 2021). Chain values of food production including seeds commercialization, cropping, managing farms, agroindustrial processing, and delivering products to supermarkets have not stopped.

It is also important to notice that the Ministry of Agriculture, Livestock and Food Supply has the role of act directly for rural producers, managing food stocks as well as the logistics and infrastructure to ensure food production could feed the citizens.

Although Embrapa institutional subordination to this Ministry, the main role of action differs from that one. Embrapa must produce research in order to build better agriculture and livestock in Brazil, and for 'better' we can understand both more productive and more sustainable.

So, Embrapa Soils has a role to play in this pandemic, which is to contribute to maintain (or improving) the sustainable practices on agricultural production, especially the ones concerning soils.

One activity that contributes to go towards its institutional role is the production system Tomatec, created and managed by Embrapa Soils (Laforet et al., 2020). Shortly, it is a way of producing tomatoes that reduces to lower levels the amount of pesticides as well as sets up some sustainable practices during the tomatoes crop like good practices of soil management, controlling water consumption to stop its waste and the physical protection of fruits with paper bags, also to avoid losses by plant diseases.

Tomatec farmers are constantly monitored by a research team of Embrapa Soils, which visits the producers to adjust some conducts on crops and solving doubts.

On pandemic, all visits to farmers were canceled. Contacts between researchers and producers have taken place on virtual systems for chatting (mostly whatsapp), on which they could address their questions, exchanging farms photos, etc.

Besides, the leader of Tomatec research in Embrapa Soils has also developed a virtual module to teach Tomatec techniques through e-learning. Its initiative has been important to spread these sustainable practices to potential interested in becoming Tomatec adopters.

Another environmental subject Embrapa Soils is highly involved is in the discussion about Payment for Environmental Services. Basically, environmental services are the benefits people obtain from ecosystems. The first benefit one can think about is the food provision, but environmental services may go far from that. It also includes soil conservancy, water provision, atmosphere cleaning, and so on. (Turetta et al., 2016) Embrapa Soils has many researchers into projects and discussions concerning models of thinking and doing about environmental services.

Although Embrapa researchers cannot act directly with rural producers to make payment for environmental services happen, they can articulate with other public agents the purpose to implement an agenda that contemplates many of the discussion this research group has been producing in the last years.

This political articulation has been conducted by the research group as well as by the CEO of the company, and due to covid-19, it has occurred mainly online. It encompasses not only a good dialogue with different political view agents but also a recognition for the group as one of the most respected teams in Brazil on that subject which is up to date with the science developed in that field.

As a result, on January 13, 2021, it has been published the Brazilian Law nº 14.119 (Brasil, 2021), which creates the National Policy of Payment for Environmental Services. It sets up master lines and structures mechanisms of payment for environmental services. Embrapa Soils team was crucial to make it happen, both by technical and political contribution.

It worths remind that this is not the only contribution this team has provided to public policies on environmental issues. Table 1 presents all the contributions Embrapa Soils has made to that policies. Some of them are implemented laws and others are Law Projects, which haven't been voted on Legislative Houses (Chamber of Deputies and Senate) yet.

Table 1 – Public policies with environmental appeal supported by Embrapa Soils

Status of public policies	Subject of public policies
Projects of law	Green assets
	Fire management
	Reduction of emissions by deforestation and land degradation
	Sustainable rural development on hydrographic micro basins
	Protection of pollinator's population
Approved laws	National policy about climate change
	National policy for low carbon agriculture
	National policy of paying for environmental services
	National policy of biodiversity

Source: made by authors

Another activity concerning environmental issues is the contribution to agricultural zonings. Zoning is a tool to identify the productive potential of any region providing data and information about soils, climate, rain frequency, and the adaptation of some cultures to that conditions (Da Silva et al., 2009).

We mention two zonings Embrapa Soils are currently working on: Partial zoning of State of Paraíba and Zoning for implementing underground dams in the State of Alagoas.

Both zonings demand technical visits to collect soils and to validate the findings with external pedologists and local communities.

