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Towards a multifaced definition of environmental sustainability: the case of a water company

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## **Towards a multifaced definition of environmental sustainability through the engagement of young generations: the case of a water company**

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### **Summary**

This work aims to analyse the concept of “materiality” that features the stakeholder engagement process and the implementation of sustainability strategies and nonfinancial disclosure. Thus, the objective of this study is to investigate, under the lenses of Stakeholder and Legitimacy Theory, how environmental sustainability concept may be defined by stakeholders of an Italian water provider. The responses of 246 stakeholders were collected through the use of a Q-methodology survey specifically designed to gather their understanding of environmental sustainability issues related to water management. In reaching stakeholders, we considered young generations as well through a range of ages of respondents from 14 to 79 years old. To the best of our knowledge, a materiality assessment, through the use of Q-methodology with stakeholders of a water provider has not been developed. The analysis of the responses conducted to identify four different clusters of respondents. These groups embody four different understandings concerning sustainability in water management.

**Word count:** 1989 words

## Introduction

The Global Sustainability Standards Board states that the sustainability reports must address social and environmental matters affecting the assessments and behaviour of stakeholders (Global Sustainability Standards Board, 2016). This study analyses the concept of “materiality” which features the stakeholder engagement process and the implementation of sustainability strategies and nonfinancial disclosure. This principle is the driving force that enables companies to identify and select topics to include in nonfinancial disclosure processes that should promote stakeholders’ instances and expectations. Thus, the objective of this study is to investigate, under the lenses of Stakeholder Theory (Freeman, 1984) and Legitimacy Theory (Deegan, 2002), how the environmental sustainability concept can be defined by stakeholders of an Italian water provider. Stakeholder and legitimacy theories have been selected because a materiality assessment fosters a firm to communicate and discuss with the different parties of society, following the belief that a company’s survival and growth depend on interactions with all of society’s players (Cormier et al., 2005). In addition, the relevance of adopting a multi-theoretical framework in order to analyse organizations’ behaviour and conduct is an approved matter in the nonfinancial disclosure and stakeholder engagement fields (Cormier et al., 2005; Giacomini et al., 2022b; Gray et al., 1997; Tagesson et al., 2013). In detail, the responses of 246 stakeholders were collected through the use of a Q-methodology survey specifically designed to gather their understanding of environmental sustainability issues related to water management. To the best of our knowledge and after an analysis of the current literature, a materiality assessment, through the use of Q-methodology, with stakeholders of a water provider has not been developed yet. The use of Q-methodology in assessing stakeholder engagement is also a valid tool in order to involve young generations (Gao and Soranzo, 2020), as we did in our data collection. Indeed, our questionnaire is also structured for citizens younger than 18 years old. Our results depict a multifaced definition of environmental sustainability that revolves around four different views that are shared by groups of stakeholders, as we discuss later in the paper.

## Theoretical background

Nowadays, companies are dealing with growing pressure to carry out sustainable, responsible initiatives aimed at supporting social and environmental issues (Camilleri, 2017; Mio et al., 2020b), even if nonfinancial disclosure process is mandatory only for firms with defined requirements (European Parliament, 2014). Several studies have affirmed that companies may adopt a multi-stakeholder perspective, integrating organizational dimensions and the instances of all their stakeholders (Attanasio et al., 2022; Lozano, 2018). Furthermore, the consequent increase in accountability requests from stakeholders’ side concerns not only economic but also social and environmental outcomes (García-Sánchez et al., 2013). Indeed, transparent and reliable communication of information to stakeholders is widely seen as essential to legitimacy (Torelli et al., 2020). According to Gray et al. (1997), the accountability concept includes the responsibility to provide an account of meeting stakeholders’ expectations. Thus, nonfinancial disclosure activities represent the process by which the sustainable development performance of the organization is measured and communicated, strengthening company’s accountability towards internal and external stakeholders’ responsibility for all its outcomes (Tommasetti et al., 2020).