As all soil data had been collected just before the start of the pandemic, it was not necessary to do any trip to the fields to collect them. It worths remind that work would not have been moved towards if this soil collection hadn't been previously done. During the pandemic, all work trips were canceled.

So, the next steps were the validations. All discussion that usually would have taken place on a presential meeting has turned into virtual meetings. It has happened easily with the external pedologists, which mostly live in the cities and access the internet from their homes or their workplaces (mainly universities or public agencies). Researchers may have faced some difficulties, however, to contact people from rural communities to validate data. Internet on rural spaces in Brazil is more unstable. Besides, people in rural territories have to manage their crops, so they are harder to mobilize if there is not a physical presence of the researchers who should drive the meetings.

By the way, even with the problems concerning validations, work has been done and both zonings were presented for the State governments of Paraíba and Alagoas during the year 2020.

Social

Social issues have been always a great demand for Embrapa Soils, even out of pandemic. Nevertheless, with COVID-19 rising up, it was necessary to think about new ways for delivering social benefits among company stakeholders.

The first initiative is probably one of the most common strategies companies have used during this period: the internet *'lives.* (Graves and Karabayeva, 2020).

Embrapa Soils main contact with the public often happens either on scientific events or on the rural territories. These traditional tactics have been being very important, but one can see that it ends up limiting the audience to both specific groups: academic partners (students, professors, and researchers – all of them mainly linked to the universities) and the rural audience (farmers, agencies of farming support, rural media, etc).

Lives have opened the possibilities for the company to explore an important and often neglected public: urban people.

Although Embrapa Soils is located in a very urban area (at the gentrified South Zone of the city of Rio de Janeiro), the standard understanding of its core business (soil research) always have pushed away from its communication with the city, leading the discussions that matter to the company to the academic and productive sectors.

On pandemic, there was some attention given to that repressed potential for communication to the urban public.

Series of lives showing the importance of soil for agriculture, the main types of soils, the interaction between soil and water, and so on, have been presented on YouTube and Instagram platforms. Language has been turned to a more colloquial one, in order to adapt the message to the public.

Feedback Embrapa Soils has received about the lives was usually positive. Comments and 'likes' received as well as the total amount of views (10.000 people, counting viewers from all lives promoted since pandemic has started until the end of 2020) have ensured that Embrapa Soils has promoted an increase of its positive image among the urban public.

Another action that goes towards the strength of virtual platforms was the promotion of a virtual contest. Embrapa Soils has been associated with FAO (Food and Agriculture

Organization, a UN agency) to set an open call for small videos that present practices facing soil erosion.

Embrapa Soils has received videos from all regions of Brazil and the pride ceremony was an event that has had the participation of the Ministry of Agriculture, Livestock, and Food Supply officers.

It has mobilized independent farmers, undergraduate students as well as some agriculture public offices of small municipalities.

It was a great opportunity for Embrapa Soils to promote itself in a complex environment through virtual approaches. It has also strengthened the partnership with FAO and has gone towards the accomplishments of its institutional mission of spreading good practices on soil management and conservation.

The last social action we bring up is the adaptation that has been made on Embrapa and School program. This program is a strategy to make Embrapa Soils closer to the schools. It includes visits from students to Embrapa and, on the other hand, visits of Embrapa researchers to some schools.

Series of ludic presentations are often shown to the students, which leave from that experience with new knowledge about soils. They can be shared with other students, their families, and so on.

As all presential activities have been interrupted, the 'normal' strategy has also had to turn itself. The new arrangement leader researcher of Embrapa and School program has found was to focuses actions not onto the students, but onto the teachers.

So, Embrapa and School team has developed many meetings with teachers from schools that have already participated in any Embrapa and School action. The idea was to provide them with resources (articles, books, sites, pedagogical activities) to enable them to approach the subject of soils with their students.

It has been proved itself a good strategy because it has enlarged the capacity of Embrapa Soils to spread knowledge. Counting on these teachers as 'multipliers', the program could save some time from physical meetings with school's audience and could use it to increase the quality of material available for these actions and to instruct the teachers on approaching sustainable ways for the use of soils.

Governance

Governance is necessary to guarantee some effectiveness on actions companies do, as well as to ensure companies comply with good practices of management and stay connected to the institutional environment that they are made part of.