The principle of materiality is derived from financial reporting, where it is usually seen as a threshold to affect the choices of those that use the economic resources of the company, such

as investors (Edgley et al., 2015; Messier et al., 2005). Recently, the aforementioned principle has been extended to sustainability disclosure (Edgley et al., 2015; Jones et al., 2016). Firms may choose topics to include and address in nonfinancial reports, prioritizing the instances of all stakeholders with this concept. In order to comply with the principle of providing all stakeholders with outcomes consistent with their expectations, an analysis of materiality becomes essential to identify what significant matters and identify the most important content that requires a wider level of analysis in the work (Calabrese et al., 2015; Hsu et al., 2013).

In the last decades, researches delved into the materiality concept as interpreted by the final users of the documents defined following the materiality principle (Eccles and Krzus, 2015; Hsu et al., 2013; Vance, 2011), highlighting the relevance of the theme (Murillo and Lozano, 2006; Porter and Kramer, 2006) and developing materiality indicators and procedures to conduct a materiality analysis in sustainability reporting (Calabrese et al., 2017, 2015; Cerbone and Maroun, 2020; Fasan and Mio, 2017; Patten, 2002). Nevertheless, materiality assessment remains a highly subjective process where personal expectations and experiences may be crucial in the analysis of social and environmental issues (Zhou, 2011) and the prioritization of material topics may vary broadly among firms (Clark, 2021; Fasan and Mio, 2017; Mio et al., 2020a).

Stakeholder engagement is an essential milestone for the nonfinancial reporting process. Several studies have found that stakeholder engagement policies may positively affect the nonfinancial disclosure strategy (Bellucci et al., 2019; Pucheta-Martínez et al., 2020). During the overall process, the relevant topics to address should be defined under the materiality principle (Manetti, 2011). As a first step of the nonfinancial reporting process GRI provides the identification of stakeholders with the aim of understanding their reasonable expectations and interests (Global Reporting Initiative, 2011). Thus, nonfinancial reporting and other forms of disclosure could be considered not fully accountable to stakeholders, unless these parts are engaged in the materiality analysis process. Regarding stakeholders' heterogeneity, it is valuable to underline that it is hard to define clear borders among the different stakeholders' categories and that the status of stakeholder may change during time and about different issues (Phillips, 2003). This study focuses on the stakeholder engagement process aimed at designing the sustainability strategy and the nonfinancial report, and investigates their conception of environmental sustainability.

## **Data and Methods**

Providers of utilities such as water, gas, and electricity usually declare they are generally led by social purposes with the aim of spreading public value towards society and their activities may diffuse different types of externalities (positive, negative, and neutral) towards citizenship and communities (Bresnihan, 2016; Giacomini, 2022; Giordano, 2012; Mio, 2010; Renou, 2017; Traxler and Greiling, 2019). In particular, water providers undertake different activities regarding infrastructure innovation, water supply management, water quality checking, and policies aimed at reaching high levels of energy efficiency. Thus, if providers are not able to carry out these actions in the right manner, negative externalities may occur and affect the environment and communities, such as the spread of diseases, an increase in prices, and bad service quality (Speight, 2015; Tosun and Leopold, 2019).

In this study, we concentrated on Acque Bresciane, a water and wastewater services company based in northern Italy, serving around 600,000 users. This company offers an exemplary case to evaluate the meaning of environmental sustainability among its stakeholders because it has

started to define a sustainability strategy since its creation in 2017 and has received numerous national awards on sustainability (Giacomini et al., 2022a). Furthermore, Acque Bresciane has developed, in recent years, innovative and effective stakeholder engagement activities.

We collected responses by contacting a large plethora of stakeholders (~ 700), collecting 246 responses from stakeholders with a good distribution of ages (from 14 to 79 years old) and a good gender balance (46% females).

The survey is designed according to the Q-methodology approach (Watts and Stenner, 2005). The aforementioned methodology is a combined qualitative and quantitative approach that provides repeatable steps to prompt the social views of key stakeholders on a range of issues that directly affect the effectiveness, barriers, and social processes of environmental policy making and management. This methodology has been used mostly regarding social and environmental themes by researchers in the field of sustainability (Barry and Proops, 1999; Sneegas et al., 2021; Stephenson, 1935). More specifically, Q-methodology requires respondents to sort statements from maximum agreement to maximum disagreement (Watts and Stenner, 2012). The similarities among respondents' answers are then treated with factorial analysis techniques (Akhtar-Danesh, 2018) to flesh out which statements create a cluster or pattern (Stenner, 2011). In this way, the emerging definition of the concept studied is based on the responses of participants, who benefit from their own views.