One of the first actions Embrapa Soils has promoted on pandemic was to donate some laboratory material to State and National government, to contribute with covid-19 exams.

It is important to know that Embrapa Soils labs are not provided with PCR equipment (that is very useful to coronavirus disease diagnosis). Other units of Embrapa may have in their labs that kind of equipment and material, but it is not the case for Embrapa Soils. However, some important items as masks and gloves that are normally used for internal activities have been offered to government authorities, so they could repass this material to their health units.

It is important to look to the benefits for the institutional image that comes from that action as well as to the administrative effort to make that movement, as it affects the 'normal' sense of stock usage. This action was accomplished without damage to the accountability of the company. It has also not disregarded any financial rules for stock movements on public agencies.

Another issue about governance covid-19 has had a great influence was the driving of company activities. Although there were some interesting outwards movements as lives and virtual contests, that moment was realized by leadership and the workforce as a time to 'clean up the house'. In that sense, internal processes have gained importance when compared to processes that are directly driven to the Embrapa audience.

One of the processes that have been strengthened up during the year 2020 was the Project Office. Despite it has launched as a management initiative two years ago, in any sense

pandemic has contributed to make it a more structured process (more people, better workflow, accumulated expertise). Project Office of Embrapa Soils helps researchers on formatting their projects to submit them to calls. Some calls are from external funding and some are just from Embrapa. There is an amount of financial resources that annually Embrapa Headquarters shall distribute among the unities, and that money flows according to the approval of research projects. So, what happens is that the unities of Embrapa end up competing among each other for that money. Then, Project Office implementation and his recent strengthening up during pandemic have turned Embrapa Soils more competitive on fighting for these resources.

The last activity concerning governance worths mention is the implementation of the Pronasolos platform. Many of the products Embrapa Soils deliver to society are in the form of maps, like zonings and pedological works. Until now, these products have been being published on a map server that belongs to the company.

Pronasolos is a government program that has been implemented with a great participation of Embrapa Soils and its main purpose is to provide infrastructure to strengthen up the governance of soils in Brazil. Many players have been mobilized and now the first version of the Pronasolos platform has been launched in 2020.

It means that all maps company publish from now on is part of a greater infrastructure of soil management. Map server does not belong anymore to Embrapa Soils neither use only Embrapa Soils information. It has turned into a tool for sharing information about soils and to help public managers to take decisions at a strategic level concerning soil governance. Like other initiatives, all meetings that have been necessary to make that platform happens in 2020 have been done online.

DISCUSSION

According to the last session, we have pointed out nine strategies that go in line with ESG practices. We have separated them into three equal parts, each one containing three strategies and linked to one of ESG pillars (environmental, social, or governance). Table 2 shows the strategies we have mapped.

Table 2 – Strategies on ESG Embrapa Soils has adopted during the pandemic

ESG pillar	Strategy adopted by Embrapa Soils
Environmental	Online courses for sustainable production
	Supporting public policies on environmental issues
	Zoning validations with technicians and rural communities
Social	Lives through Youtube and Instagram
	Adaptations on Embrapa and School program
	Video contest about erosion control
Governance	Launching a National platform for soils governance (Pronasolos)
	Strengthening up internal processes and Project Office
	Donating laboratory materials to help covid-19 detection

Source: made by authors

However, if we look carefully we can see that all of these initiatives do not only fit their given aspects. Hereupon we can see that the Tomatec course is linked to environmental aspects by presenting some sustainable ways of producing but is also linked to social aspects as it mobilizes the tomato farmers community as well as it is a governance practice that delivers to the public on the form of knowledge all money that has been invested by the citizens to R&D on Embrapa Soils.

The same analysis we can do for the lives. Though it has been firstly assigned as a social initiative because of the large audience it has been reaching, we can also mention that most of the the lives presented by the company talk about environmental issues (soil conservancy, waste of water, and so on) and that lives contribute to place the company as a respectable source of good information on the web concerning to soils.

That kind of analysis is valid to all the practices we have brought up to discussion. Table 3 shows how strategies fit the ESG pillars.

Table 3 – Strategies Embrapa Soils has adopted linked to ESG pillars

	Environmental	Social	Governance
Online courses for sustainable production	Focus on sustainable production	Courses have appeal to farmers and rural communities	Invested money on R&D in the company is given back to the audience in the form of knowledge
Supporting public policies on environmental issues	Focus on environmental issues	The whole society may have benefits with environmental public policies implementation	Contribution to public policies
Zoning validations with technicians and rural communities	Potential to support decisions concerning environmental conservancy	Zoning affects people directly once it is used by governments	Accounting on quality of data production at Embrapa Soils
Lives through YouTube and Instagram	Most of the lives talk about sustainable practices for soils	Lives increase and improve company's audience	Liability of information concerning soils given to civil society
Adaptations on Embrapa and School program	Environmental education is one of the main focus of the program	Community from schools feel supported by the company during the pandemic	Accomplishment with education on soils
Video contest about erosion control	Erosion control is a subject on soil sustainability	Strong appeal and mobilization of public and private agents	Articulation with FAO and the Ministry of Agriculture, Livestock and Food Supply
Launching a National platform for soils governance (Pronasolos)	Potential to use data to improve soil and water sustainable management	Soil governance affects farmers and food production	High level of articulation with interinstitutional players
Strengthening up internal processes and Project Office	Approved projects have sustainability appeal	Approved projects deliver knowledge and technologies for society	Strengthening up Embrapa Soils among other Embrapa unities
Donating laboratory materials to help covid-19 detection	Promoting peoples' health is taking care of life on the planet	It contributes to guaranteeing detections for all people who may have been affected by covid-19	Improving the institutional image of the company

Source: made by authors

Table 3 shows us that the trying of grouping ESG strategies into only one of the given pillars (environmental, social, or governance) may be unsuccessful.

Although it is not very common in literature, we have built a framework where that strategies on ESG end up being linked to each of the ESG pillars. Grouping them this way opens a possibility for companies to think on ESG in an integrated way. It may reduce costs on implementing ESG strategies as well as can mobilize many sectors or departments on implementing them, making it a whole company policy.

It is also important to know that these strategies only could be implemented during the pandemic because of some conditions. Despite the impossibility of prediction of pandemic magnitude, Embrapa Soils has gotten to perform lots of actions during this period. We understand that the success of implementing these strategies relies on three key elements: leadership, processes adaptation, and the strength of personal and professional connections.

The role of leadership is very important in managing organizations that face adversities, especially on the covid-19 pandemic (Bartsch et al., 2020; Dirani et al., 2020). All strategies we have presented only have been carried on due to the existence of a strong leadership. The CEO of the company has quickly mobilized the supervisors, who could on the next moment talk to their employees and ensure a situation of any sense of normal workflow on pandemic times.

More than the strength of leadership, there was the readiness to act on time and the precise sense of responsiveness the great elements to make things work well. Feedbacks *a posteriori* of some employees show us they have felt cared for by the company at the start of the pandemic. Employees' new work plans and adjusts of their work contracts were also built in a very fast way, demanding the cooperation of the Human Resources department with all the employees and, of course, counting also on the support from the CEO.

Besides leadership, another important factor that has positively contributed to reaching good results during the covid-19 pandemic was processes adaptation.

Almost all internal processes on Embrapa Soils had to be thought in a new way. First, we can mention all the presential meetings (with the internal and external audience) turned to online conferences. Employees have started using the RNP (Public Research Network) platform, which was provided to all public agencies and entities to carry on their meetings. It is considered a safe place to have conferences and discussions because it relies on data protection and cryptography from Brazilian Government servers.

As time has passed, however, and as Embrapa Soils has increased its external audience, other platforms such as Google Meetings and Microsoft Teams also have been used.

Trips were canceled, courses also have turned to online platforms, all the office work was turned into home office.

Managing work from home is easier to ones than to others. People who take care of children and the elderly are especially affected. We can say that women are more affected by the new work conditions that come from covid-19 (Collins et al., 2020).