## Findings and Discussion

Our analysis of the responses led to the identification of four different clusters of respondents who embody four different views around sustainability in water management.

The first group, named “*Environmental Activists*”, includes 79 respondents highly sensitive to environmental issues not necessarily specific to the water sector. Indeed, the first two items characterizing this cluster are related to the reduction of polluting emissions and to a real commitment against global warming.

The second cluster of 47 respondents is named “*Workers Centred*” because the main point of attention is company's employees. Avoiding unethical behaviours of workers and maintaining a constant attention to the safety of workers are among the most relevant items for these stakeholders.

The third group, named “*Customers First*”, includes 32 respondents and focuses on consumer relationships as a main duty of the company. Sustainability aspects for this group are of lesser importance, while it is essential to send clear and legible bills and respond quickly to users' requests.

The fourth group, named “*Water&Work*” is composed of 22 respondents who consider both the specific sustainability of the water sector and the work conditions at the top. As evidence of this, the first two items of this cluster are: (1) *Increasing the quantity of purified water* and (2) *Maintaining a constant focus on safety at work*.

What emerges from our analysis is a picture of a multifaced stakeholdership with a polarisation towards some societal and political views related to sustainability. This initial finding expands the current literature on sustainability and stakeholders' engagement. Stakeholder management scholars have pointed out the prioritization of stakeholders with the aim to enhance firm's value, but less attention has been put on the organizational practices useful to decide “who and what really counts” (Hall et al., 2015). The in-depth analysis through the Q-methodology clearly shows how stakeholders should not be considered a unitary group.

While sharing the double-materiality approach (Adams et al., 2021), for which the identification of issues that are financially material is partial unless the organisation has first identified its material impacts on sustainable development, it should be stressed that the approach to stakeholder engagement is virtuous only if it can involve all the main types of stakeholders. In many materiality processes, this is not the case; for example, younger generations are not included, and yet, as the results just illustrated show, they bring a different point of view from other stakeholders. Table 1 reports the distribution of ages in the four clusters.

**Table 1 Cluster descriptive statistics**

| <b>Cluster Number</b> | <b>Name</b>                    | <b>N</b> | <b>Average Age</b> | <b>Male</b> | <b>Female</b> |
|-----------------------|--------------------------------|----------|--------------------|-------------|---------------|
| 1                     | <i>Environmental activists</i> | 79       | 33.58              | 40.51%      | 59.49%        |
| 2                     | <i>Workers centred</i>         | 47       | 45.21              | 59.57%      | 40.43%        |
| 3                     | <i>Customers first</i>         | 32       | 41.28              | 62.50%      | 37.50%        |
| 4                     | <i>Water&amp;Work</i>          | 22       | 42.86              | 63.64%      | 36.36%        |
| /                     | Not grouped                    | 66       | 35.23              | 59.09%      | 40.91%        |
|                       |                                | 246      | 38.08              | 54.07%      | 45.93%        |

An element that emerges from our initial analysis is related to the age and gender distributions of the *Environmental Activists* cluster: its members are on average younger than in the other clusters and have a higher presence of female stakeholders. Considering Millennials, Reavis et al. 2017 found that the majority of them identify themselves as “stakeholder-oriented” rather than followers of a shareholder approach (Reavis et al., 2017). They are defined as “cooperative” and “civic minded”. Moreover, expanding the scope on Z Generation, socially responsible business practices carried out by companies are better considered than philanthropic initiatives, and the most relevant public-serving causes are more linked to social and environmental practices (Kim and Austin, 2019). In addition, recent works found that members of Generation Z perceived the essential importance of businesses in connection with firms’ social and environmental duties; otherwise, they are considered sceptical about the honesty of corporate conduct (Bulut et al., 2021; Park, 2022). Research works on Generation Z are still at an emerging stage and mainly oriented towards the analysis of Z Generation’s beliefs and expectations (Chillakuri, 2020). A recent report maintains that young generations are expecting companies to “take a stand” in choosing specific issues and firms’ actions should match their values, which should then be embedded within their value chain and the entire stakeholder system (McKinsey and Company, 2018). Considering these aspects, the initial findings of our study illuminate what angles are more relevant in terms of sustainability for younger generations.

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