Processes adaptation at work is one side of a complete change in almost every people's life. In this situation, people vary how they manage their amount of work, their worktime, and their affection and mood to work. Supervisors and the CEO had to have the flexibility to deal with all the flexibility employees have needed.

In this sense, Embrapa Soils has benefited from its very low level of turnover. As hiring processes depends on government calls, and as these calls (also known as public tenders) are becoming less frequent due to the conservative wing that is now on the command of the country, Embrapa Soils (and also the other unities of Embrapa) has been presenting little or any people movements recently.

That stability in the number of employees over the last years leads us to the third factor that has contributed to the success of implementing ESG strategies at Embrapa Soils: the strength of personal and professional connections.

Embrapa Soils headquarters in Rio de Janeiro count on about 120 people (and other 30 employees at the city of Recife, in the Northeast of Brazil).

Employees have well-structured professional connections with each other. Not only relying on the few amount of people in the company, these connections are also potentialized

by the cozy house where Embrapa Soils is settled in, which contributes to promoting small talks during worktime and ends up improving the quality of the environment to work.

Of course, most of the connections are strictly professional, but some of them get stronger and slide to personal relations of trust and confidence.

Either professional or personal, all of these connections are based on trust. That trust works as a pavement that gives some solidity to work during the covid-19 pandemic. Only when people can trust each other it is possible to make the work happens in so adverse conditions (Mayo, 2020).

CONCLUSION

We have presented some ESG strategies Embrapa Soils have used during the year 2020 on dealing with the covid-19 pandemic.

Results show that the ESG approach is effective to deal with management issues on adverse conditions. It has been also shown that ESG strategies may play an important role in providing quick responses to what is expected from a company in a situation of a high level of uncertainty as the covid-19 pandemic. Problems and obstacles of making these strategies happen were far surpassed by the benefits these strategies provided to the company during the covid-19 pandemic.

Another finding we have brought up is that ESG strategies the company have adopted to deal with covid-19 may be linked not to only one ESG pillar (Environmental, Social, or Governance). Instead, they can be linked to all of them, showing that environmental, social and governance issues can be approached all together on the company. It is relevant because strategies that integrate the three pillars may improve the capacity of companies on adopting ESG, once it can reduce costs and act towards a better cohesion of the firm when it thinks and deploys its strategies.

To make these strategies being implemented, there were three key factors the company has relied on: strong leadership, processes adaptation, and strength of employees' connections. Mapping these factors open a possibility to drive policies to the public companies that take them into account. The case of Embrapa Soils shows that the implementation of ESG strategies is not disconnected from these key factors. Maybe other companies can rely on other factors for implementing ESG strategies or to deal with covid-19. More research is needed to fill this gap, but we can affirm that the adoption of ESG strategies by a company affects and is affected by the current working of the firm.

Current working models were strongly affected by covid-19. Adopting ESG strategies was an opportunity for the company to drive its actions in uncertain times and to create and provide new answers to the demands of society.

It is important to know that the ESG approach we have presented in this paper comes from *a posteriori* analysis, considering the end-of-year presentation where Embrapa Soils has shared its performance with its employees. Although it has been done *a posteriori,* it worths remind that Embrapa Soils does not explore an activity that enables it to earn money directly. So, ESG is more than an approach of unnecessary tasks or 'extras' to make the company more interesting to their shareholders. In fact, ESG approach goes towards to institutional mission of the company and is strictly related to Embrapa Soils' core business.

Information that have been shown on this paper may open a possibility for Embrapa Soils to change their annual planning, considering *a priori* the ESG pillars to drive its strategies. The success of the ESG approach at Embrapa Soils presented in this paper has the potential to drive new policies for public or private companies in Brazil and abroad, considering environmental, social, and governance issues on an integrated approach. More specifically, we strongly believe that the ESG approach may improve the performance of government companies that cannot profit directly (earning money) from their activities.

We also believe that sharing covid-19 experiences on companies helps the academic community to think about new ways of operations management during turbulent times. New narratives and researches about facing covid-19, preparing for a post-pandemic world as well

as ESG approach on public and private companies remain as interesting topics for the community to discuss in future studies.

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